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스포츠 매니지먼트 석사 학위논문

Introduction of Technology in the

Olympic sport of Taekwondo:

Cementing or sabotaging the image of Taekwondo from

South Korea's prospective

올림픽 종목 태권도에의 전자 기술 도입:

한국 태권도 이미지에 영향을 미치는 양날의 검

2021년 2월

서울대학교 대학원

체육교육과

Rahul Anilkumar Jain



이 논문은 문화체육관광부와 국민체육진흥공단 지원을 받아 수행된 연구임
This work was supported by Ministry of Culture, Sports, and Tourism and Sports Promotion Foundation

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Korea's prospective

지도교수 이 용 호

이 논문을 스포츠 매니지먼트 석사 학위논문으로 제출함
2021년 2월

서울대학교 대학원

체육교육과

Rahul Anilkumar Jain

Rahul Anilkumar Jain의 석사 학위논문을 인준함

2021년 2월

위원장

이 옥 선

부위원장

이 충 근

위원

이 용 호



Acknowledgement

It has been a long way and this rocky yet smooth journey was only possible with involvement of several people who have been significant in further helping me achieve my passion in sports through this master's degree at the Seoul National University. It's my immense pleasure to acknowledge the role of several individuals , firstly my Family in my home town India who has always been at my rescue and has always supported the choice in pursuing the master's degree .My respected Coach master Abhishek Dubey who has always believed in me and has been a great mentor to me both on and off field. My friends Prabhat, Mayur, Rohit Monika, Jai and Yasin who are nothing less than my family. Your guidance and support throughout has helped me to turn my perception into reality.

Second, Prof Joon-ho.Kang for considering me for this programme and my advisor Prof. Yong ho lee for your support and feedback throughout my thesis and academic years. Your constant encouragement and belief in my work ensured that I could achieve my desired results with my thesis. I would also like to thank all the professors for their teaching, your efforts have played a vital role in transforming my knowledge to a better level.

My companions here in the university Han ,Iram, Dana Anoosh and all the batch mates for your bond, warmth and affection throughout this journey. Your presence will be missed and also to all the good times we had at the Taekwondowon , Presentations and various engaging events .

My special thanks to DTM staff who has always been my strong support system throughout, helping me to cope up with my training schedules, championships and manage both my priorities. Further Seoul National University, KSPO and thank South Korea for being the reason of my dreams turning into real life experiences all these years. Words will never express my gratitude towards this beautiful country and the amount of love and affection this country has shown is impeccable. I would truly take endeavors to use all the learning and great virtues this nation has offered in all the viable ways

Abstract

Introduction of technology in the Olympic sport of Taekwondo:

Cementing or sabotaging the image of Taekwondo from
South Korea's prospective

Rahul Jain

Global Sport Management, Department of Physical Education
The Graduate School
Seoul National University

Countries like South Korea have successfully nurtured the development of taekwondo from many years. The World Taekwondo Federation promotes and sanctions local, regional, national, and international tournaments throughout the world, both for sparring and forms. The WTF encourages the popularity of Taekwondo by allowing schools to market themselves to their local communities.

In the Olympic games, South Korea has accumulated gold medals in Taekwondo. In recent years, government has played an active part by encouraging athletes to strive to the highest level in order to win medals. In

fact, the development of a sport system is a complex and dynamic process. Physicality, body language, freedom, connection with nature and other people, energy spreading etc., all these peculiarities are intrinsic in human nature, it is something that a kid is not taught in school, it simply belongs to him. These natural instincts evolve during a lifetime and most likely are best expressed when practicing sports.

As per our study we consider sport as one of the most democratic ‘places’ in which every human being could be part of and truly believe in the importance of practicing it in any of its forms. Unfortunately, several times we tend to assign too little value to this discipline. Instead, we should encourage it and discover a way to embrace it in our routine.

Nowadays, the improvements within the field of artificial intelligence would be able to guarantee an even greater effect if correctly implemented. Thanks to this, it would be possible to capture a massive amount of data coming from the field to exploit in several ways. Eventually, this would mean that a great game like taekwondo wouldn’t only be the result of a good coach and talented players, nonetheless also some advanced IT specialists would make the difference in generating impactful information for the players. Each sport should browse into available technologies to renovate and get on board new participants which could eventually foster the practice of the discipline

In addition to the worldwide growth and recognition of Taekwondo making it an excellent example of what an Olympic Sport should be and also the ground breaking improvements made between past years there are other practical and organizational reasons Taekwondo included in the game.

This Research provides a record of the long, sometimes uneven but ultimately successful road the sport has travelled from being a demonstration Sport to Olympic Sport. Further, this research gives us a brief detail about the up-gradation the sport has gone through, growing its spectatorship to secure its position in the Olympics. Some key points of our research work are:

- Semi-structured and open-ended interviews were conducted with athletes, coaches, spectators via Skype, Telephones, and one on one interviews.
- The thematic analysis method was used, transcribing and analysing the interviews.
- Similarities and differences were discussed comparing the results with existing literature review.
- Proposal for further research and restrictions and this exploration were additionally displayed.

Keywords: Taekwondo, Technology, Rules, Spectatorship and Mega Events

Student no: 2018-22638

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Chapter 1: Introduction

1.1 Background of the Study

'Taekwondo must remain an Olympic sport' is the key concern of the powerful Korean Taekwondo lobby. The prestige of the nation depends on it from a Korean point of view. Consequently, the main purpose of alteration of equipment and rule changes was to secure Taekwondo's status as an Olympic sport, most of them, and quite quickly. Decisions made so uniquely are not necessarily beneficial to sport, to athletes, and to the general culture of taekwondo as a whole. A good example of this decision-making method is the fast introduction of an outdated electronic score system. In addition, even though, under new leadership, there has been and remains an ambiguous selection process for protector scoring systems, the World Taekwondo Federation (WTF).

In view of the technological problems pertaining to the competitive framework, the WTF chose to double the viability of the electronic headwear rather than reassess its viability. Only the incomplete device was developed according to the electronic body protector for unbiased scoring; therefore, it was a reasonable decision to introduce electronic head gears. Yet, considering that after more than two years of use and development, the body protectors will not work correctly or efficiently, what would an effective electronic

headgear device be which is feasible in the next few years? In addition, the human touch has not yet been eradicated, as ratings and punching still depends on corner judges. Although it seems time to add the sensors to the punch score gloves, what is the answer to the face score? The addition of e-helmets and other electronic scorers, like predictable e-gloves, may lead to a range of problems instead of providing a suitable solution to this dilemma, forcing athletes to adapt even more to technological constraints. The WTF is most likely not to deal with these technical problems in an extensive way by further "dumping" the sport by inhibiting technology development because of the limits of the technology available; the face, for example, is probably eliminated in the near future as a solution to the failure of facial sensors in the electronic headgear. The Taekwondo culture could get contaminated with a blind belief in technology in the present age of video games. The perception that computer-controlled systems are superiority over established, sound human judgment introduced into sport new, unpredictable problems and side effects. However, athletes don't test the machine, unlike video games, but are controlled most frequently by the machine. Today, human beings do not follow the traditional course of sport as determined by the technological limitations of an outdated electronic structure.

Besides that, the rule changes of the last decade have also proved to

be only moderately effective. Since these modifications have resolved some of the issues in the competition system, they have also created a myriad of other challenges, which often have a bad effect on sport. Twenty-one amendments to the official rule were adopted by the WTF between its founding in 1973 and 2015. However, the fact that the WTF adopted ten amendments between 2009 and 2015 alone shows that officials are also not comfortable with the recent results and direction [WTF 2015]; of course, it may also suggest an inadequate process of research and policy development prior to the adoption of the rule changes. Some might suggest going back to the old rules, which is probably not the best way either. Moreover, with recent equipment and rule changes, the WTF leadership has put their and taekwondo standing on the line, making any change of direction highly unlikely.

At the end of the day, any easy remedies for all current problems are difficult to find. False rules and reckless controversies, on the other hand, can obviously stall Taekwondo's growth and slow it down and risk its future. In any case, a large discussion and debate on existing rules and the usage of protective equipment have been overdue for a long time. Coaches and athletes need to be involved more actively in these governance debates. Furthermore, routine survey instruments on rules, equipment and competition issues at all levels of taekwondo sporting competitions should be assigned, completed and

collected.

This thesis is a qualitative examination of recent developments in taekwondo landscape due to the introduction of the technology. This also explores the possible future of the game on the basis of Taekwondo present Olympic and South Korean scenario.

1.2 History

1.2.1 Brief History of Taekwondo

The term Taekwondo is derived from the Korean term "Tae" implying foot, "Kwon" implying fist, and "Do" implying foot(path) So, literally, Taekwondo means "the path of the foot and the fist" but it was only used since 1955, when origins of art started in Korea 2300 years ago. Taekwondo has long been a direct product of events in Korea, known by its name as martial art and way of life. And historical knowledge is a significant step forward in Taekwondo's comprehension.

Early Korea

History in Korea began in 2333 before Christ. "Old Korea" was formed at Asadal by the well-known national founder, Tangun. As the history of other countries shows, group life later became tribal societies and eventually tribal leagues. It shapes a structure eventually. Although the fighting strategies at that time do not include historical records, the people of

this period were thought to be hunters and had a protection as well as subsistence.

The Three Kingdoms:

A.D. of the sixth century. The Korean peninsula which we recognize today has been divided into three kingdoms: Silla, Paekje & Koguryo.

Koguryo (37B.C.-668A.D.)-Koguryo was the world's largest kingdom. There have been inhabited South Manchuria and North Korea. Paekje (18 B.C.-600 A.D.)-Paekje was founded in the Han river and the South-West of Korea. The Silla (57 B.C.-936 A.D.)-Silla, the oldest of the Kingdoms, was on the southeastern tip of the peninsula of Korea. The archeological sculptures in Silla on Pagodas and the texts written during the Paekje era, such as walls at the Koguryo royal tombs, display techniques and postures of battle that were possibly the first types of Taekwondo.

The three kingdoms were at conflict, fighting continuously for new land on the peninsula. It began to be difficult for Silla, the smallest and most vulnerable in the military, to protect itself from And then she took steps that would turn the history of Korea into a turning point.

HwaRang :

Chin Heung established a group called the HwaRang as King 24th of Silla. In weapons like the sword, spit and bow, the HwaRang was trained. With their

determination to safeguard Silla, they dedicated their lives to these martial skills. The HwaRang has also learned SooBak, an unarmed combat style. SooBak used manual techniques as a rudimentary form of football, but most of the time by feet. The HwaRang started taking SooBak to create a more militant art. The SooBak techniques have been developed in order for the warriors to fight against their enemies with the other HwaRang weapons. But to unite HwaRang and create the mind that leads to victory, he needed something. More than trained soldiers, Chin Heung required. His petition was to take over the HwaRang school by Won Kang, A monk and student Buddhist. Won Kang revived, not only good warriors but the whole HwaRang. The Warriors of Won Kang's HwaRang agreed to establish a code of ethics. It was:

1. Be obedient to the parents
2. Be loyal to the king
3. Have stamina/perseverance in battle
4. Justice never to take a life without cause
5. Have the honor and faith of friends

The HwaRangDo was the "way of the flowers of the manhood" with the ethics code and everybody's ability to fight the HwaRang, that soon gave the leadership to split the Paekje and Koguryo and unite Korea in a country known as the Koryo at that time. The HwaRangDo was the "path of the flower

of the virgin."

Koryo Dynasty: (918 A.D. to 1392)

The martial arts flourished and rapidly expanded during the Koryo Dynasty. Unarmed struggles have reached their highest prominence during this time. SooBak was reportedly brought to China and known as KwonPup. The modern methods SooBakGi was also identified by the mental discipline that was assigned to the theme. SooBakSooBakGi has become a growing sport for military and general. Martial arts were on the rise, and new forms started to emerge. Tae Kyon has experimented with several different and innovative kicking methods and was designed more for fighting than for training. In the King's annual festivals, the Tae Kyon and SooBakGi competitions took place. The champion of this competition was recognized by high courts and the military styles and that made these unarmed martial arts compulsory for military. The soldiers have also transmitted the martial arts studies throughout the kingdom since they started studying and practicing those arts with their journey.

Yi Dynasty (1392 A.D. to 1910):

Throughout the Yi Dynasty Korea was substantially converted to Confucianism, the prevailing religion from Buddhism to Yi-shi-choson. China's effect on the government and citizens was affected by this move.

Military leaders started to lose influence of civil statesmen who trust their society's cultural development. In the martial arts, people are generally losing interest. Martial arts and weapons are forbidden from practicing with the exception of the army. HwaRangDo slowly lost its young appeal amid Buddhist teachings. However, when King Jong Jo issued Instructions, there was a significant contribution to martial arts to the writing of a military art manual, including weapons, Tae Kyon and SooBakGi. Martial Arts has begun a great fall. Lee Duk Mu 's book comprised in-depth chapters on unarmed fighting and restored the techniques publishable in this area. A number of Japanese invasions took place during the Yi Dynasty. However, on 2 August 1910, the Yi Dynasty ended Japan's occupation by subsequent military force decreases.

Japan's Control:

After Japan (Choson) has affected Korea, a lot has changed now. China has banned both organized sports and martial arts. Only the military could practice martial arts, now under Japanese rule. SooBakGi was practiced secretly and quickly changed SooBakDo 's name again. Around that point, Korea was introduced to Japanese martial arts. The Koreans have been very interesting in taking them. Japanese training curriculum is taught in all Korean schools, Japanese art as well as in Kendo ("Way of the Sword"), Judo,

Karate, and Aikido on the basis of the peace agreements between Japanese and Korean citizens. Martial arts, Japan and Korea, trade and martial arts styles started to thrive once more on both sides. Korea was released of Japan on 15 August 1945 and the arts of Korea were able to regenerate.

Unifying Taekwondo:

Five major academies of martial arts or Kwans have been held in Korea. The names of them were Mooduk Kwan, Jido Kwan, Changmu Kwan, and Songmu Kwan. These schools have various styles like KongSooDo, Tae Kyon, SooBakDo, TangSooDo, KwonPup, etc. The way many techniques were studied and useage of them differed as well as schools and the Dojangs (training halls) were attempted to unify and harmonize teaching methods in 1946. Many of the members decided to retain the martial arts of the schools,while others sought a fighting sport. Such discussions were inadequate.

In 1955, all schools were coordinated by the board of teachers, historians and prominent society members and a name was chosen for hopefully unified art. Taekwondo became a new name with a range with titles in April 1955.

The Korean Taekwondo Association (K.T.A.) was founded in 1962 as the Korean Taekwondo Association. Dr. Un Yon Kim formally established the

World Taekwondo Federation (Headquarters) in Kukkiwon on 28 May 1973. The World Taekwondo Federation, located in Seoul, Korea is an organization which protects the roots and development of Taekwondo, monitors the requirements for testing and testing, and encourages worldwide Taekwondo study. The WTF hopes that its native art will continue to unite in this way.

Taekwondo in the Modern World:

Nowadays, Taekwondo is so thrilling. In more than 190 countries, Taekwondo, led by the Taekwondo World Federation, has evolved into a global art and sport.

In 1975, the United States. Taekwondo was accepted as an official sport by the Amateur Athletes Union (AAU). The General Association of International Sports Federations (GAISF) and the International Military Sports Council (CISM) were both awarded to Taekwondo in 1976. In the 1980s, the World taekwondo federation (WTF) was made a sports competition organizer at the Olympic Games in 1988 and 1992, and the International Olympic Committee (IOC) Sport Federation. Taekwondo became an official sport at the 2000 Australian Olympics.

1.2.2 History and Culture of Taekwondo as a Traditional Korean Martial Art

Oriental Martial Arts are historically considered both offensive and

defensive combat techniques. Even irrespective of physical and mental background, martial arts ranges from physical exercise, such as running and watching, to an ancient Asian soccer game Chukguk. But all sectors have been advanced and evolved with the advent of modern culture, which brought oriental martial arts into the light of their traditional values and advantages. In Japanese martial arts like judo, kendo, karate and others such as Taekwondo, Thai Muay Thai and China's Wusu this transformation into martial arts has begun. Kukkiwon figures show that the World Taekwondo Federation is a member of 184 countries around the world. Internationally, Taekwondo is regarded as a sport. It was also identified as a Korean who guarantees a cultural identity enabling Korea to become the country of origin of Taekwondo.

On the other hand, this undisputed achievement gives rise to ongoing discussion of the cultural and historical heritage of Taekwondo. The explanation was that modern taekwondo was developed under the direct influence of Japanese (1910-1945) karate from the time of Japanese occupation, (1910-1945) And that is a modern martial art, although Taekwondo, it is not traditional, despite it being known as Korean martial art. So Jeong believes that the promoters of Taekwondo skewed reality by pretending to be the origin of traditional martial arts in Korea.

Taekwondo does not have a cultural identity until now. It is unreasonable to assume The barehanded martial art of the Chinese Tang Dynasty Tang Soo passed through Japanese karate in Okinawa from generation to generation until in 1879, when the country was enlisted in Japan. After 1929, the Ministry of Education held an old martial arts exhibition, Funakoshi Gichin, also considered the founder of modern karate, his fame began to spread. Karate had his first school established by Funakoshi, sixteen years earlier, after experiencing cultural changes from Southern Martial Arts to Okinawan, and eventually to Karate, 16 years before the word 'taekwondo.'

It is located approximately 45 miles north of Taiwan, approximately 400 miles south of Japan, and approximately 300 miles from East Asia. In the Korean peninsula, Japan and China, Okinawa has been influenced primarily by politics, culture and religion as a result of these geographical characteristics. South East Asia also had a bearing on the influence. The culture of the 'southern' cultural world, which varies entirely from central Japan and makes Karate a strictly un Japanese martial arts, tends to be established in Okinawan. Moreover, before 1922, Japan didn't recognize karate, and it meant judo and kendo. martial arts. Judo and kendo were then used as instruction for Japanese troops, but karate was never the case. Even though, after the Second World War, the Japanese military government

banned judo and kendo, karate which they considered harmless or sport pure was not banned. The findings indicate that karate was not seen as a major martial art by the Japanese as judo and kendo, but a minor sport. There were also no consistent records of karate activities in the post-war period that were sequentially communicated through oral and body practices. As we now know, Karate 's history is ambiguity greater than clarity and we must carefully and analytically investigate the origin of Karate, Kevin Tan says, as the history of Karate was not convincing.

As mentioned above when the cultural origin is established, karate may not be considered to be a traditional Japanese martial art and it may be regarded as an Indian and Chinese cultural heritage for the majority of Asian society. Karate is not regarded as a heritage in China, however, and Taekwondo certainly is not a Japanese tradition. However, the fact that there is confusion A new conceptual structure needs to be established concerning Taekwondo's cultural identity.

What is the ethnic identity? Identity problems can seem trivial, but they are among the oldest crossroads in metaphysics. For example, has the same culture destroyed and restored the cultural heritage? Shares it? Is it our responsibility to call and become our own if we follow an foreign culture? What is the sublime of our company? Choi Jun Sik (1997) and Tak Seok San

(2000) are books on the questions posed and on the history of culture in Korea. Tak explicitly defines individuality with three requirements: personality, credibility and autonomy. Identity is what happens when it's not something in the past, and it's happening now (in the presence). The community (popularity) is indeed venerated and supported independently by the rest of culture (independence).

Even as Taekwondo 's early coaches clarified numerous explanations for his existence, a clear theory has not yet been developed in academia. Taekwondo should be based on four main aspects: Choicentery Theory; KuanCenterTheory; theory of karate influx; traditional martial arts, of course. Taekwondo was thus the result of the fusion of Choi, the Karate age of martial arts dividing society, during Japan 's invasion. This lasted until the name of 'taekKwon' was formally endorsed in 1955. It became Korea's martial barrier in 1959, with the foundation of the Association Taekwondo in Korea. Taekwondo was a martial-arts that preserve traditional Korean martial arts against the parameters of life, prestige and autonomy. Presence and development suggest that the present situation demands more phenomenological attention than the history or origins of an institution in deciding the identity. This implies that it is focused on the continuing creation and emergence in society of a new identity. Freedom is also an introduction

to how much Korean thought and practice have been influenced by Taekwondo organizational and motion techniques. Such talks are summed up as follows.

The modern taekwondo should first of all be regarded as a reconstruction of a modern culture inspired by Choi Hong Hi, the karate, the kwans and the barren martial art of Korea in his history. Of course, if it is considered sole origin of taekwondo, each of the four sources will be weak, but they have all made significant contributions to taekwondo's development. It is therefore suggested that one theory should contain these four theories and that opposition against opposing theories should be reversed by further study.

Taekwondo is not only a Korean, but world-wide martial arts sport. The dimension and importance of cultural identity are properly fulfilled. It has also inherited and mainly developed barbarian martial arts in Korea, which emphasizes a foundation. This distinguishes from Chinese and Japanese wushu based on skills of hand. The shirt, the bubble guard and the helmet are all mixed bizarrely with Taegeuk patterns and usually with five-direction light. The nature of a Korean locale is expressed in all the technical terminology used in the pure language.

Now Taekwondo is easily portrayed as the classically Korean martial arts, preserving the splendor and peace of sport and the greatest global cultural

heritage in the world. However, it continues to expand today. Tradition is not broken or stagnant, it is a socio-cultural environment continually restored and updated. Taekwondo 's culture as modern martial art evolved and incorporated various characteristics. Consequently, in addition to overcoming Taekwondo's exclusive patriotism which absorbs the properties and values of all communities and creates an acceptable code of conduct and style, the peoples of Korea must try and create a new heritage paradigm as a multi-cultural and global martial arts sport.

1.3 Taekwondo & Technology

Some time ago, Taekwondo's safeguards were meant to protect fighters' safety against the high risk of head and face injuries caused by kicks, so fighters now only need a light touch.

Herbert Perez, a former member of US national team, described Taekwondo 's new "Millennial Taekwondo" as not taking any risk in the fight. Taoyuan Taipei vs. Bianca Walkden of the United Kingdom fought in the final fight of WT Grand Prix Series 3, 2018.

He said that, "I'll not really move when someone hits, because I could raise my leg," and it is true, they 're playing in defensive style, not offensive style, but they're reckless not to look after the score. I don't know what I can do when I go and I'm not really going to do it, because the new players are

fighting for protection.

Where's the real reason for a better kick? Which is the heart of Korea's martial art in defense of another civilization's incursions?

We have to understand that taekwondo is an athlete's tradition, not just a game, an effort is physical, referees should be fair and the professionals will work well, as they are also athletes, protectors' sensors, gloves, safety systems, helmets, protective equipment, players, laws or rules, Physical activity is one of the goals of sport, whereby human effort can be minimized by allowing technology to participate, whereas physical activity and exercise are one of the causes of sport.

Looking at sport and martial arts, this is a basic separation of martial arts.

In fact, Taekwondo has several components, loosely grouped into two main divisions: 'traditional' taekwondo (forms/self-defense) and taekwondo sparring or wettbewerbs, which have been known in Korea for the last fifty years as sports combat, techniques and methods invented and developed, and which are related in traditional martial arts training.

The martial art was designed to defend the whole country from invaders as well as against Spiritual peace, health and self-control of mind and body. In reality, the Martial Arts aimed to protect the whole country from invaders, but it also aimed at ensuring the spiritual peace.

Taekwondo's modernist nature underlines sports training methods. The various educational methods followed by the two fields show this distinction. There is also a lot of conflict and ambiguity about philosophical approaches to aspects of sports.

This contrast attempts to understand the difference between traditionalist and modernist taekwondo which is at the heart of this sport. A system of research would explain Taekwondo's changing experience since the martial arts started technology.

The method is believed to be evolving for Taekwondo due to the use of technology to raising the spirit, reverence and principal intent of this sport. Both sports grow, but when Taekwondo was at its peak, this loses its essence as the technology comes in and the COI results in sport.

In Taekwondo, the use of electronic protection equipment affected the method of combat. Consequently, the International Taekwondo Federation continuously changed the rules of combat to try and preserve taekwondo's old form, not to drop the electronic protectors.

1.4 Statement of problem

Over the years, there has been a lot of game changes, but constant changes in the rule, score and score, and gear changes are especially extensive and essential. It should recognize the growing success of Taekwondo, its

continued participation in the Olympics and whether or not it will remain competitive in the modern and ever evolving sport of mixed martial arts with a rising membership and public.

The atmosphere of Taekwondo differs and is split into two sections. The one is that modern computers are built for fairness and the other is that they are undermining the game's fundamentals. Now the game will hit points that will ruin his image as a martial arts guy that Taekwondo earned over years of fighting for himself and the military.

In fact, Taekwondo has been strongly criticized for its Olympic status. There are two ways of addressing this issue in the context of this article. Taekwondo must first adapt a viable body defense device; if it is not able to comply, it must return to the application of the traditional human judgment. Second, high-profile cases of corruption which made a mockery of sport must be stopped. The researcher believes that Taekwondo 's status is well established if these two conditions are met.

1.5 The purpose of research

This research aims to analyze the views of athletes coaches and spectators on Taekwondo's current approach and the suitability of taekwondo by testing electronic protectors before and after use. Therefore, the referees' personal opinions, to learn if it's an tool for them to judge matches better.

The approach for this research is qualitative, requiring data collection to construct a questionnaire and the presentation of findings in conjunction with the interviews. Taekwondo fans, competitors, Coaches and Referees participated in the study.

1.6 Significance of Study

Taekwondo was greatly changed with the use of technology. Historical and political factors, economic, social and cultural forces, which can-not be disregarded in a thorough study, have driven this transition. It is of historical and cultural importance for Korean peoples, especially in communities where taekwondo is seen as part of society itself, such as in the Republic of Korea where Taekwondo is not just a play or martial art.

Recently, taekwondo is changed many folds from its original form which was created as a martial-arts to fight invaders. It has become sport from art. Taekwondo had to face a tricky route in the past to reach Olympic Games. Its transparency and accuracy is questioned each time. Even the IOC has been reviewing the programs of the games and has removed several sports with different reasons to keep the value of the Olympic games. Maintaining the general standards of the game, keeping the key factors of spectatorship and entertainment in mind, the innovation of new technology is paying off with modifications in successive games around the globe.

Further it can be seen that with the implementation and use of these technologies, competition can now be provided on a fairer platform, in turn leading to a greater improvement in player performance and providing a more attractive competition.

The value of such research lies in the useful direction it will take, particularly where this sport has a strong social impact, to step on the right path to the growth of Taekwondo especially in societies with a high social influence of this sport.

1.7 Research Questions

R1- How has new technology affected the fair play of Taekwondo as an Olympic Sport?

R2- What are the experience of athletes, coaches, officials and spectators in the Global competition?

R3- Recommendation to improve the spectatorship and viewer ships of Taekwondo in Global competition?

The study purposes to analyze the imminent of spectators, athletes and coaches related to the Taekwondo sparring in context with pre and post

technology use. Furthermore, will Taekwondo continue to be a spectator sport, regardless of the up gradation. Are these new innovations helping the game to maintain its legacy and attractiveness and securing its position in the Olympic Games. The equivocates include Spectators, Athletes and coaches from Olympic Games, Asian games, world championships and other global taekwondo competition.

Chapter 2: Literature Review

This chapter is a study that examines the roots and the reasons for the transformative headings of Taekwondo as a sport over the past 60 years. Additionally, the favored techniques used in sparring continue to change with revisions of the rules and regulations, as well as advancements in protective gear and scoring equipment. Along with political background on decision making this study majorly highlights the technical aspects and influences on Taekwondo. At first, giving some background information on Taekwondo gradual development, this chapter will concentrate on the origin of full

contact sparring and the kind of productive gear that is used in Taekwondo sparring.

This study will seek to exhibit how these rules, regulations and guidelines were chosen. It will further proceed with a discussion to how the improved equipment's and the advances in the rule and regulation modifications have affected the technical direction of Taekwondo. Finally, to conclude with the discussion of most recent developments regarding the above, with the suggested aim to meliorate scoring transparency and put forward Taekwondo's image as a spectator sport, thereby cementing its status as an Olympic discipline.

2.1 Taekwondo Origin

2.1.1 Origin of Taekwondo from Karate

Since taekwondo is a direct descendant of karate, and karate literature predates taekwondo literature, a close investigation of early karate publications is necessary. The Hawaii Karate Museum has an extensive collection of karate books and articles dating back to the late nineteenth century. The first article citing Okinawan karate (at that time under a different name) in this collection was published in 1873. The first comprehensive book written about karate, with full technical illustrations, is generally considered to be Ryūkū Kempō Tōdi, published in Japanese in 1922 by the late Okinawan

karate master Funakoshi Gichin. The illustrations in this book consist only of drawings, but the 1925 revised and expanded version, *Rentan Goshin Tōdi-jutsu*, displays photographs. Funakoshi was the founder of Shōtōkan karate, although he never referred to it as such, instead calling his art karate-dō.

The second publication to use photographs was the work of Motobu Chōki, *Okinawa Kenpō Tōdi Jutsu Kumite-Hen* (1926), the following year. Motobu was a well-known pioneer in kumite (free fighting), as indicated by his book title. Several self-defence manuals for women, police, and some publications from Tokyo University followed these earliest books. In 1932, Motobu compiled a second work with the title: *Watashi no Karate-Jutsu*. Another influential instructor, Mabuni Kenwa, published a variety of manuals during the 1930s, as well.

During this period, Funakoshi's main work, *Karate-Dō Kyōhan* (1935), was the most influential. Revised and republished in 1957 shortly after his death, the book was translated into English in 1973. Funakoshi's works are interesting for the development of early karate because of his relationship to several of taekwondo's founders.

During the 1930s and 1940s, when the West had little knowledge of karate, dozens of books and articles were written, but only in Japanese. Most consider the first English language book with a karate link to be a work

written by James M. Mitose in Hawaii, what is Self Defense? Kenpo Jiu-Jitsu (1953). Several English- language karate publications soon followed, the most important among them Ōyama Masutatsu's, 1958 publication, what is Karate? Ōyama started karate training under Funakoshi, studied under several famous masters, and finally sought to establish his own style of karate, Kyokushin Kaikan, during the late 1950s. He included techniques from other martial arts, with heavy emphasis on full-contact sparring without any protective padding.

However, Ōyama's works are not essential to this study, because he was not related to any of the taekwondo founders, and did not become a prominent figure in karate until the late 1950s.

The most influential book about karate was the classic work of Nishiyama Hidetaka, Karate Art of Empty Hand Fighting (co-author Brown), first published in 1960. Nishiyama started learning Shōtōkan karate in 1943 in one of Funakoshi's schools, and during the 1950s, he was considered one of the best instructors in Japan. In 1961, he emigrated and became one of the most influential instructors in the United States. His book has been the most-sold book on karate, and is still in print. There also exists a variety of other early karate publications, which could not all be mentioned in this review because of their minor importance; karate publications after this period are

considered to be insignificant for this study.

2.1.2 Early Korean martial arts manuals

A brief overview of early existing Korean martial arts manuals discussed in detail below. Most of the manuals published in Korea are very rare, with only a few copies left in a number of Korean libraries. In 1949, Hwang Kee, the founder of Mudōk Kwan, published what is thought to be the first modern Korean martial arts book under the title, Hwasudo textbook (in Korean only). From early on, he preferred to use Korean names for his art, and the ‘hwa’ (‘flowers’) refers to the long ago ‘hwa-rang’ (‘flower youth’ or ‘flower boys’). The book was written in the traditional top to bottom, and right to left direction, and employs extensive use of Chinese characters.

Another very early book, Kwōnbōp textbook (in Korean only), was published by Choe Song-nam in 1955. Choe was a soldier and a Chōngdo Kwan member. However, Choe was not a key figure in the process of the development and formation of taekwondo.

In his second book, published in 1958, Hwang Kee uses the title Tangsudo textbook (in Korean only). A large part of the book describes, oddly, such various skills as first-aid and how to rescue someone from drowning. In later publications, Hwang also uses the term “Soo Bahk Do” (subakdo), which he adapted around the late 1950s, to also describe his art.

Pak Chŏl-hŭi is the author of Kwŏnbŏp association – Kongsudo textbook (in Korean only), published in 1958. He was originally a member of the YMCA Kwŏnbŏp Pu, but split from the school in 1956 to co-found KangdŏkWŏn. Park was an influential figure in the formation of taekwondo.

In 1958 Choi Hong Hi, the founder of Odo Kwan, published the first, full-length instructional manual under the name Taekwondo textbook (in Korean only), making it the first book using the word ‘taekwondo’ in its title. Although the Korea Military Academy published around the same time, or possibly earlier, a similar textbook with the same title, using simple drawings instead of photographs. For both books, several Chŏngdo Kwan members, among them Nam Tae-hŭi, reportedly contributed extensively to the content.

Choi’s next publication, which was the first English taekwondo manual, followed in 1965 under the title Taekwondo – The Art of Self-Defence. This book partly expands on the content of the former Korean publication, using new and better-quality photographs and more detailed explanations. The book was compiled before Choi’s break with the Korean taekwondo world, and the South Korean government, during the early 1960s. Considering Choi’s status and influence in the formative process to unify taekwondo in Korea, his books are considered representative of general taekwondo activity at that time.

In 1965, a monograph published in English, titled: Taekwondo: A Way of Life in Korea, also used the term 'taekwondo' in the title; author Chai IkJin stated that his publication pre-dated Choi Hong Hi's by several months. Chai posed for several photographs and most likely advised the American writer, Stanton E. Read, on the content. Chai was first a student at Changmu Kwan and later at KangdŏkWŏn. While not an instructional manual, the book tried to introduce general information about taekwondo to English speaking audiences.

Yi Kyo-yun's manual, titled Taesudo textbook for the masses (1965, in Korean only), was the only book published under the name 'taesudo,' the official name chosen by the martial arts association for the discipline from 1961 to 1965. Yi was originally a member of ChosŏnYŏnmu Kwan but, in 1956, founded Hanmu Kwan, which became one of the most important schools. He was an influential leader in early taekwondo.

In 1968, Lee Won Kuk, the founder of Chŏngdo Kwan, published, Taekwondo manual (in Korean only). Even though, he was the most important and senior figure during the first years of martial arts activity in Korea, he had become largely irrelevant in the Korean taekwondo world by the time of this publication.

Son Duk Sung became the leader of Chŏngdo Kwan after Lee Won

Kuk fled to Japan. However, during the late 1950s, Son had disagreements with his vice-president and split from the organization. Subsequently, he joined Kungmu Kwan and became its leader in 1959. In 1963, Son moved to the United States and several years later, in 1968, he published a book titled Korean Karate – The Art of Tae Kwon Do (co-written, Clark). Son was a well-known figure in the Korean taekwondo world and later in the United States.

Sihak Henry Cho, who joined Jido Kwan in 1953, was one of the first Korean taekwondo instructors to immigrate to the United States (1958). He wrote several books in English during the late 1960s. In 1968, Cho published first, Korean Karate – Free Fighting Technique (1968), and the same year, Tae Kwon Do – Secrets of Korean Karate, which presents the same content as his earlier book, but with a different title. Subsequently, he published, Better Karate for Boys (1969), and Self-Defense Karate (1970). Cho became an influential figure in the American taekwondo world.

Later publications are less important for this study, because that is the time when taekwondo changed substantially and developed distinctively from traditional karate. Despite this fact, one book is worth mentioning because it provides some additional interesting information.

In 1972, as chairman of the technical committee of the Korea Taekwondo Association, Lee Chong Woo published a manual titled

Taekwondo textbook (in Korean only), which was essentially the first modern taekwondo textbook. Lee was fundamental to the formation and promotion of modern taekwondo while he worked for the Korea Taekwondo Association and the World Taekwondo Federation. He was an original member of Jido Kwan, and became its leader in 1967. Subsequently, Lee held the positions of secretary general and vice-president of the World Taekwondo Federation, and vice-president of the Kukkiwon.

2.1.3 Modern taekwondo literature over south Korea

The era after the 1960s concerns mostly publications regarding sport taekwondo with a focus on sparring and competition. This was the time when sparring technique developed rapidly and separately from traditional technique which stayed largely the same. Therefore, later publications regarding traditional taekwondo are, by and large, not related to this study, with the exception of the presentation of historical and philosophical accounts. On the other hand, sport taekwondo literature helps to explain the technical evolution of sparring technique.

Between the mid-1970s and early 1990s, more than a dozen master's theses at Korean universities and articles in Korean journals were published dealing with the technical aspects and developments in sparring. However, most authors focused on analyzing scoring frequency and kicking patterns in

competition. Lee Sung Kook, in particular, contributed to a variety of interesting studies in this field, and some of these articles were helpful in establishing a time-line for the development of kicking techniques.

The first book written about sparring technique is Taekwondo Wettkampf (Taekwondo competition), 1980, by Ko Eui Min. It was not well-known in Korea because it was published only in German. Ko, the Korean national team coach for the 1975 and 1977 Taekwondo World Championships, moved from Korea to Germany in 1978. All the pictures for this book were taken in Korea, in 1977. Some of the notes for the book about steps and other techniques date back to the early 1970s; therefore, the book provides a good glimpse of the sparring techniques of the 1970s. Many of the models for the pictures were top Korean athletes of that time, including Kim Sei Hyeok (recently retired general director of the Korea Taekwondo Association), Ju Sin-kyu (former head coach of the professional team of the Korea Gas Cooperation during the 1990s, and former national team coach), Ha Sök-kwan, and Son Tae-hwan (former world champions). The book shows taekwondo about ten to fifteen years after the introduction of full-contact competitions. Great differences from karate can be seen: Dynamic stances and steps, and especially the existence of direct counterattack kicks; the targets for training (boxing mitts) differ from karate, and in most of the

pictures displayed, the body protector (hogu) is used to demonstrate technique.

The book presents a striking departure from earlier publications, and helps to explain some of the theories discussed in this study. With this publication, taekwondo graduates from being a static, reactive, self-defense oriented physical activity to an exciting, dynamic, pyrotechnical combat sport.

The first book published in Korea about competition taekwondo appeared only in 1988; most likely due to the attention that taekwondo received as a result of its inclusion as a demonstration sport in the Seoul Olympics. The title of the book is Taekwondo sparring discussion (in Korean only), by ChoeYōng-nyōl. Some years later, Yi Kyōng-myōng and Chung Kuk Hyun, the four-time world champion, published a book titled, Taekwondo sparring (1994). Unfortunately, however, the quality of pictures is sometimes less than ideal. The manual comprehensively describes the competition system, but many of the aspects, as, for instance, the chapter about rules and regulations, are outdated. For this study, Choe's, and Yi and Chung's books are not of significance, because the technical transformation into modern taekwondo was already completed by that time.

Oddly enough, while English-language publications were leading in quality and quantity in the early years of taekwondo, there have been no books written in English, or translated from Korean into English, exclusively about

sparring taekwondo until rather recently. A variety of instructional videos have been published in English about sparring and taekwondo training, but as regards to competition taekwondo, there exists no major original or groundbreaking contribution.

As a result of the many new taekwondo departments at Korean universities, academic publications and research in the field has mushroomed. During the last ten years, many books and articles, as well as master's theses and doctoral dissertations have been published about traditional and sport taekwondo in the fields of science, philosophy, and history. However, critical studies regarding taekwondo's history and development are rare, and it sometimes seems that these fields of inquiry are neither much encouraged nor greatly welcomed as research topics in Korean universities. Instead, many works attempt to reinforce the most commonly accepted popular taekwondo stereotypes, leaving just a few articles critical in nature.

The Korean educational establishment does not generally encourage deviation and controversy, preferring, instead, to maintain a polite status quo. And so, because Korean students are integrated into a hierarchical web of relationships and expected behavioral norms, challenges to common views held by the establishment are difficult to find. Perhaps an outsider's perspective is necessary to kindle some degree of critical discussion and

debate.

2.1.4 Naming of taekwondo

The World Taekwondo Federation formerly stated on its homepage that when Rhee Syngman (1875–1965), the first president of South Korea, watched a “Taekkyon demonstration” by the Korean military in 1954, he was capable of “clearly distinguishing Taekwondo from the Japanese Karate which had been introduced by the Japanese ruler.” But the ‘Taekkyon demonstration’ was really a tangsudo, or karate, demonstration, which was practised under Choi Hong Hi in the Korean military at that time. The mention of the word ‘Taekkyon’ was probably a rather unconscious and innocent remark by the late president, who knew nothing about martial arts. But Choi apparently got the idea of renaming the Japanese art at a later time.

Kang Won Shik (taekwondo pioneer and president of the Kukkiwon until 2013) and Lee Kyong Myong stated: “It was General Choi’s determination that we should no longer use any Japanese or Chinese martial art names, but rather, use (names) derived from Korean tradition.”⁸⁰ Most sources suggest that Choi Hong Hi proposed the name ‘taekwondo’ because of its close pronunciation to the native ‘Taekkyon.’ Choi himself claimed, “At the (1955) session for naming, the term worded in ‘Tae’ and ‘Kwon’ which I submitted was chosen unanimously among the many other ballots.” Son Duk

Sung, another influential instructor of that era, who took over the Ch'ŏngdo Kwan leadership from Lee Won Kuk, also claimed later that he was in charge of crafting the term 'taekwondo' at that meeting. Son and Kang Won Shik (member of Songmu Kwan) promoted Choi Hong Hi, who was relatively inexperienced in martial arts, to an honorary fourth degree black belt in 1955, due to his powerful position in the military. But some time later, they had disagreements over Choi's actions and further demands. This dispute probably led to their later contradictory claims. Another popular name suggestion, also favored by Rhee Syngman, had been 'Taekkyon-do.' However, Choi instinctively knew that he could not promote his art, which was basically karate, with the name 'taekkyŏn.' The significance of this event is that it presents the beginning of the creation of a national, historical narrative for taekwondo. This episode was not so different from the earlier quest by karate leaders to ensure that karate became 'Japanese.'

Regarding the choice of the name 'taekwondo,' a few points require clarification. Whereas 'Taekkyon' is a purely Korean name and cannot be written in Chinese characters, the name 'tae-kwon-do' is derived from three Chinese characters. The second character, 'kwon', bears the meaning of 'fist' as in quan-fa or kwŏn-bŏp, and the last, 'do', is an indicator for the modern Japanese bu-dō sports, as mentioned earlier. However, the first character, 'tae',

is described by Choi Hong Hi in the following manner: “Tae literally means to jump or kick or smash with the foot.” This definition, or a definition very close to this one, has been adhered to in all later taekwondo literature. However, in fact, the character ‘tae’ has the meaning of ‘to step on,’ ‘to trample (or stamp) on or down,’ and bears no connotation in meaning with kicking or jumping. The closeness in pronunciation of the words ‘taekkyŏn’ and ‘taekwondo’ was more important than its actual meaning for the founders. Currently, Sino-Korean (Chinese character) dictionaries also list to ‘kick’ and ‘jump,’ but only in association with taekwondo, as representing ‘special Korean characteristics’ of this Chinese character. Over the years, this attractive fallacy has even been accepted by the administrators of the Korean language.

Regardless of the origin of the name, the main reason for the formation of the different schools under one national umbrella organization and name was the desire for expansion, with the ultimate goal of internationalization. While the name taekwondo was used at first only by Choi’s Odo Kwan in the military, and the closely connected Chŏngdo Kwan, in 1959, under pressure by Choi, the different schools unified for the first time under the name, the ‘Korea Taekwondo Association’ (KTA), with Choi as president. However, disagreements over the art’s name persisted since most

of the masters wanted to retain the name ‘tang- sudo.’ Soon thereafter, Hwang Kee was the first to split from the group as the result of a variety of internal issues.

Following the 1961 military coup by Park Chung Hee (1917–1979), there was great turmoil in South Korean society and the martial arts world was affected as well. As a result, the organization was renamed the ‘Korea Taesudo Association’ (‘TaehanT’aesudoHyöphwe’). However, factional strife and further disagreements between leaders kept undermining the establishment of a strong organization. Finally, the term ‘taekwondo,’ hard-pressed and promoted by Choi Hong Hi, was officially recognized in 1965, when the Korea Taesudo Association changed its name back to ‘Korea Taekwondo Association.’ With the formation of the Korea Taekwondo Association, in concert with the drive for taekwondo’s internationalization, any Japanese historical association had to be increasingly denied.

During the 1960s, the Japanese terminology was gradually changed. In early taekwondo many of the technical terms were often pronounced in Japanese. For example, several early Korean martial art manuals still sometimes used the Japanese pronunciation for names of forms, even though they were written in han’gül (the Korean alphabet). This was resolved by increasing the use of the Korean pronunciation of Chinese characters and by

the introduction of new and sometimes purely Korean terms. Finally, the old karate forms and most of its terminology were replaced with newly developed taekwondo patterns during the late 1960s and early 1970s. However, in spite of several modifications, the traditional karate uniform (gi or dōgi) was still worn by Choi Hong Hi and other authors in the photographs of their books. Kanō Jigorō, the founder of judo, invented the uniform in 1907, using the traditional kimono garment (literally ‘thing to wear’), as model. The first uniforms consisted of simple, unbleached, heavy cotton, later models were bleached white. In Okinawa, karate students used to wear their everyday clothes during practice. However, Funakoshi, influenced by Kanō, at first introduced the standard judo uniform to karate training in 1924, which was modified over time, using lighter material and a design with a looser fitting. Judo training requires a strong garment for grappling and throwing, in contrast to karate, which needs a looser and lighter training uniform for kicking and punching. In taekwondo training, the traditional karate uniform was slightly modified only during the 1980s, with the introduction of a new style taekwondo ‘dobok’ (‘uniform’), which featured a closed jacket with a v-shaped collar, instead of the traditional overlapping, open cover.

In addition to the uniform, the belt ranking system was also invented by Kanō to structure judo training and its syllabus according to corresponding

grades and ability levels of students. He divided the ranks into kyū (student ranks) and dan (master ranks). The kyū ranks are indicated by different color belts, and the dan grades are structured according to different black belt levels. Funakoshi adopted the same system, because it was a superior training method. Moreover, the ‘Dai Nippon Butoku Kai,’ the official umbrella organization governing the Japanese martial arts, aimed for uniform standards across the whole spectrum of existing martial arts and Funakoshi aspired for karate to become a ‘Japanese martial art.’ Naturally, the system was assimilated into taekwondo, although it has been slightly modified over the years, by any instructor choosing to do so. Nonetheless, taekwondo’s kŭp/dan (the Korean transliteration of the Japanese kyū/dan terminology) system used by the World Taekwondo Federation nowadays was inherited from karate and is, in principle, judo-based.

Moreover, the main formalities and training curricula of early taekwondo were directly derived from Japanese karate and remain largely the same today. YabuKentsū (1866–1937), a military man, who also studied karate (just as Funakoshi) under ItosuAnkō, turned out to be another influential Okinawan karate master at the beginning of the twentieth century. Influenced by his military background, and likely by kendo and judo routines, Yabu pioneered and introduced the following training rituals and methods to

karate training, when karate was first introduced to the public school system in Okinawa in 1901: “Bowling upon entering the training hall – Lining up students in order of rank (and in rows) – Seated meditation... – Sequenced training (warm-up exercises, basics, forms, sparring) – Answering the instructor with loud acknowledgment – Closing class with formalities similar to opening classes.” These are essentially military-style methods, which allow instructing and controlling a large number of students at the same time. None of these rituals or training methods existed in earlier Okinawan karate, Chinese martial arts, or Korean Taekkyon, and had previously been used only in kendo and judo. All of them still exist in present day taekwondo, along with the common appearance of the Korean flag on the dojang (gym) wall, which also represents an imperial Japanese martial arts tradition.

2.1.5 Definitions of Taekwondo

Taekwondo is a traditional Korean martial art, which means "the way of kicking and punching". In Taekwondo, hands and feet can be used to overcome an opponent, but the trademark of the sport is its combination of kick movements. (International Olympic Committee)

“Tae” means “to step, or stand up straight,” “Kwon” means “fist” and “do” means “the way” or “cultivation of the mind”. For convenience, Taekwondo” is usually translated into English as “the way of hand

and foot.” [Koharu, I.]

“Tae,” means “to kick” or “squash with the foot.” “Kwon” implies “a hand or fist to block, punch, strike or destroy.” “Do” denotes an “art” or a “way.” Thus “taekwondo” means “the art of kicking, blocking and punching.” (Svinth, T. A. 2003).

Taekwondo is a Korean-phonetic composite of three Chinese characters: tae (): standing for a system of foot techniques, Kwon (): standing for a system of fist techniques, Do (): standing for a behavioural intuition obtained through mental and physical experiences (training, kyorugi, competition, etc.) of the systems of fist and foot techniques. The two combined characters, “taekwon,” imply functional and morphological aspects of Taekwondo, while the “do” does an essence of Taekwondo which lies in a martial art sport. (lee, 1996)

Taekwondo trains both mind and body through strict discipline and places a great emphasis on the development of moral character. Thus, control of the mind over body, patience, kindness, self-restraint, and humility must accompany physical grace. The essence of Taekwondo rests on the integrity of its practitioner. [Svinth, T. A. (2003)]

Taekwondo is a system of techniques designed for the Self - Defence and counter-attack in unarmed combat, making use of the

hands and feet as weapons. However, Taekwondo is not merely a physical fighting skill- it is rather, a way of thought and life.

(Udo Moenig, 2012)

The Korean word, “tae,” means “to kick” or “squash with the foot.” “Kwon” implies “a hand or fist to block, punch, strike or destroy.” “Do” denotes an “art” or a “way.” Thus “taekwondo” means “the art of kicking, blocking and punching.” [Svinth, T. A. (2003]

As J. Caputo defined:

“Taekwondo rejects that concept of sport, where the aim is only the victory without considering proceeding or the means. From the point of view of the Taekwondo, the sport is not an aim in itself, but an important way that, as it was said, collaborates to generate better martial artists and persons raised for benefit of the society”. (2018).

2.2 Philosophy of Taekwondo.

World Taekwondo President - Choue said,” Taekwondo is a more than a sport: it is philosophy. It teaches people self-discipline, respect, and understanding while also keeping them physically active and healthy. That is why we believe it is such an important sport for youth to develop and even further harnessing its power to educate the next

generation.”(WT Report 2018) Taekwondo is consistently on the otherworldly and philosophical part. It isn't only a sport but it's a way of life wherein the fundamental reason for existing is to instruct an individual in each prospective and period of life. (Koharu, I.)

All the actions in taekwondo are developed from the human instinct for self-defence reinforced with positive elements as the needs arise, and ultimately reach the absolute state to overcome the ego and arrive at the moment of perfection, thus giving the sport philosophical dimensions. (WT Report 2018).

The principle motivation behind Taekwondo isn't money but to advance Taekwondo as martial art and spread its philosophy over the globe. (Udo Moenig, S. C. (2012).)

Training of Taekwondo must be started from philosophical basics:” The final victory goes to the one who wins over himself. Kyorugi is a fight against one's self and one set agreeable rules for himself” [Kim, U. (2005)].

A games rivalry is the methods for causing one to apply his Physical possibilities without limit and improve the degree of strategies. Particularly the Taekwondo rivalry targets creating and fitting the physical conditions, strategies, strategies and organizing

capacity and furthermore, developing fine sportsmanship and exemplary frame of mind in challengers with which to have the option to quiet down at a triumph and not to be debilitated by an annihilation

A sports competition is the means of making one exert his physical potentials to the fullest and enhance the level of techniques. Especially the Taekwondo competition aims at developing and harmonizing the physical conditions, techniques, tactics and coordinating ability and also cultivating fine sportsmanship and righteous attitude in contestants with which to be able to calm down at a victory and not to be discouraged by a defeat. (lee, 1996)

Taekwondo spirit can be better summarized by the philosophy of hongik-ingan, peace-loving spirit, a spirit of integrity with which to protect righteousness and a strong sense of responsibility.

[Udo Moenig, S. C. (2012).]

Taekwondo training consists of hardening the body through the practice of the various attack and defence forms .This system of unarmed combat involves the skilful application of punching, jumping, kicking,dodging,blocking and parrying actions, directed toward the goal of neutralizing an aggressor. Philosophically, Taekwondo has as

the main aim to train people acquire greater self-confidence in themselves, the Taekwondo player learns to forge his own spirit through resignations and, above all, perseverance; Taekwondo training is to develop the body and complete the character.

Proper training of Taekwondo can result in proper habits, healthy body, and upright mind and indomitable spirit. (“Philosophy of Taekwondo,”)

2.3 Modes of Taekwondo

Taekwondo aims to trains the body, mind, and soul, as a result it becomes a complete sport that helps to develop in perfect balance through its 4 modalities:

- **Poomsae** (품새): It is used as an element that shows the power and moderation of Taekwondo includes designated and creative Poomsae. They are the basics postures of Taekwondo.
- **Kyokpa** (격파): The spirit of Taekwondo is displayed through strong power and high techniques. It is a training method to the scientific system of Taekwondo techniques and spirit of challenge and concentration. The power varies depending on the body part and range of movement. It is the completion of Taekwondo training that uses the mind set power and

technique. Proper techniques and strong mental power to a trainee can be obtained through Kyokpa.

- **Self-Defense Techniques (호신술):** Self-defence expresses the practical features of Taekwondo most effectively and can deliver the value of Taekwondo as a martial art. Also, you can obtain skills to protect yourself and the weak by overcoming the opponent's threat.
- **Kyorugui (겨루기):** It is a process of training attack and defence skills based on basic postures of poomsae. Through kyorugui training, one can develop distance, control, judgment for setting the target, speed for effective attack, and conditioned reflex to the opponent's move. Kyorugui is conducted according to certain rules. By specializing techniques that can be used in actual games, it shows the powerful and active sides of taekwondo. ("Taekwondo Museum," 2013)

2.4 Martial Art to Global Combat Sport

2.4.1 Martial Arts

Martial – Martial the word derives from the Latin martial is that represents Mars, the god of the war in the Greek mythology. So, the martial art concept alludes to systems for war and fight (Rocio, 2001)

Art Etymologically, the word art comes from the Latin ars, artis,

and this in turn from the Greek τέχνη (téchne), which means "technique".

Art is any form of creative expression that a human being can have. It is about expressing feelings, emotions and perceptions about their experiences and creativity through an infinity of forms and techniques.

Derived from the name Mars, the Roman god of war. The term Martial art refers to the various systems of trainings for combats that have been systematized. The main purpose behind these different styles is physically defeating the opponents and defending against the threats.

Mars was the Roman god of war was responsible for everything i.e military, warriors as well as weapons. Thus the skills of combat and self-defence in martial arts are also practiced as sport.

Thus when martial law was declared, a country's armed forces took over the functions of the police. The main martial arts are: *aikido* (a kind of *judo* of graceful movement in which an opponent's force is used against him), *bando* (Burmese boxing and wrestling), *judo* (wrestling with special emphasis on balance and leverage), *jiu-jitsu* (a more comprehensive and aggressive forerunner of *judo*), *karate* (kicking, striking, and blocking with arms or legs), *kung-fu* (a group of various styles of fighting and defence), *Shaolin* (Chinese shadow boxing), *tai kwon do* (Korean system of kick-punching), and *t'ai chi c*

huan(originally a self-defence art, now a system of physical exercises to harmonize body and mind). [Udo Moenig, S. C. (2012).]

Martial arts can be further broken down into five distinct categories: Stand-up or striking styles, grappling styles, low impact styles, weapons based styles, and MMA (A Hybrid Sports Style). Along with this, bit of mixing styles in recent years has been seen the cause being the emergence of MMA with the inclusion of dojos which don't look quite the same as they used to. Regardless, below are some of the more well-known styles.

[Udo Moenig, S. C. (2012).]

Table 2. 1 Different well – Known styles of Martial Arts.

Striking or Stand-Up Styles	Grappling or Ground Fighting Styles	Throwing or Take Dow Styles	Weapons Based Styles	Low Impact or Meditative Styles	MMA- A Hybrid Sports Styl
Boxing	Brazilian Jiu Jitsu	Aikido	Iaido	Baguazhang	MMA
Karate	Russian Sambo	Judo	Kali	Tai Chi	-
Krav Maga	Shoot fighting	Hapkido	Kendo	Chi Gong based styles	-
Kung Fu	Wrestling	Shuai Jiao	-	-	-
Kick boxing	-	-	-	-	-
Tae Kwon Do	-	-	-	-	-

Thus, sport is a western idea of human advancement of body, mind and spirit by training under coaches. It is based on competition under rules and regulations, developing a democratic citizenship.

Martial art was developed to discover oneself through body, mind and spirit by training under masters to harmoniously level exit. However, Western and Asian philosophies are learning from each other on a daily basis and the world is becoming one.

For the success of organizations, revealing customer perception of service experiences has always been important (Cronin et al.,2000; Kelly and Turley, 2001; Rust and Oliver, 1994).

The development of martial arts as a global cultural product can best be illustrated in the case of Taekwondo(Ko and Yang, 2008).

In South Korea, although various forms of traditional martial arts have existed, leaders of Korean martial arts chose Taekwondo as the definitive Korean national martial art in an attempt to promote its development internationally (International Olympic Committee,2007

Taekwondo became an official event in major international sport events such as Olympics, Commonwealth Games, Pan-American Games, and Asian Games.WTF and its member organizations have contributed to the globalization of Taekwondo by actively promoting

the sport to be a formal competitive game in the Olympics.

Ko and Yang (2008) summarized the major factors of the globalization of martial arts including modern Taekwondo, which include transformation of values of martial arts training. modernization of the instructional curriculum promotional efforts made by governments of the martial arts countries-of-origin and increased marketing efforts in the martial arts business global expansion of martial arts through formalization and the diversification of martial arts products such as movies, fitness programs, and the emergence of a new genre of martial arts events.

2.4.2 Global Sport

Going global with WT (World Taekwondo Federation which is governing body and vehicle is responsible to push Taekwondo from being a Korean martial art to a global sport. Internationalization of Taekwondo was a result of the Korean and Vietnam wars by U.S. Armed Forces personnel. The main considerations that added to the achievements was the monetary miracle developed in Korea during the 1960's and 70's. Report 2008

By putting down endless efforts with the aim of promoting and advancing the art of taekwondo, unifying its members throughout

the world and furthering its promotion as an international sport, the president of Korean Taekwondo association Un Yong Kim and Kukkiwon in 1973 founded the World Taekwondo Federation. (Koharu, I.)

Becoming an Olympic sport from a martial sport it started forming continental Taekwondo unions that includes European Taekwondo union, Pan American Taekwondo, Asian Taekwondo Union, African Taekwondo union and going global by organising world Taekwondo championship in united states in 1977, West Germany in 1979, California in 1981 and United Kingdom in 1985 respectively. According to the World Taekwondo Federation (WTF), Taekwondo is defined as “one of the most systematic and scientific Korean traditional martial arts, that teaches more than physical fighting skills. It is a discipline that shows ways of enhancing our spirit and life through training our body and mind.

2.4.3 Taekwondo Population

Taekwondo starting its journey from its mother land Korea to spreading all over the globe has showed a tremendous development, from putting down incessant effort to become a sports for all, regardless of culture, race, gender, age, physical or mental disabilities in cooperation with various international sports organizations. It started

to take roots in 1973 with 17 member nations and expanding with 209+1 nations by the end of 2018

Table 2. 2: World Taekwondo membership growth

Year	Number of WT member nation
1973	17
1984	108
1990	140
1997	153
2000	160
2005	189
2013	204
2014	206
2016	206+1
2017	208+1
2018	209+1
2019	210+1

With inclusion of 50 countries from Europe,43 countries from Asia, 19 Oceanic countries,5 countries from Africa and Pan America with a total of 45 countries. World Taekwondo has branched all over the world. It was rigorous efforts of about 20 years that helped WTF succeed in establishing Taekwondo as a demonstration sport in Seoul Olympics 1988 and Barcelona Olympics 1992 where Seoul Olympics was the Golden time for Taekwondo.It was the first time, the world's

TV-watching populace got to see Taekwondo performed live, in perfect synchronicity in its motherland.

Ultimately these provided a tremendous boost of the globalization of Taekwondo as an internationally recognized world sport. The Other factor was when thousands of Taekwondo masters who ventured overseas to teach and promote Korean martial arts and Taekwondo was one of the biggest exports from Korea to the world. Report 2008 Combination of both Martial Art and Olympic Sport has continued showing progress in technical and operational aspects. It has been continuously evolving into an exciting, transparent and media friendly sport with all the demands of IOC and expectations associated any other Olympic sport.

2.5 Taekwondo in Olympics

It was during the leadership of World Taekwondo Federation founder president Un-Yong Kim that marked the golden key as it was during his leading where he not only successfully unified the Kwan in Korea but also tirelessly pursued Olympic recognition during his tenure.

Taekwondo along with being a sport peruses character building process that creates a well-rounded person and promotes devotion to

the welfare of mankind. Thus, this Korean martial art Taekwondo finds itself in accord with the Olympic philosophy and movement. (Kim, U. ,2005). During the 103rd IOC Session held in Paris, France on September 4th 1994. Taekwondo was accepted as an official Olympic Sport. This day was marked as the monumental day and to commemorate this historic day every year September 4th is marked as “Taekwondo Day”.In order to fulfil the safety standards of the IOC and get admission to the Olympics, various equipment modifications had to be done.

Shin guards, forearm guards, and headgear were gradually adopted as required safety devices. In addition, a soft mat was added to protect against injuries as a result of falling. The advancement in gear development for Taekwondo equipment and outfits led to an increase in worldwide marketing. (Udo Moenig, S. C., 2012). It was a long wait of 20 years for the WT (World Taekwondo)to succeed in establishing Taekwondo as a demonstration sport in the Seoul Olympics 1988 and Barcelona Olympics 1992.

Taekwondo had its Golden time where the world’s TV-watching populace got to see Taekwondo performed live, in perfect synchronicity in its motherland, providing a tremendous boost of the globalization of

Taekwondo as an internationally recognized world sport (Kim, U. (2005).

That is the reason why the IOC agreed that Taekwondo should be featured on the Olympic program, thereby recognizing the tradition, its educational value, and with a view to encouraging its development and expansion throughout the world by the virtue of its accession to Olympic glory. [Kang, S. (2015).]

As Korean traditional martial art Taekwondo follows the Olympism which is a philosophy of life, exalting and combining in a balanced whole the qualities of body, will, and mind. Blending sport with culture and education, Olympism seeks to create a way of life based on the joy of effort, the educational value of good example, social responsibility, and respect for universal fundamental ethical principles. The traditional Korean martial art, means "the way of kicking and punching". In Taekwondo, hands and feet can be used to overcome an opponent, but the trademark of the sport is its combination of kick movements as well as maintaining the Olympism philosophy that takes it much further.(International Olympic Committee,)

The Olympic Charter clearly states: "The goal of the Olympic Movement is to contribute to building a peaceful and better world by educating youth through sport practiced in accordance with Olympism and its values." Thus, Taekwondo in the Olympic Games are competitions between

athletes in individual bought together by their respective NOCs, whose entries have been accepted by the IOC.They compete under the technical direction of the IFs concerned.Taekwondo being a part of the Olympic movement, strives to realize the Olympic spirit shared by the Taekwondo family and by our member nations, Taekwondo seeks promotion of harmony and world peace through training and its educational program, sharing the value of Olympism with the world. (Choue , 2010)

Taekwondo as an Olympic sport has been evolving. It has now reached a new juncture which could determine our course towards the future of Taekwondo.(WT Report 2008)

2.6 Transition period

Upgradation in any form is important, the world is always redesigning with technology, and as already mentioned, sport will not be the exception. Every year, International Olympic Committee requests update to International Federation of games that partake in Olympic Games, it needs new equipment, new technology, and innovation in Olympic Games. Taekwondo all the time have had contention in its game, mainly in the combat zones. Taekwondo was in its best moments, but there was an issue with the referees in XXIX Olympic Games Beijing 2008, when Ángel Matos from Cuba kicked the referee on his face, in an event which promoted

union and peace. It was a place where people from around the world we're seeing the event, including the children, which proved to be a bad example for them, This alarmed the International Olympic Committee even more and asked World Taekwondo to fix the problem.

If Taekwondo does not do anything, it might have problems in Olympic Games, In the case of Taekwondo, it was the risk to be removed from the Olympic Games that occurred after the problem with the Cuban Angel Matos in Beijing 2008. International Olympic Committee asked the World Taekwondo to introduce new ways to mark the fights in more transparent format. The spectacle of Olympic Games must be constantly changing in all events and Taekwondo had its time in which it did not change much in itself, and International Olympic Committee was asking for a revolution. The objective of the sport remains the same deliver kicks and blows to the torso - it places an accentuation on the athlete's precision rather than strength. The upside to this is that while there is also less emphasis on showing beauty in movement, trainers have a more clear thought of how to prepare their athletes. Point is vital; dramatic skill and nothing less.

In Beijing, Taekwondo saw the absolute most sensational minutes the game had ever observed: Sarah Stevenson of Great Britain was eliminated from competition when the judges didn't catch a game-making blow she

delivered. After Television replayed demonstrate that she performed, the judges switched the choice and granted her the bronze. The International Olympic Committee and the World Taekwondo had their work cut out for them, though: clearly, judging by sight alone wasn't going to cut it. In the same tournament Aaron Cook, another Briton, put his semi-final loss down to "horrendous judging" The transformations during this period, ranging from the duration of rounds, the uses of electronic scoring protectors, the introduction of live video review during matches, the numbers of match refereeing officials, the point-scoring criteria, the competition area dimensions, as well as competition rule changes and modifications to their interpretations to be used by the refereeing officials. After too many trials and errors to meet certain criteria for scoring transparency of the IOC, an electronic scoring body protector, modelled after and inspired by fencing. The body protector (PSS – Point Scoring System) was introduced in all the major international competitions of taekwondo. (Kang, S., 2015)

2.7 Introduction of technology

Evolution Technology in combat sports has evolved in every form in the past decades and especially over the past few years. A significant amount of technology is becoming compact and wireless and data information is now

often being made available in real time for coaches, trainers and sport scientists. This has upheld the progress of innovation from lab settings to practice fields, courts, and sometimes in authority sport competitions.

“New technologies and inventions are the results of our curiosity, creativity, and problem-solving techniques”. (2017)

Thus it can be very well contended that utilization of new advances is changing not just the methods for training players and playing the sported in addition the entire experience of living and watching sport on TV over the globe. Advances in technology have had a profound impact on sport including:

- Analysis of sport performance and enabling coaches to greatly improve the quality of feedback to players/athletes
- Increase accuracy in time measurements of sport performance
- Enabling referees, umpires and sport officials to make better decisions on rule infringements
- Improvements in the design of sport equipment and apparel
- Providing spectators with better viewing of sport performance.

(Sev19)

President Choue says that learning from the experience of Beijing Olympics we will place our concerted efforts to ensure fairness and

sportsmanship in the upcoming WTF promoted /sanctioned competitions.

For this we aim to introduce an electronic body protector system and instant video replay system that can cross check any controversy over the referee decision.

Table 2. 3 Introduction of electronic protectors

July 19, 2005	1 st meeting of ad-hoc WTF Electronic Protector Committee (Seoul, Korea)
July 20, 2005	1 st electronic protector demonstration (Seoul, Korea)
March 25, 2006	2 nd electronic protector demonstration (Seoul, Korea)
March 28, 2006	Evaluation results of ad-hoc WTF Electronic Protector Committee announced
September 11, 2006	WTF signed an electronic protector recognition agreement with LaJust
January 12, 2008	3 rd electronic protector demonstration (Seoul, Korea)
March 4-5 2008	WTF Electronic Protector International Taekwondo Championships (Chuncheon, Korea)
December 2008	1 st meeting of ad-hoc WTF Electronic Protector Committee (Ankara, Turkey)
May 6, 2009	Electronic protector demonstration (Lausanne, Switzerland)
June 10-14	Electronic protectors used at 1 st WTF world Para-taekwondo Championships and 2009 WTF World Cup Taekwondo Team Championships (Baku, Azerbaijan)
October 14-18, 2009	Electronic protectors used at the 2009 WTF World Taekwondo Championships (Copenhagen, Denmark)
February 2, 2010	WTF Signed electronic protector recognition agreement with Daedo International
March 3-9, 2010	Electronic protectors will be used at World Qualification Tournament for 1 st Youth Olympic Games and the 8 th World Junio

	r Taekwondo Championships (Tijuana, Mexico)
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Table 2. 4: The Technology used in Taekwondo for scoring

Technology	Technology Used/Trialed
Adidas PSS(ESM) Introduced 2008	Records scores using information technology. Operates on the force. Transmits scores using Bluetooth Technology.
PSS(EBP) Introduced 2009	Development of product commenced in 1982. Records scores using information technology. Operates under 2 different modes: 1. proximity-based on closing an electronic circuit or force. 2. Transmits scores using proprietary technology
Video replay Introduced 2009	Allowed for an instant review of the referee’s decision. Review of points scored/ not scored. Provide multiple views and slow motion. Used in Olympic games for the first time in London 2012
Daedo PSS (E-Pro/TruScore) Introduced 2010	The development of the product commenced in 2002. Records scores using information technology. Identified points on a combination of proximity and force. First decision support technology used in the London Olympics 2012

2.7.1 Different Technology Implemented

After too many trials and errors To meet certain criteria for scoring transparency of the IOC, an electronic scoring body protector, modeled after and inspired by fencing. The body protector (PSS – Point Scoring System) was introduced in all the major international competitions of Taekwondo. [Kang, S. (2015)] .

]With this we are opening a new chapter to surge another way of change for the creation of a new image of Taekwondo. Our

new task is to make competitions more exiting ,to ensure transparency and internationalization of administration and to peruse transparent and far competition (WTF Report 2010) Hence, Electronic scoring systems are now required in competitions with the aim of reducing potential referee’s bias and promote the Olympic spirit of fair play [Koharu, I.].

2.7.2 Modifications of Rules and Regulations

The transformations during this period, ranging from the duration of rounds, the uses of electronic scoring protectors, the introduction of live video review during matches, the numbers of match refereeing officials, the point-scoring criteria, the competition area dimensions, as well as competition rule changes and modifications to their interpretations to be used by the refereeing officials. It can be further explained with a detailed table discussed below:

Table 2. 5 Scores and the technologies used for the scoring in Taekwondo

Rules and Regulations	Beijing Olympics Games 2008	London/ Rio Olympics Games 2016
Punch technique to the body	1point scored by the judges using hand-held devices Punch techniques are not permitted to the head	1 point scored by the judges using hand-held devices Punch techniques are not permitted to the Head
Kick	1 point scored by the electronic	1 point scored by the

technique to the body (non-spin)	technology	electronic technology
Kick technique to the body (spin or turning kick)	2 points scored by the judges using hand held devices	2points-consisting of: 1point scored by the electronic technology, plus 1 extra point scored by the judges using hand-held devices
Kick technique to the head (non-spin)	3 points scored by the judge using hand-held devices	3points scored by the judge using hand held devices
Kick technique to the head (spin or turning kick)	3 points scored by the judge using hand held devices	3points scored by the judge using hand held devices
The size of the mat	10m x10m	8m x 8m
Number of judges	4	3
Type of trunk and feet protector	ordinary	Electronic equipped with sensors
Methods of scoring points	Indirect judges admit points using electronic pads	Automatic registration of points by an electronic system. Indirect judges admit points using electronic pads
Recording a result of the fight after giving a negative point	The score of a player who performed an offense is left unchanged	From the score of a player who performed an offense one point is taken away
Scores recording	Points are recorded by judges by the means of electronic devices connected to the electronic board	Points are recorded automatically by an electronic system that

		connects hogu and a computer by the means of Bluetooth network and the computer is connected to a monitor which displays the results of the fight
Type of protest	Written, lodged after the fight at the head judge of the tournament. The protest did not affect the result. The protest is resolved in time	Video replay, lodged during the fight using the card in the colour which matches with a hogu of the player. The protest may have an impact on results of the current fight. The result of the protest is immediate.

2.7.3 Current New rules

Table 2. 6:Current Upgraded Rules

Techniques	Current rules and regulations
Punch technique to the body	1 point scored by the judges using hand-held devices Punch techniques are not permitted to the head
Kick technique to the body (non-spin)	1 points scored by the electronic technology
Kick technique to the body (spin or turning kick)	4 points-consisting of: 2 points scored by electronic technology, plus 2 extra points scored by the judges using hand-held devices
Kick technique to the head (non-spin)	3 points scored by the judge using hand-held devices
Kick technique to the head	5 points- consisting of:

(spin or turning kick)	3 points scored electronic technology, plus 2 extra points scored by the judges using hand-held devices
The size of the mat	8m x 8m
Number of judges	3
Type of trunk and feet protector	Electronic equipped with sensors
Recording a result of the fight after giving a negative point	From the score of a player who performed an offense one point is taken away
Scores recording	Points are recorded automatically by an electronic system that connects hogu and a computer by the means of Bluetooth network and the computer is connected to a monitor that displays the results of the fight.
Type of protest	Video replay, lodged during the fight using the card in the color which matches with a hogu of the player. The protest may have an impact on the results of the current fight. The result of the protest is immediate.

It has been recognized, to some degree, the technologies have also acted as transformers of the sport, necessitating the dimensions and skillsets of elite-level refereeing officials to have broadened and also now requiring adaptability to the varying technologies.

The applications of the technologies can now be attributed to the success of the Taekwondo competition at the 2012 Olympic Game, and subsequently, assist the sport in confirming its position as an Olympic sport. [(Kang, S., 2015).]

Taekwondo's most critical event is the best-ranking Olympic Games.

Taekwondo is not a daily sport on TV like soccer, basketball, but is not very popular. Baseball, etc., all the time on TV, people wait to see the good Takwondo event, and the best is Olympics. Sports like that are always on TV. The fans wait for 4 years to see their tatami idols in practice.

Almost every taekwondo player sees those hardships in the world.

Taekwondo was the ninth sport most popular in Olympics at the XXIX Beijing Olympic Games 2008, due to his excellent work in the fighting of Taekwondo in edition XXVIII Athens 2004.

In his telegraph post, John-Paul Ford Rojas said that the XXX edition of the London 2012 Olympics was the most widely seen in the history of the Olympics. The "reach" of the Games was 50,2 million, 87% of the population. Earlier, World Cup football reached 85%. (2012)

If "Bolt 's performance at the men's 100 m" was the most visited part of the Olympic games, because it was a historical moment that a page in the historical record of the games was written; the same page in the taekwondo case was one of the largest, it was in that position that athlete Steven López was the first taekwondo athlete in the fight of the 4 Continuous Olympic Games.

This historical moment of our sport would not skip the entire audience; this time, the Olympics had been special and some people had already awaited

the first Olympic games with an electronic protector (Taekwondo players' audience). The people who did not practice taekwondo were not upgraded to "new taekwondo" so they saw a very unique way to combat the modern system. The New Method should not think that it just works because the machine is now measuring a score that has no justification for measuring a kick with or without technique. Fighting without show kicks and the use of techniques to fight exciting battles is now in Taekwondo, and when a sportsman fails for advanced skills more than one skill, he is discipline. The company continually updates the rules to create a sport with less action, less spectra and less actual fighting, and does not allow the viewer to tackle athletes quickly.

Taekwondo was the twelve most famous sport in the games at Rio 2016. It is now Taekwondo who is out of this list and loses public in the top 10 of the most popular sports in the Olympic games. According to Mindshare, 75% of the 1,034 adults expected to watch the Rio 2016 Olympic Games.

That's not all Super Bowl coverage, but the Oscars and the Emmys have higher ranks. It's an experience that unifies. Almost everyone is drawn to it.(My Excellency, 2016)

The use of technology is theoretically one of the most important components for contemporary sports audiences to optimize their viewing (Cummins and Hahn 2013). The invention of an IRS led towards the

transformation of time (i.e., slow motion play reproduction) and space (i.e. close-up play with contrasting viewpoints, Mullen and Mazzocco, 2000).

Three types of sports foster technology (Leveaux, 2010) exist:

- Post-game match analysis,
- Specific incident review during the match,
- Off-field referee's advice to center referee during the match.

Among these types, specific incident reviews during the match may influence the flow of games because it requires stopping the game for immediate action to the challenges.

2.8.1 Perception of spectators and competitors: Use of scoring technology in Taekwondo competitions

The evolution of technology today is unprecedented (Meuter et al., 2005). There is no exception to the advancement of technology in sport. In the international community, Taekwondo has become a famous cultural and sports commodity. In a highly competitive world Taekwondo (TKD) organizations' effectiveness relies on their response to quick change (Yang, 2008, Ko et al., 2010 & Ko). Use of an electronic scoring function has recently developed as a way of determining a match and increasing the effectiveness of the tournament's whole activities.

One of the most important factors in assessing the interpretation of

market product events in the Taekwondo case is the rational judgment (Ko et al. 2010b). The technology for enhanced activities by electronic scouring systems and Tv analysis processes has also developed in international fencing and tennis organizations.

The World Taekwondo Federation (Chi, 2005) has created an electronic body protection (EBP) and scoring system in response to its demand for technological advances. This step was taken with the goal of continuing to develop Taekwondo into a spectator sport of the best quality currently available while providing the best possible product and customer support on the ground. The EBP rating system is to be updated for the Taekwondo event in the 2012 London Olympics and all subsequent Olympics (Kim 2010). It is the only Olympic sport which needs electronic gadgets and protective equipment, except a fence.

Conversely, it has its own shortcomings to have an online scoring system. As costs rise, product quality requirements have risen and technological products are not utilizable, organizations may face significant consumer resistance.

At present, Few studies for this form of programme, including fans, athletes, referees and media, were carried out to examine the perceptions and acceptations of key actors. The lack of systemic information may constitute a

major barrier to the development of effective marketing and business goals by Taekwondo organizations and event planners. There is clear on both sides of the unit.

- New technology market expectations (a US open taekwondo event-friendly online score system)
- Factors that have a significant impact on consumer attitudes and purchasing decisions.

Jae Ko Yong and. Al. states that the beliefs, Accounting for attitudes and desires of various population groups, based on demographic (independent) factors, is statistically considerably distinguished. However, generally, the participants highly experienced (four years or more) were generally less likely than participants less experienced (with less than three years) to perceive electronic score equipment. The system for the Taekwondo Turnings is new technology. Many of them also rely on retaining the traditional assessment system. Experienced participants prefer to get comfortable with a conventional score system. Many that were qualified for far too long in Taekwondo were more immune to implementing an electronic score system. Reform resistance is a real, potentially harmful barrier that producer organizations need to eliminate. Brand presentation and education are, as

described above, an effective way to educate customers who use older methods. Qualitative results provided Further information about consumer concerns, product preferences, Taekwondo program implementation and tournaments management using latest technology. Researchers with additional insights. The findings of this study essentially aim to reinforce standard practices in today's manufacturers and to provide some means to develop their services.

2.8.2 The Perception of Instant Replaying System in Sports

The application of technology can be one of the most critical elements in optimizing consumption by contemporary sports audiences (Cummins & Hahn, 2013). The IRS has changed time (e.g. slow play) and space (e.g. multiple perspective close-up play; 2000, Mullen & Mazzocco), which gives audiences a unique and distinct experience of watching TV compared with live watching. Their engagement leads to transforming the lives of viewers. There are two types of sport technology facilitation (Leveaux, 2010):

- (1) post-game match analysis,
- (2) specific incident review during the match, and
- (3) off-field referee advice to center referee during the match.

Relevant event reviews may influence the game flow because they interrupt the game immediately to solve the challenges.

Including IRS in the perceived fairness and happiness of the customer suggests that these experiences can be different due to intra-personal characteristics of customers of sports media (e.g. team identity and current awareness status) and contextual considerations (e.g. IRS Regulations and Forms 457) (e.g. tennis hawk-eyes, taekwondo wireless score system).

Chapter 3: Methodology

To assess whether Taekwondo is an onlooker sport, considering the innovation driven changes. Will it prevail with regards to establishing its situation in the Olympic games over the long haul? Uma(2003) characterizes explore as a sorted out, orderly basic, objective and logical request or examination concerning an issue attempted to discover answers or answers for it.

In this segment, the systems for picking the individuals, treatment of the meeting information, accumulation of the data, and in particular the structure and the technique of information breaking down will be examined. Phenomenology is frequently the hypothetical point of view that has been related with subjective specialists [Neale, C. B. (2006)]. The subjective research with a top to bottom meeting was led. This technique is viewed as the most proper to dissect the examination questions. These members have the chance to express their feelings and emotions in this manner giving point of interest experiences into the substances of how Taekwondo as an Olympic game has impacted the competitors, mentors and onlooker's life. This part characterizes and talks about every one of these segments in connection to this investigation. Qualitative research approaches are particularly useful in

discovering the significance people attach to different events they experience [Neale, C. B. (2006)].

.Yin (2015) Having said that qualitative research has five distinctive characteristics:

- (1) It helps the study of meaning in lives of people.
- (2) In a study it represents people's views and perspectives.
- (3) It covers the conceptual situations of which the individual is inside.
- (4) It covers the conceptual situations of which the individual is inside.
- (5) (Yin, 2015)It uses multiple sources of evidence to get further information “Questions of meaning, understanding, and process are appropriate for qualitative research” [Merriam, S. B. (2002).]

According to [Steinar, K. a. (1996)], Qualitative research is an exploration in which minimal information is known about the topic or questions of problem research. The purpose statement and research questions are intended in qualitative research together information from the participants in order to better understand their experiences.

3.1 Research Design and its Modes

In detail Interviews were directed to pass judgment on the frames of mind of Spectators, Athletes and Coaches towards Taekwondo, is it still an observer's game, considering the innovation driven changes. What's more,

will these progressions help Taekwondo to keep up its situation in the Olympic games at the since quite a while ago run? Interviewees could clarify their points of view plainly thus open-finished meeting and semi-organized meeting style was embraced. Moreover berg (2004) Expressed Qualitative research requires more notable time, greater clarity of objectives during the setting of the examination structure, and can not be estimated or dissected through the use of PC programs. This segment depicts the foundation of the exploration, clarifies why a specific strategy was embraced and its significance.

The subjective study meeting aims to represent and the ramifications of focal topics in the subjects' universe of life. The fundamental task in speaking is to grasp the sense of what the state of the interviewee is. A subjective study meeting aims to cover both a level of actual and a level of significance, but it is usually difficult to achieve on a level of importance. (Kvale, 1996)

A Qualitative research questioner intends to find the meetings claim system of implications; the examination undertaking is to abstain from forcing the analyst's structure and presumptions beyond what many would consider possible. (Steinar, 1996) The detailed interview is A qualitative study technique involving intensive interviews with a small number of respondents

to explore their perspectives on a specific idea, program or situation (Merriam, S. B. , 2002).

Interviews are of particular value to get the story behind the perspectives of a person. The interviewer can follow up on in-depth information about the topic. Interviews may be useful as a follow-up to similar questionnaire from the respondents, — for example for further review of their responses (Steinar, K. a., 1996)

According to the Boyce and Neale (2006), there are (6) steps to be implemented when conducting research using in-depth interview.

- a) The first step is to Plan in which we will identify the interviewees who will be involved to share the relevant information contributing to our research.
- b) The second step is to develop an interview protocol, These are the guidelines followed for each interview to ensure that the interviews take place in a constituent manner, thus increasing the responsibility of the results.
- c) After second step the next step is trained data collectors where necessary identify to train and use the interviewers that speak the local language
- d) The fourth step is summarizing the key data immediately and if necessary verifying the information given in the interviews.

- e) Analyzing the interview responses, in the form of transcribing and /or in the form of review data.
 - f) The final step is Analyzing data and disseminating findings as a planned process involving the consideration of target audiences and the settings where research findings are to be received and, where appropriate, communicating and interacting with broader policy and health service audiences in ways that facilitate the adoption of decision-making research.
- [Merriam, S. B. (2002).]

3.2 Data Collection

As the study is specifically based on South Korea, the population of the study were athletes, Coaches and referees of taekwondo from Korea. In our study we selected 5 athletes, 5 referees, 20 spectators, 5 coaches from South Korea and the spectators of taekwondo from all over the world. The total sample size of the study was 35. The athletes, coaches and referees were participants of international games like Olympic games and world championships.

The study is qualitative in nature. The data collected for the study was qualitative. Separate questionnaires were prepared for athletes, coaches, referees and spectators. These questionnaires had open ended questions. In which the respondents can describe their feelings, suggestions about the game.

An in depth interview procedure was adopted through emails, face to face interviews, video calls, telephonic interviews. The responses collected through these methods were firstly reviewed, after that useful information was collaborated from the recordings and mails. The interview transcriptions were further coded to make the data useful for the analysis.

The data containing transcripts of interviews, a wide range of records and historical documents, telephone interviews and memoranda, and are subject to rigorous and ongoing analysis. Throughout the study a fusion of 3 processes is involved: data collection, coding and analysis [Merriam, S. B. (2002)].

3.3 Selection of Interviewees

The interview participants were the former and current Athletes, Coaches Referees team officials, Fans and Spectators of the Olympic game. We also used the Library of World Taekwondo, Kukkiwon, Korean Taekwondo Association, Indo Korean Taekwondo Association and other sources to get information related to Taekwondo as a sport in Olympic game. The interviewees were selected randomly mainly focusing on South Korea.

3.4 Data Analysis

Considering that qualitative research is increasingly recognized and respected, comprehensive and methodical production of concrete and

practical findings is imperative. To be accepted as trustworthy, qualitative researchers need to demonstrate that data analysis was conducted in a precise, consistent, and exhaustive manner by recording, systematizing, and disclosing analytical methods with sufficient detail to enable the reader to determine whether the process is credible. While there are numerous examples of how to perform qualitative research, there are few advanced tools available to researchers to undertake a detailed and precise thematic analysis.

3.4.1 Thematic Analysis

Thematic analysis (TA) Is a common method for qualitative data evaluation in multiple disciplines and fields that can be applied in many different ways to many different datasets, addressing many different research issues. It is one of a cluster of approaches focussing on finding patterned context through a data set.

TA is best known as a paragliding term for a category of qualitative data analysis approaches that share a emphasis on the qualitative data identification of trends (significance patterns). TA's various iterations seem to share a degree of theoretical continuity, but they can vary considerably in terms of both the basic theory and the thematic production procedures. All the interview data were coded manually and categorized according to research questions [Braun, V. C. (2013)]. This research study follows some of the

important steps of the six data analysis steps :

1st Step – Prepare and arrange the analyzing results. This phase involved the analysis and translation of recorded interviews into word document transcripts.

2nd Step – Scanning data. Collect and combine the information and ideas that the interviewees expressed in the interview.

3rd Step – Coding process of In-depth interview. Gathered details about the material and arranged different categories. Specific details about the interview in each category were also included in genuine exchanges to ensure that members' innovation and feelings were kept alive.

4th Step - Using the coding process to create a setting specification (Pg. 189) Different categories were generated from the interviewees. Analysis was coordinated of all participants in each group.

5th Step – After coding and organizing the data. Thematic analysis was applied to achieve the objectives of the study.

Chapter 4: Findings

The aim of this research study was to examine the impact of change in the rules and technology affecting the spectatorship in Taekwondo focusing

on country of South Korea. The research findings are based on the analysis through interviews conducted, newspaper articles and observations during the research. The Interviewees provided differing amounts of information which is converted in the different themes that comprises of the narrative. Some participants talked about all the themes, while some of them made comments on one or two themes; and some participants made equal contributions across all themes. Thus, the view of all the interviewees are represented in this study. In our study there were four types of interviewees; 5 Coaches, 5 Referees, 5 Athletes and 20 Spectators (Total of 35 participants). All are athletes are former and current Olympian and world champions and coaches selected are national team coach, while referees are licensed with world taekwondo. The following themes were decided to examine the thoughts of Athletes, Coaches, Spectators and Referees based on the research questions provided:

4.1 How has new technology affected the fair play of Taekwondo as an Olympic Sport?

4.1.1 Transparency and fair-play

In general, the participants, especially coaches demonstrated and expressed sense of massive improvement as far as their technical aspects and innovation were concerned in terms of transparency and fair-play in the game like video replay.

One of the coach expressed that “The evolution of taekwondo from manual to electronic system, video replay has played a vital role and sufficient tool to bring transparency and fairness. Not only for athletes and coaches but also involves spectators of what actually happened in 8*8 octagon arena between the two fighters.” In the similar way another coach further emphasized on the expertise of video replay system usage in raising of game in terms of fairness. He explained “A coach needs to be very alert and sharp in using video replay card because if it used in perfect time at perfect situation it can change the momentum of the fight and mind-set of his/her player and if it’s not used properly it is complete waste of power.” The statements of coaches indicates the if the technology is used properly like video replay on time then it may change the game as player will get clear picture of his fighting style and he can change his strategy. Spectators also get more involved. Some of the athletes also shared their real life incident. One of them said, “Video replay is a great example of transparency. It gives a chance to rectify a human error and personally I have won a game with a video replay decision in the last secs of my fights.” Statement of the athlete shows that the video replay is very important feature of new format and it is very useful and could be considered as a game changer as it reduces the chance of every minute error.

Transparency in the game have not only come from video replay decision but also there are many other electronic gadgets which are used for reducing the bias of the decision made by the referees. An athlete stated “less of bias decision and human decision making errors. Everything is automatic you kick on opponent hogo and check through the scoring screen.” Hogo is also very useful as sensor scoring appearing on the screen brings change in mind-set of the player and also sets its rhythm during game time. Another athlete gave similar viewpoint on that “sensor scoring enables all the athletes to maintain the tempo of the game like when to attack and defence ultimately making optimum utilization of time and energy. And also the electronic scoring screen not only excites spectators watching the game live inside the stadium but also their support, cheer-up boosts the athlete’s morale during tough situation in the fight.”

The statements of all the athletes are showing that technology has made the game very transparent and fair, which increases the assurance of the athlete as they have no doubt of something unfair could happen to them. We can observe that the athletes and coaches are completely satisfied with transparency and fair-play with regards of the game.

4.1.2 Merits and demerits of the Tech - Game

Technology is often considered as double edge sword one side it

provides tremendous benefits and on other hand it may cause damages.

Following are the merits and demerits of new style of game expressed by are all participants:

Table 4. 1 :Merits and Demerits of the New Format

Merits	Demerits
Fair and transparent, video replay, screening of points	Senior problems occurring, Time consuming in decision making. It doesn't favor short height and old style players
The appeal against biased judgment is a significant advantage	Lacks enthusiasm, skills and power.
From athlete point of view fair play and everything could be monitored	No grace no more fun to watch. More front leg dominant players have forgotten to use their back leg.
Referee cannot cheat/ fair play, More clean game because of video replay system and other use of gadgets .	Sometimes players kick hard no points but sometime just touch fetch you a points. I mean it doesn't have good standards
Electronic system is good to reduce the errors	it's losing the originality and also it is restricting the game.
For a player when they kick higher they don't need to use much power. It eliminates human feelings also as there is less interference of referee in the match regarding the score.	They have to be very careful slightly touch also gets you score
May be good for the equipment manufacturing companies as they keep coming up with new technologies and new designs for uniforms, hogos, scoring systems and so on.	It has converted Taekwondo into a matter of disguise and laughter.

According to the differentiation made by the participants, It can be seen that the new game format is fair, transparent with video replay, screening of points, all being the advantages of the new game and on the other hand there

are few drawbacks of the new game format like the senior problems, it's time consuming, has less involvement of short heighted players, absence of enthusiasm and skills which causes lack of fun, grace and loss of originality.

4.2 What are the experience of athletes, coaches, referees and spectators in the global competition?

The second half of the findings abide into the experiences that the Athletes, Coaches Referees as well as Spectators have shared. The findings here are outlines of real lived experiences and opinions of the interviewees, classifying the themes into sub categories comprehending the key elements which would further outcast the shadow from our research giving an overall overview. The experiences narrates various facets of taekwondo as game on whole that indirectly acts as a link to the findings of our further questions. It may likewise fill in as a future reference to understand the disadvantages and positives from these experiences while structuring policies which involve sports advancements. Some of the main experiences of the respondents are as follows:

4.2.1 Experience of athletes

Athletes selected for interviews were 5, which are former Olympian and world champions. Some are active players while some are retired almost all the participants have played both old style and new style of taekwondo.

Through the detailed and in depth interview athletes have shared their experience and views regarding the Olympic sport taekwondo.

a) Difference in old style and new style of taekwondo

All the athletes were from Korea. When the athletes were asked about the difference they feel in the old format and the new format. Out of 5 athletes, 3 athletes relate to the old style, 1 of them is good to go with both the formats and 1 athlete is comfortable only to the new style of taekwondo. Former Olympian and 2011 world champion who retired in 2015 stating that “my love for taekwondo is only because of the old style as the new style is bit of awful style of fighting it doesn’t suit my game. Similarly another one stated - “Many of us would go with old format as we would any day love only old style and so few of us have put an end to our professional playing careers.” It differs from person to person, situation to situation and time to time while some of athletes find it difficult, some are leaving their taekwondo career while some cope up with time in adapting the changing style of game but deep inside these athletes liking could be seen more or less towards old style of the game.

One of the Athlete gave opinion allying towards both the old and new format of the game - “if change is what that is always constant in life and I’m

good enough as I know to play with both the soils but I definitely miss the old style of taekwondo.”

Another athlete who is current world champion believes that the old school style would have not favored his growth as much as the new style and further states that “old style taekwondo, I didn’t play but heard a lot and watched on social media platform, I’m lucky enough not to born in those era because I love new style game because it supports and favour me physically and mentally.” These statement express player feels fortune not to play with old style of game as it was furious and raw different from its game skills. The following table gives the main differences experienced by the athletes.

Table 4. 2The Main Differences Experienced by the Athletes.

Old style	New style
Earlier full of power strength	Now its bit complicated awful style of fights
Before the game was more thrill	Now the game is predictable
Before the attack and defense with power was achieved with various steps and tactics,	In today’s game, players with tall and long limbs have the advantages
Before the game was very graceful and impactful	The major difference is that the game has lost its grace
Inclusion of the Electronic Hogo which changed the game and more over the techniques changed and year after year.	Everything became more complex, Lack speed and transaction of kicks
There was no distinction between tall and short players,	The probability of short player winning is very low but its an added advantage for tall players in sensor system.

Sources: Authors observation using Primary Data

b) Changes in the thought process

Having a strong yet pacific mind set helps being more distinct on the tech game era, each second counts as the game demands focus, calmness and foremost performance, all at once. Former world champion and truncheon city professional team member further states:- “earlier the game duration was 3mins 3rounds compared to today’s rule, its 2mins 3rounds, we get more time to relax. These rule haven’t changed the aura of the game but have changed the thinking of athletes to score points.”

Another athlete claimed that earlier with given higher number of forewarnings players would take chances and give their best shot but today the game demands winning, for which no body would risk penalties, resulting in safe play with a clear mind set to just score as another athlete adds - “In old style game, before penalties many warnings were given which was negligible because of that more fighters were ready to perform or use advanced kicking techniques with high risk factor but in today’s new style of game penalties plays a big factor in winning or losing a fight so fighters play more cautiously by taking less risk of using advance kicks.”

3 out of the 5 athletes have similar views on the new game being too hard with rough warnings which not only affects the players boost but also

affects the overall aura for the spectators as well signifying of which he says-
“Considering the bold warning of referees, put players restrict themselves in putting up there 100% which overall reduces the tempo of the game thus making less attractive to watch for spectators.”

All these clearly states that there is affect in the mind-set and the game plan of an athlete as in the new game style the focus of the player is to win by scoring points. Due to the risk of penalties they all try to play safe which makes the game less interesting with lack of dense fighting like old format. In the old format the players did not play for winning and scoring points but in present format their goal is only to win and their thought process is also centered on winning the game only.

c) Changed Training Style

There has been a significant and drastic change in the training pattern with technology intervention as compared to old style of taekwondo. Athletes have further explained the following during the interviews:

2 out of the 5 athletes prefer the safe training with less power and state their experience as - “first it was real taekwondo, real martial arts very raw and full of power in terms of training and now it’s not like that, it is more of sport with legpower, flexibility and is spectator friendly. Safety of athlete is

considering the uttermost important aspects.” These athletes favored the new training style because safety is the most important factor for them.

The rest 3 athletes are still in favor of the old style training which had potential and real time training, benefiting everybody and not just the one sided tall game play. They further quote their experience as - “In the previous game, I think that the attack and defense with power was achieved with various steps and tactics, where physical condition was really important, and in today’s game, players with tall and long limbs have the advantages, for example, uses a lot of cut kicks rather than the traditional taekwondo kicks. The difference I see that today’s players goal is only to touch hogo by using various techniques of the foot regardless of power”

One of the athlete also emphasized about how the technical development has affected the training patterns he said - “After the Beijing Olympic, a year later in 2009 the game changed with inclusion of the electronic hogo which changed the game and more over the techniques changed year after year everything became more complex. See there is also major change in the training pattern as we used to concentrate about the speed, power, reaction timing and now all you have to concentrate on controlling the leg in the air and also in the middle. In today’s time most of the players lack speed, power and it’s just not the same as before.”

The statements of the players indicate that their training style is totally changed in the new format. Before they had to use power and strength while in the new format they just use the cut kicks and get training for scoring power. The new format do not demands for the physical strength and just favor's to the tall players. Change in training pattern resulted in change in mind-set thus changing their style of game in order to adapt with the current format of the game. Which is needed to adapt in order to compete in present format.

d) Drop in interest due to technology and new rules

Introduction of technology and new rules had its adverse effect on old style athletes. Former world champion and truncheon city professional team member stated - "Personally I weight 67kgs with the height of 167cm. In previous game height was not a factor to consider even if you weight same there was fun playing with your steps and strength to get the score. However, these days when you tend to face tall players they hang up their front leg and keep restricting the shorter player like me, no matter how hard stepping I try to get a score. I had a lot of such issues while playing. So finally I had quit playing in 2015."

The statement shows that the player left the game as it supports only to the tall players. In the new format height is very important no matter how

much physically fit the players is. Another athlete which is former Olympian and World Champion with similar experience facing difficulties to cope with the changing dynamics say “It’s over for me now I can’t adapt these complicated awful style of fighting.” Some have adapted and adjusted with game while some have suffered the consequences with the technology intervention. The technology and the new format was not really suitable for the players who played in old format so they left the game which can be considered as a very bad effect of the new format.

4.2.2 Experiences of coaches

All the coaches selected in the interview were the national team coaches of South Korea. Their experience in the game is the most important element as they are who make the athletes. Following are the views of coaches through in-depth interview conducted.

a) Biased decision making

Rules and regulations are the key element in formation of game which also helps in maintaining the fair-play and transparency so it can be enjoyed by all the people who are participating. Out of 5 coaches, 4 coaches find it very difficult to adapt while only 1 is satisfied with the constant changing rules. As one of them says “It changed my teaching skills because of changing the rule. I can say about 50% major changes happened.”

Another is in the view that the rules have bothered his training routines and made him to have purposeful choices , he stated- “from London Olympics 2012 the rules have constantly changed so frequently that it affected my training pattern style and making me take bias decision of choosing tall athletes over shorter ones for competing in tournaments.” These statements gives a clear picture that they are forced to select the tall players because this is what the new format demands. In some manner it makes that game unfair to short players and intended to tall players only.

While one of the former national coach is completely fine to sail in both the boats of new and old rules stating - “Yes for sure, I started my coaching since 2011 and I was a player too at the same time. I was coach when there was old-style at that time the new rules started to show up. So as a coach you need to adapt with both old rules and new rules. The old-style depends on power and strength more than that technical things. 2011 players are very tactical and used technics to kick dolyochagi with both front and back leg with speed and power but now most of the players are front leg players.” This statement indicates that the coach is ready to adapt the new format but at the same time he believes that the training style is changed and the new format game is only for front leg players and no need of much speed and power.

All the coaches were in the opinion that new rules and regulations changed their way of coaching. Out of five coaches 4 of them think that old version is better than new version while one of them thinks that every version has its own advantages and disadvantages.

b) Lack of interest

Out of 5 coaches 3 of our coaches feels lack of interest and insecurity with the new style of taekwondo. They have expressed their brutally honest views as follow:

Cadet and national team coach coach said- “I am doing this because it is my job and it has its importance till it is an Olympic sport, also the people of South Korea are following it just because it is an Olympic sport. If it is removed from Olympics, then everything will be vanished.”

Another coach had similar views stating “Roots and pure taekwondo everything will be lost.” Shows that the game is losing its legacy. These statements shows that the coaches believed that game is alive due to its membership in the Olympics and their doing it just as their job otherwise real taekwondo and their interest both are vanished.

Some strong thoughts were prescribed by our international coach with firm viewpoints completely indicating lack of interest towards the new tech- rules. He expressed his thoughts as - “Yes it certainly has, as I don’t

even consider the current Kyorugi format as Kyorugi, it's more like a video game, and hence I don't teach Taekwondo kyorugi of WT style, and probably never will, as I don't want the new generation to learn a comic fight sequence on the name of a dynamic martial art such as ours which was considered as one of the strongest combat martial arts."

The expressions of the coaches show that they really don't like coaching in the new format. They feel that in the new game format the game has lost its originality and it has become a comic game which they don't want to be learned by new generation.

c) Self-esteem and pride

It is indeed a sense of huge pride for a coach to see his trained athlete excel at all platforms and his inherent growth that boosts his/her self-esteem as one of them said - "It's great to see our students winning at the global level and its matter of honour for us, our respect in the sporting circles have increased and others sports persons look up to us."

Another coach expresses himself with great dignity saying - "I feel so happy for the students and South Korea as a country as well, my life changed after I started teaching taekwondo at a grass-root level where I have taught most famous and successful kyorugi athlete Lee Dae Hoon who was my former student"

At the end it's the satisfaction and pride that the coach wants to embrace and further another coach expresses - "we all talk about old style new style of taekwondo it doesn't matter for me what matters most is our students represent country at global level and win medals."

All these statements represent player-coach relation and bonding because of the game. All the coaches feels proud to make world class players.

d) Difference between old and new style

Coaches are considered to play a vital role in turning out to bring the best of the performance of an athlete. As many as 5 coaches who are national team coaches of South Korea out of which 3 of them prefer the old style and the rest 2 are good to go with the new style of taekwondo. All the coaches felt that new rules and technology has changed nature of game. The coaches quoted their views on current game as:- "Yes it certainly has changed a lot, as I don't even consider the current Kyorugi format as Kyorugi, it is more like a video game, and hence I don't teach taekwondo kyorugi of WTF style, and probably never will, as I don't want the new generation to learn a comic fight sequence on the name of a dynamic martial art such as ours which was considered as one of the strongest combat martial arts."

Another coach had similar views on agreeing with the old style and he is spectacle over the partial decision making, and further has his opinion

on the game dynamics states “Before 2008 and now the main difference is that the referee where involved in bias decisions, after 2008 with the introduction of electronic system the referees are bit scared and competition are some-how fair. before 2008 the game was more dynamic a lot of turning kicks, skills and knockouts many prefer old style because it more entertaining and attractive, whereas in new one athletes just want to take points with less skill and power. I believe it’s like foot fencing.” Likewise, the international coach added - “For players may be new style, surely not for the spectators, introducing some funny hand signals and assuming that the spectators understand the referee is a bizarre assumption. Points coming on the screens with minor touches on the hogo and hand guards doesn’t make it kyorugi. The beauty of Taekwondo was its range and variety of spectacular kicks, if it’s not there, as a spectator is not worth watching.” The above statements of the coaches show that they feel the present taekwondo in not real taekwondo as technology and new rules have totally changed it. The new format converted the game from fighting to touching game.

According to one out the five, believes that change is necessary and that it is for good. He comments about the necessity of transparency and accuracy focusing more on the growth due to technology advancements and further states - “Each one has its advantages, as per spectators view old style

is much preferred one and the new style is to be in Olympics. We are following new style with electronic protectors to be in Olympics so changed the whole dynamics. In the old style, we used all are speed power and strengths. But in new style, we are focusing more on the accuracy, mind techniques and plan of the match. I personally think change is necessary.” This statement shows that the coach believes in change, so he has no conspiracy with new format.

The answers of the coaches show that they really don't like coaching in the new format. They feel that new game format did not play any role to make it Olympic sport in fact it made it worse as it losing its originality and now it has become a comic game which they don't want to teach to the new generation while some of the coaches believes that new rules played a vital role to make it a Olympic sport, Taekwondo as a sport is growing and development so trails and errors are part of the journey.

4.2.3 Experience of referees

All referees selected are world taekwondo license referees officiating in big mega events like Olympics, world championship and Asian games.

Following are the points extracted through the thematic analysis method of are in depth interviewing:

a) Differences in refereeing before and after technology

Five referees were selected for the study from Korea to know their point of view about the new and old format of the game. Firstly, they were asked about what difference they feel after 2008. Out of 5 referees 4 referees which is 80%, referees liked new style of taekwondo only 10% liked old style of taekwondo. Considering the tech advancements helps to lessen the human errors otherwise. They consider that the game is now safer with context to the athlete injuries and also that humans should grow and advance themselves with the growing technology. As one of them stated- “Of course, new style because it gives you less tension and focuses on game as we are human we may make mistakes. Like with naked eye we wouldn’t see ahead score then the coach can take a video reply and change the decision of referee so it’s more transparent and fair. After technology taekwondo is more popular because in this age is technology age and world taekwondo has to develop according to Olympic standards in order to be in Olympic Games.” With similar views another referee added- “If the world taekwondo wants to continue to develop change after trial and error, it should prefer new ways and continue to make efforts. The old-style is appealing for spectators but the new style is safer as a sport and more appealing too.”

Many referees felt that new style of taekwondo is best for taekwondo to cement its position in the Olympic as a sport while one referee feels that’s

hampering the image of the game in the spectators.

20% sticking still to the old style as they strongly comment that originality is when we are connected to the roots and that is what audience loves the sport for. He stated - “Yes old style is real taekwondo. I don’t like new style because players only use cut kicks similar to side kick which doesn’t attract audiences and many say too it’s like foot fencing.”

Overall they described the following differences-

Table 4. 3Differences in refereeing before and after technology

Manual system	Electronic system
Before 2008 no irregular kick and very skillful techniques were visualized	These days many players use irregular kick like monkey kick, scorpion kick which are actually not a taekwondo kicks
There were more decisions by referees.	since the introduction of electronic protective gear, application of polarization decisions has declined
Earlier It was manual scoring	Now, it is electronic scoring there is less involvement of referees.
The old-style Taekwondo was harder.	Today because of the electronic System the fighting style is much softer and is very similar today to fencing.

Form the answers of the Referees it is clear that they feel the game

has become softer and easier after introduction of technology and new rules but on the other hand they feel that with new technology based decisions have removed the biasedness in the game. They feel that the new rules and regulations have reduced the involvement of the referees as the decisions in game are not driven by them in the present system.

b) Limited human intervention

Out of the 5 referees, 4 have their live experiences with the ease the technology has provided with the game. One of them stated - “now it is electronic scoring, less involvement of referees in the game and more use of Information Technology and gadgets to enhance the game which has developed considerably through constant trial and error and changes.”

The automating system has made them stress free as the other referee added - “It’s more comfortable than using the manual system as a referee we also have tension in the competition so technology supports us to reduce the tension and focus on more players and competition. On the similar lines another referee added- “It’s really comfortable and easy to use. In fact, it helped to reduce the pressure on referees.”

The statements of the referees clearly indicates that the new system is very convincing for them and it has made easier their work.

On the other hand 1 of the 5 referee senses that there is more or less

involvement indirectly in context of some rules as he says - “intervention is less but it has more involved us in technicality like yellow card and video replay decisions.” The referee gives a point of view on their increased involvement with technology.

c) Use of technology/ real life experiences

Technology plays a vital role and is a bliss if used wisely and has adverse effects if one is not handy with it, sharing his real life experience referee says, “constant changing of rules the referee also needs to be more alert and educated in terms of using technology for different kinds of scenarios where athletes tend to outsmart the referee to score points regardless of rules thus taking undue advantage of technology.”

Some referees are convinced with the up gradations and accepts it with all its fixings as another referee shares his opinion stating

“Overall it is satisfactory made the game transparent and fair but sometimes it takes long time in setting up.” On the same ground one of them also said - “Although electronic protector is convenient, it is necessary to correct it because error occurs sometimes. One of the incident during world championship in the sudden death round last few seconds both players kick together and scored points if it would have manual system I bet none of the referees would have given the score because from a naked eye its really

difficult to give decision sometimes but in such time technology plays it vital role in giving the right decision and deciding the winner of the match.”

While 1 of the 5 referees pointed to the many glitches experienced by him says, “As the game is more dependent on technology it has its own flaws like during the fights the electronic hogo and headgears stops working, powerful kick doesn’t fetch you points but sometimes slight touch also gets you a score, It’s Time consuming as compared to manual system.”

The statements of the referees indicates they found very adverse effects of technology and overall they feel technology have upgraded the game and made it fair and transparent than ever before.

d) Effect of technology on knockouts

All Referees believes that Number of knockout have decreased in the new format as they stated-

“In new style with current rules every 100 match’s you see knockdowns but in old-style before 2008 each 10 match you see knockout.

“Knockout is a great skill in taekwondo that catches the eyes of the audience. I think it has affected because of rules and electronic protectors it got safe.”

“Of course because it is more protective and more safety because of which there is low chances of knockouts.”

“It seems that the touch concept is more often use in the current game which

as ultimate affected the rate of scoring for higher points. Thus hardly you see knockouts.”

The statements of the referees’ show that in the new game format the number of knockout has decreased as in the new game format safety measures have increased which suits the sport to sustain its place in the Olympics under the law.

4.2.4 Experience of spectators

Interviews were conducted with 20 spectators who belonged to South Korea and they disclosed some of their views and feelings.

a) Spectators Preference between old and new

78% spectators like old format 11% are good to go with either of the formats and 11 % prefer the New style which means that a very small part of respondents like the new format. It presents that the popularity of old format is relative to new one. As they stated

“I really like old format because the fights were really intense and kicks were furious and fast as compared from today’s time new format it is restricted one because too many penalties so players play very cautiously they don’t open up. Which attracted me to view or keep a track on this game.”

“From point of entertainment I really like old format because the fights were really filled with action, athlete injuries are important so I’m fine with

both the style of the game but for the spectators it becomes boring with the new format.”

With the spectators majority in our interview preferring the old style of fight over new style shows that it’s a matter of concern in terms of popularity of the game that is affecting the spectators attractiveness towards the game or to keep a track on the game. A mixed yet fruitful output was observed summing here are some key elements that would provide a broader prospective as listed here after.

b) Core point of interest for spectators

The most exciting thing or part of game for viewers is kicks and speed and the flying Kicks. As most of them stated “The kicking and Punching is interesting and the skills oflegs to hit the other person with speed Turning kicks.”

Someone likes attitude, some likes punching, someone likes the technique. Most of the respondents have different view point on that. Only some of the spectators had similar view on that. It shows that the game has different things to catch the eye of the spectator. As they stated “What I like the most about the game is you cannot expect and be sure about victory or defeat until the game has finished and I also like to watch unexpected the performance with great skills in the game.”

“Attitude of athlete never die attitude.”

“The team spirit, the way each team supports their players, showing the act of sportsmanship spirit, respect for each and every player.”

c) Effect on no. of knockouts

The spectators also observed the decrement in no of knockout as they stated “Manual game was furious with insane combination of kicks with full of power and speed because of which there was many knockouts in a tournament.”

“Earlier in the first kick their used to be a knockout the game only was intense and hard hitting now-a-days I barely see any. With these protective gears usage and all I don’t sense athlete attitude to go for knockouts in game. In fact, they just want to play easy, simple game by getting the lead in the beginning and then wasting time by avoiding the rest of the time.

d) Popularity of live events among spectators

Filling millions of empty seats takes a huge amount of audience data, as well as a deeper understanding of consumer mind set, some spectators don’t feel like investing their time on entire match and surely prefers to just have an overview about the same one of them states that

“I will like to follow and see highlights on social media platform rather than going to stadium as I can hardly watch new style of fight not even more

than 5 mins it's just some few moments of the game are eye catching which are showed in highlights as a I said." This statement shows that the spectator is not that much interested in the game that he watch the live show which shows that there is a need of making the live game more popular.

There are few who would choose to see the match with their own favourable conditions as they say "Lee Dae Hoon, Ahmed Abhughush, Aaron Cook Servet Tazagueland Levent Tunacat, if all these star players are playing then I will buy a ticket to watch the fights in the stadium." For some of the spectators their favourite players is reason for watching it live. Some of the spectators made comments like "if cost of ticket are cheaper than I will buy a ticket to watch." Different spectators had different reasons for watching and not watching the live match.

e) Game knowledge

Game knowledge is a necessary aspect as it binds and keeps connected to the sport. 14% of the spectators understand the game and its rules while there are the other 43% who don't understand the rules and rest doesn't bother about the rules or the game they just prefer watching action .many of them made statements like "rules are easily understandable but sometimes tricky and quite interesting.

4.3 Recommendation to improve the spectatorship and viewer ship of Taekwondo in global competition?

Out of all the respondent across the 4 categories of athletes, coaches, referees and spectators, views emerged that revival of old style fights in present technology usage would make much more impact in terms of attractiveness of the sport. More than half of the respondents are with old style of taekwondo irrespective of rules and regulation along with electronic system. They believe innovation and safety is necessary to evolve and empower them with greater abilities and resources for their future in upgrading the standard of the game but keeping the actual essence and real value of taekwondo as a martial art is also important.

4.3.1 Suggestions from athletes to make the game more popular and entertaining

- Modification of rules with elimination of cut kicks, more of Cash prize
- Team competition are good for spectators entertainment but I think it cannot be include in Olympics because world taekwondo as to follow Olympic norms.
- Remove the electronic system bring back the real game.

4.3.2 Suggestions from the coaches to improve the sport's popularity among spectators-

- Increase safety of athletes and go back to real Taekwondo kyorooigi.

- Rules should be bit modified to bring back the old style of the game like remove the heel sensor.
- WT should start an international leagues which will make game more competitive and also bigger price money for athletes. All these can affect the level of spectatorship.

4.3.3 Suggestions for future improvement of overall judging systems in Taekwondo-

- Firstly add 1 more corner referee for clear vision and decision making. Second is allow grabbing for 1 or 2 seconds.
- For the sport, it is important that only the best referees are selected for the most important tournaments.
- Improve the scoring system of kicks caused by the simple offense, reviewing the rules that can result in a good kick that spectators enjoy to watch.
- World taekwondo is doing really good. But some female match's gets really boring so we should make more dynamic rules to make them fight in 6 minutes which will attract the spectators to come n watch are game.

In order for the technology to see less criticism and be embraced by taekwondo enthusiasts, the spectators must be involved in the decision making process or giving suggestions as they are major stakeholders in the game and it is not fair on their side to be kept in the dark so one of the spectator suggested that, "world taekwondo should focus more on entertaining aspects of the game considering spectators prospective and also

using social media platform to create awareness to increase its fan base, sponsorship and future market business opportunities to boom up the level and image of sport worldwide.” Detailed recommendations are further listed in the discussion chapter of this research.

Chapter 5- Discussion

This chapter has the discussion of all the advantages and disadvantages of new system and the points concerned to our research questions. Every change has its benefitting as well as contrary effects. In the same way the rule modification and technology inversion in taekwondo also has have favoring as well as opposing effects on different aspects of the game.

5.1 Taekwondo to Tech- wondo

There is a technical revolution taking place in taekwondo that changes the look of sport and can take time to get used to it. Tradition is replaced by new rules, which seek to make sport more competitive and include a fairer scoring system. But with every transition, the sport moves away from the old martial art from where it originated and that strong kicks

are emphasized which lacks in some modern matches. The application of technology can be one of the most critical elements in optimizing consumption by contemporary sports audiences (Cummins & Hahn, 2013). Eg – Tennis , Haweyes , VAR Football, DRS Cricket.

Four years after vests with sensors were introduced at London Olympics, athletes were using headgear that electronically scores kicked off the head at the Rio Olympics 2016. That is not the only thing: the fighters have reached an octagonal tap instead of a square and participants are for the first time are labelled to an additional point as they turn their backs in order to promote further techniques of spinning.

Even the spectators found a dramatic change in the approach to sport by combatants. Instead of violent fights and kicks which were just a decade ago marked as the taekwondo classics, taekwondo matches are more defensive, with every person using his or her legs protecting the sensors with the least tap theft.

There are examples of many other games that have used technology very efficiently which did not change the game but enhanced it more to the spectators as well. Through the years a limited number of innovations in professional football have had a clear and dramatic impact.

Professional football fans experience a realistic game from the

comfort of their own homes thanks to innovations such as on-screen graphics, VAR, high-definition (HD) and surround sound. In field-based technology, nearly every aspect of the 49ers games has had an equivalent or greater effect. In playing, interacting and improving the future players, technology has had an influence. In this game the technology has improved it in certain ways but have not changed its originality and the traditional way of playing. While taekwondo has totally changed in terms of playing style. In addition, Taekwondo moved towards becoming a point sport, not a true tactical, full-contact fighting sport. With the too much use of technology taekwondo has become a very expensive sport. It is not affordable for everyone. Especially for developing countries with low finances. It is not possible for them to buy such an expensive sport. But today's game format requires all the equipment. Then in these circumstanc it is not possible for them to give a chance to talent on taekwondo in their country. So it is also a very negative aspect of technology for the sport making it unreachable for many.

5.2 Change in playing style - Lack of interest of players

In addition, the electronic body defense analysis also "scores points with low impact forces - no kicks with high impact strengths are expected" (Ramazanoglu 2013). Rather than force, the angle of the ball and the direction of the impact on and between the body guard and the foot guard, which varies

even between systems, also plays a role in deciding a score. The kick angle often varies between the systems. Athletes also have to adapt their technique and prepare to the system's scoring needs. For instance, athletes have more often started to use the frivolous "scorpion kick," technique which has never before been considered legitimate scoring techniques in full-contact sparring taekwondo and thus not used until recently. For example, it has been the case that athletes have been executed. Because the methods are without projection of the power of real war, the electronic body defense system and corner judges often award them points. The performance and control of traditional, standard techniques is no longer important because any interaction with the PSS foot (or head area) can gain points. As a result, the technological shortcomings of the PSS led to a technological deterioration as well as to the fact that taekwondo became a point of play more and more. Most of the leadership of taekwondo probably don't care if taekwondo turns into a point sport, as they want to present taekwondo, again in line with the Olympic spirit, as less competitive and healthy sport for everyone. When tandem with an electronic body protector, the intensive use of the high kicks of the foreleg often awards points fairly easily for forced kicking (called cut kicks, usually not awarded with points) in a front leg strategy (trump and high kicks) during matches. Although accurate statistics on the precision use of kicking techniques are not

available before and after legislative changes, most coaches and sportsmen agree that sparring techniques are a strong reliance on for kicking. This trend has already escalated and became evident at Gyeongju [Moenig et al. 2012]. For example, in the final game of the World Championships in Pueblo, in the 2013 Championship with a weight of -66 kg the Iranian competitor managed to overpower the Korean competitor with front leg tactics (feinting, initiating or carrying out front knee or rods). The Iranian athlete started or initiated head-to - head moves about 70 times during this three-round match. He kicked the back leg twice on the other hand (one stubborn double shot at first round and one dumb round house shot at last). During the first two rounds, the Korean athlete had a similar record but tried a lot in the last round because the Iranian athlete led by points (2013 World Taekwondo Championships]. Although this match is an extreme example, similar gaming activity is the standard. Sadly, these matches are an embarrassment to the sport's reputation and are definitely not appropriate for a broader TV audience, in particular an Olympic. Athletes' exercise practices moved from round-house kicks to high kicks and kicks with the front leg. The fitness practices moved on. As a consequence, taekwondo matches today are mostly like karate point light-contact matches. Some of today's matches are also not attractive. Becoming not interested in the game anymore, because of all these factors. They quit the

game, because they are not fit for today's game format. Also the coaches interviewed have revealed that they are doing it just as their job as they have no real interest in the present game. In addition to the loss of identity the retiring athletes might have psychological and emotional complications like depression and self-doubt (Wolff & Lester, 1989).

5.3 Consistently vanishing of inheritance

For any sport it is very important to maintain its legacy. The relationship between sport and cultural legacy must be seen from two specific viewpoints. It is important to point out that sport is a tradition that we can discover. Sport itself becomes part of the fabric of a community, region and / or country. This occurs when the traditions, customs and history transcend sport and serve men. Sport therefore can help to cultivate and reinforce collective identities and provide informative acts that convey what the position or culture really is to the curious visitor. Often in all its forms, sports are a backbone for a fun person and can therefore bring more true visitors experience (Higham & Hinch, 2009). Sport is an integral part of a country's heritage. It is also very important for a sport to safeguard its legacy. The game has changed entirely now, with constant changes to the rule and improvements, with no challenges.

Culture and civilization, no doubt, contributes important role in

games and sports. That is why different games are famous in different countries like taekwondo is for South Korea. One cannot point out the time when the sports started but, they have been part of man's everyday life ever since he learned to struggle for his physical and basic needs. Similarly, when Koreans were ruled by Japanese they used taekwondo in military to fight but today's game is more of touching and scoring like a video game, it can't be used in military nor in real life. Later these activities resulted in competitive sports. People always learn from their culture and that is culture's essential feature that passes from generation to generation. If this continues, taekwondo will hamper its image. Making people dislike it and will not prefer following it. Therefore, it is going to be difficult to maintain its heritage.

Before becoming Olympic sport many Koreans masters travelled abroad to spread this sport world-wide because of their efforts today there are 210 member nation plus two refugee's countries which almost equivalent to football member nations. Now the coaches do not want to teach the touch game of taekwondo to any refugee because it is not possible for them as the new taekwondo lacks its own dynamic and traditional element, also at a competitive level it's very expensive in terms technology used . Everyone is not able to buy such costly equipment's so it is not possible for the experts to teach the new format game to refugees. With very less involvement of the

fighting skills, nobody is interested to learn the new game. Resulting in lack of learner's coming to Korea, which is indeed a bad sign for the game's popularity affecting South Korea's economy on whole as a country

It has been rightly said that, "if you don't know where you come from, you don't know where you are going". Heritage is considered to be the uttermost important factor as these game viewpoints undermine the endurance and improvement which derived the resources objecting the survival of national cultures, compelling them to encourage a further development under the foundation of globalization. For several countries, the primary content of cultural communication is globalization of sports. The prime way to encourage international sports communication is by conducting the mega events like the Olympic games, the Asian games and other sports events which not only helps in presenting a impactful sports contest for the world but it also displays the national cultural characteristics proudly taking forward remarkable legacies associated. Creating a significant impact around the world as the other nations will have better awareness and clarity of culture and national traditional sports culture. The Seoul Olympics was marked as an exceptional affair where the Korea's home grown sport that gave great chance to introduce the national conventional game to the world. (New York Times) Considering this, the decisions made by the World Taekwondo are of

immense importance not only for the Olympic factor but also concerns of Korea as a nation.

5.4. Aftermath of the Tech-Game on South Korea's Economy

A sport is considered to be one of the many important aspects for a country's economy. A study by RAUHALA KIMMO (2006) explains how important taekwondo is for the economy of Korea as a country. He studied the commodity from Sport Taekwondo as much as competition. The performers (practitioners), spectators (fans), clubbers (ex. TKD club in Hall), customers (customers, fans, etc.), organizations / sponsors (LG electronics, Korea Adidas etc., the governing body (Kukkiwon, WTF, ITF), products (Adidas, nidan in Finland and so on) and the owners of the TV rights everybody can be found at an event like the Olympic Games. It is clear that Olympic Taekwondo has everything in it. It's almost like a top sport, e.g. downhill skiing.

Crabbe (2006) mentions that sports can be utilized as a tool for building a bright future by building community participation, leading a way for education as well as employment opportunities and so on.' As we know that Taekwondo's origin is from South Korea. The game gives an identity to the country for originating it. Learners from all over the world reached to South Korea for learning Taekwondo as there were the specialists only in

Korea. Which proved to be a great source for income for the country. But now with the regular changing of rules and current version of the game, learner and coaches both are not interested in learning and coaching as the new format has lost its originality and popularity among spectators, new learners and coaches. Which is responsible for financial losses. The new format of the game is also not good for the economy of the country as in the present situation the number of practitioners and the taekwondo clubs are decreasing .It is highly needed by WT to focus on making the game tech-savvy as well as keeping the original taekwondo alive by bringing the old format back.

5.5 Effect on popularity (impact on popularity) to be a Olympic sport

The first stage of the process of being an Olympic sport is the recognition by the International Olympic Committee (IOC) as a sport. The IOC requires that an international NGO that supervises at least one sport administer this activity. Once a sport has been recognized, the sport moves to IF status. From that point, the international sports body shall enforce the Anti-doping Code of the Olympic charter, including successful performance checks on its athletes, while upholding the rules lay down by the Olympic Charter.

A sport may be recognized by the IOC, but may not be a competing

event. Chess and bowling are well-known sports, but not in the games. In order to be part of the games, the IF of the sport must apply for entry by filing a petition stating its eligibility criteria for the IOC. The IOC is then entitled to enter the Olympic program in three ways: as a sport, as a branch or as a competition within the field. It is also entitled to enter the Olympic program. Triathlon for example, which debuted in the 2000 Sydney Games, was accepted as an event. Women's wrestling was a new discipline in the Athens Games sport, and female pole vaulting was a track and field event premiered in Sydney. Acceptance rules slightly vary between a new sport, a sport and an event, but the purpose is the same.

Once an IF has submitted its request, it controls many rules and regulations as to the sport's participation in the Olympics. The Olympic Charter shows that men in at least 75 countries and on four continents and women must practicing sport in no less than 40 countries and on three continents in order for the sport to be accepted. The 'interest and popularity' of the Olympic Games must also be strengthened and their current traditions should be preserved.

Several additional rules exist, including prohibitions of "sports" and mechanical propulsion-dependent sports. Thus, chess, car racing and other renowned sports have been retained during the Olympics.

Taekwondo as one of the two Asian martial arts included on the Olympic program. Taekwondo made its debut as a demonstration Olympic sport at the 1988 Seoul Games, and became an official medal sport at the 2000 Sydney Games. The sport is practiced in over 200 countries and there were over seven million individuals with black belts in the world. Taekwondo satisfies all the rules of and norms of becoming an Olympic sport. But still there are always some backlogs in rules and regulations of every sport, same was for taekwondo. WTF made many rule modifications after 2008 Olympics in order to make the game more Olympic friendly. For any sport, popularity is very important to survive as an Olympic sport. In Olympics the popularity decides how many people does it attract, funded, media attention, and how the Olympics do feature the best athletes? The popularity of the sport, both men and women, may be perceived as a duty in the world. Nevertheless, given the parameters of this category, interest is not only to enjoy, but also the economic value of sport.

The popularity of taekwondo is decreasing after too much intervention of technology and rule modification. In 2012 taekwondo was ranked 9th as most popular game in Olympics which decreased to 12th in the 2016 Olympics. It is very bad sign for taekwondo as an Olympic game. There are many examples of games which were dropped from Olympics due to lack of

popularity. Popularity of a game is very important in Olympics as Spectators, media's, TV rights and sponsors are all at the fore, which explains why we're going to see rugby and golf in Rio and not squash – while we're going to be working with a global campaign. Rugby Sevens is based on popularity, sponsorship and advertisement in a strong trade event. Squash's success relative to golf had nothing to give, as fans, sponsors and media were substantially less involved. There is little common follow-up to sport itself.

It's not a continuous process, too. There are some 25 major sports in the Olympic program, including basketball, hockey and athletics. Certain sports are subject to constant scrutiny, including those which could be omitted in a given year (such as London and Rio), as supported by the local organizing committee for those sports. Softball and baseball, for example, have been included until 2008 and then removed for London and Rio. Similarly, Taekwondo's lack of recognition threatens to be removed from the Olympics.

The IOC has worked in recent years to manage the scope of the Olympics only by allowing new sports to take place simultaneously with the cessation of other sports. Sports that have already participated in the Games are checked regularly to see whether they are to be retained. In the 2008 Beijing Games, the Olympic Program Commission stated that issues have arisen when seeking to find facilities that meet unique needs of sports like

baseball and softball. The IOC must take into account the media and the public interest when selecting sports as part of the plan, as they form a core motivating force behind the Olympic Games, while at the same time controlling costs. The IOC thought of dropping wrestling, pentathlon and taekwondo at the 2020 Games in order to give chance to new sport in Olympic program which means taekwondo is at high risk of being excluded from the Olympics due to downsizing of popularity. As the spectators make a sport, without spectators there is no point to have it in Olympics. Our finding also suggests that viewers are not interested in the present foot fencing type Taekwondo. They all want the old Taekwondo back. In short it could be said that “no spectators no Olympic”. So it’s highly needed for WTF to make the sport spectators friendly to increase its popularity by bringing old school taekwondo back. For the success of organizations, revealing customer perceptions of service experiences has always been important (Cronin et al., 2000; Kelly and Turley, 2001; Rust and Oliver, 1994)

5.6 Recommendations to increase spectatorship in taekwondo

All the findings the past studies indicate that the new format has totally changed the old Taekwondo it has lost its originality, its identity for which it was a famous tactical fighting game converted into an awful touching game in order to be Olympic sport. All the participants of the study demanded

a change for bringing the old taekwondo back. They all favored that old taekwondo was more interesting and popular. Following are some main findings by the author to improve the spectatorship of game.

5.6.1 Technical corrections – There are some technical errors which are needed to be corrected, it will improve the Spectatorship as well as interest of the athletes. The following technical corrections are highly recommended from researcher's point of view

- a) Heel sensors should be given 1 point.
- b) Front sensors should be given 2 points.
- c) More points should be added for knockdown kicks as of now only one additional point is given for knockdown kick.

5.6.2 Campaign programs for prompting the game-

The WTF should start some campaigns in different countries for making people more aware about the game. If people will know about the game then they will show interest in the game their might be possibility of people coming to Korea for learning the game, it will have a good impact on country's tourism, economy and obviously on the game's image. Researcher found two major steps which can improve the game for not only for spectators but also for the athletes.

(a) WTF should start international leagues in order to make the game more competitive and money making program for athletes as in the present system no such international leagues are organized by any taekwondo committee. The international tournaments with a good prize money will be a kind of motivation for the players and these tournaments like other games will attract more spectators.

b) WTF should focus on organizing different events like G1, G2 and other large scale tournaments for the senior players to keep them actively participating and keeping in touch with the audience and also keep audience engaged regularly with the game. It will improve the spectatorship of the game as people like to frequently watch their favorite player's game. This is a simple procedure of more matches, more spectators and more players as the seniors cadets game will motivate new generation to be a taekwondo athlete.

5.6.3 Broadcasting on different platforms

The development of martial arts as a global cultural product can best be illustrated in the case of Taekwondo (Ko and Yang, 2008). Focusing on social media marketing, creating awareness by promoting real life stories of the athletes. Increasing sponsorship interactions and keeping the news and

other sources of media synergy updated

This is a very important factor for any game. There should be broadcasting of the matches on every platform. These days' social media is the most used platform by the young generation. They spend enough time on social media. If the game would be telecasted on these platforms then it will significantly improve the spectatorship. Furthermore, social media is the best tool of marketing and awareness these days, the social media users get instantly influenced by the content they see over there. It can be the easiest and fastest way for the game to get connected with the youth by showing them the game's culture and using the athletes as they influencers for marketing of the game as they can tell their own real life stories that how they started with game, how was their journey to become an athlete and how they feel to be an taekwondo player.

This will directly impact the image of the game in the mind of any viewer in the fastest way. Through the creation and dissemination of photographs the media often play a key role. There is no doubt that the intense media attention for major sport events is the key factor explaining the connection between sports and marketing. TV broadcasting (today still) undoubtedly has the greatest impact. More could be done by increasing sponsorship interactions and updating the news on social media platforms,

Television, mass media and any other source of media, the whole combination will have a greatest effect on improving the popularity among spectators and the game may enter in world of popularity with huge amount of young fans. Broadcasting on multiple platforms, not only the matches but also the every news of the game will bring the new era of the game.

5.6.4 Recruitment of Professional Sports Managers –

The need of the hour is to understand and employ community based models, and understand the contribution that sport can make in a community's development. It's an area of expertise, hence demanding proficiency in executing policies in the most efficient way. 'If sport policy and programs are imposed on communities without the local elements , it would fail to yield desired results Craig (2007)' and Vail (2007) emphasize that sport managers need to consider what the implications are for creating sustainable effective sporting opportunities that may result in positive social capital outcomes. There is a paucity of research on the ways in which non-profit and volunteer organizations partner to provide sporting and recreation services to disadvantaged groups (Cassity & Gow, 2005; Miller, Mitchell, & Brown 2005) and how sport management professionals and academics can study the broader social implications that engagement with

sport offers (Chalip, 2006). Sports managers may well be the source of laying a benchmark and could be lead for effective outcomes in social development.

5.7. Limitations of the study

The main data source used for this study – “Introduction of Technology in The Olympic Sport of Taekwondo”: Cementing of Sabotaging the Image of Taekwondo from South Korea’s prospective ” – provides data from respondents gathered through face to face interviews. As a case study, the extent of the study needs to be evaluated on a regular basis with a higher number of samples. Getting time from our participant especially national team coaches and athletes for interview was as expected hard to come because of their busy schedules. As language was also barrier while interviewing but somehow with use of technology things were figured out to make the report worthy with their detailed views and opinion. Participants expressed their views based on their past experiences which might limit the extent of the impact of the outcome of this report. And

during the interview conversation many referee where bias as they referred not to say any negative comments on world taekwondo

The other limitation that might hinder the research is that articles in Korean language was quite more as compared to the articles published in English language related to our research. Though the research is bounded by

its limitations, the findings lays a strong platform for further researches on sport for development technology concerning spectatorship.

5.8 Recommendation for future researcher

The research study was an attempt to understand the effect on spectators who can play an integral role in determining the image of taekwondo as an Olympic sport. Thereby, providing recommendation through our research which can further be adopted at a larger level at different parts of the world.

Firstly, the study was focused on one country only it can be done With more than 1 country with a view to get more precise productive results.

Secondly methodology utilized in this study is qualitative which offers detailed examination of the experience of 5 athletes, 5 coaches, 5 referees and 20 spectators providing us a small sample size of participants but in future research quantitative or may be mixed methodology approach can be adopted for larger sample size of participants to get more superior output.

Thirdly this is a unique kind of a research as no study is conducted. Additionally, it can also be used for other sports to get an overview about how the technology is helping them grow in positive and negative

aspects so that they can lay a strong foundation for better future.

Fourth, as mentioned in the report, the research is done in south Korea which is the birth nation of taekwondo and also it is a developed country further research can be conducted in the underdeveloped and developing countries as the data may differ and vary from country to country. These records may be very useful for world taekwondo.

Finally, with my research and findings we can create a strong platform with different indicators and guidelines for future research which may open new doors and valuable important recommendation for the world taekwondo to implement and bring justice to the sport to achieve the power to control their present and future.

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Appendix

Interview Questions:

Players

- 1) Were you a part of international taekwondo championship before and after 2008?
- 2) What are the difference you find before and after 2008?

- 3) What do you think current format is appealing for players and spectators?
- 4) How was your experience been with the current game format?
- 5) Do you think the new format is more transparent for players and spectators?
- 6) What are the positive and drawbacks of the current game?
- 7) What changes would you refer in new format of the game?
- 8) Would you like to have old rules and regulations back in current format of the game?
- 9) Do you think there has been effect on the number of knockdowns with the new format of the game?
- 10) Which major aspects of current rules are hampering the sport's popularity?
- 11) What if world taekwondo ask for a suggestion regarding how to increase spectatorship in taekwondo? What would you suggest them?

Coaches

- 1) Where you part of coaching in international taekwondo championship before and after 2008?

- 2) Does new rules and regulations brought changes to your coaching style?
- 3) What are the difference you find before and after 2008?
- 4) Do you prefer old style or new style of taekwondo?
- 5) Do you think the new format is more transparent for players and spectators?
- 6) What are the positive and drawbacks of the current format of taekwondo?
- 7) How is your experience been coaching with the new format of the game?
- 8) Do you think there has been effect on the number of knockdowns with the new format of the game?
- 9) Would new format of the game encourage new students to join competitive competition?
- 10) How helpful have the new technology been to promote taekwondo as an Olympic sport?
- 11) What if world taekwondo ask for a suggestion regarding how to increase spectatorship in taekwondo? What would you suggest them?

Officials

- 1) What differences you see before and after 2008?
- 2) How comfortable are you in using electronic gears gadgets?
- 3) What do you think current format is appealing for players and spectators?
- 4) What are the positive and drawbacks of the current format of taekwondo?
- 5) As an official which one do you prefer old style or new style?
- 6) Would you like to have old rules and regulations back in current format of the game?
- 7) How is your experience been as a referee with the new format of the game?
- 8) How helpful have the new technology been to promote taekwondo as an Olympic sport?
- 9) Which major aspects of current rules are hampering the sport's popularity?
- 10) Do you think there has been effect on the number of knockdowns with the new format of the game?
- 11) Please describe your suggestions for future improvement of overall judging systems in Taekwondo.

12) What if world taekwondo ask for a suggestion regarding how to increase spectatorship in taekwondo? What would you suggest them?

Spectators

1. Have u seen a Taekwondo international championship (World/ Olympics / Internationals)?
2. Are the rules easy to understand as a Spectator?
3. What did you like most about the game?
4. Who is your best athlete in the world? Why?
5. Which style of taekwondo you enjoy to watch old format or new format?
6. Do you think there has been effect on the number of knockdowns with the new format of the game?
7. Have you seen the event live on TV or at the venue?
8. Did you enjoy watching the Taekwondo sparring event?
9. What can be done to make Taekwondo more entertaining for the viewer?
10. Will you buy a ticket to watch a Taekwondo event?
11. Will you tune onto TV or social media to watch the events