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스포츠 매니지먼트 석사학위 논문

Master's Thesis

**An Analysis of Talent Development
in Korean and German Football**

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Abstract

An Analysis of Talent Development in Korean and German Football

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Despite the importance of nurturing talented football players in order to achieve international success, so far there have been no analytical studies that examine the factors critical for talent development in Korean football. In this study, the effective requirements for talent development in football will be thoroughly analyzed based on a literature review and the creation of a separate analytical tool to evaluate the current implementation of the talent development system in Korea. This study will also draw on comparative research identifying similarities and differences between talent development in the German and Korean systems. The German model, widely accepted as an advanced system supported by evidence, was chosen for comparison in order to identify the reliability of the analysis tool. This approach was highly effective because the differences between the two countries were identified and the potential application of the analytical tool to other cases in the future was confirmed. The

documentary data initially collected from both countries and additional data gathered through the qualitative interviews (n=8) was analyzed under the framework of a constant comparative method (Strauss and Corbin, 1994). While the German model turned out to be an effective one for providing football players with a supportive learning environment for developing talent, it was noted that the Korean model requires much improvement. The study also suggests that many core problems are related to aspects of the current Athletic Specialist System that have negatively affected the entire Korean football system.

Key words: Elite sport, football, talent, talent identification, talent development

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I. Introduction

1. Rationale for the Study

The 2014 FIFA World Cup is remembered for the Korean National Football Team's early exit following the one draw and two losses in the group stage of the competition (FIFA, 2014a). Despite high expectations of success prior to the World Cup, Korean football fans were extremely disappointed with the performance of the national team. As a result, the head coach resigned in a wave of criticism that emerged soon after the event. The outcome also presented many challenges and problems for Korean football, pointing to the need for a reevaluation of the current system. There may be numerous complex reasons for the national team's failure in the competition, making it hard to find the most appropriate solution to the underlying problems. However, the key point for evaluation in this thesis is whether the development of talent in Korean football meets the criteria for success, in other words, whether Korean football has met all necessary conditions for sporting excellence. Many empirical sport studies suggested that the sporting success of a country depends on how effectively the system and environment support the players recognized to have future potential for success. Despite the importance of talent development and a supportive environment for players, it is doubtful whether these factors have been given due consideration and have been utilized to form a holistic perspective in developing football players on the practical side.

It appears that Korean football governing bodies have not been taking advantage of existing academic research on the area of talent development. Generally, advice

from expert groups (mainly coaches or instructors) has been most influential and benchmarking has been the most frequently used method when implementing reforms have to be carried out in the current system. Although talent development in football has always been considered a crucial factor for success, little achievement has been made so far. Perhaps this study could suggest a new perspective in the field of talent development in Korean football.

2. Study Background

Talent development is usually recognized as a necessary part of becoming a high performance athlete, namely an elite player. Therefore, talent development and elite sports competition are inseparably linked. In this study, some historical background on the promotion of sporting excellence will be reviewed to effectively prepare the examination of talent development in football. Mainly, existing findings on general concepts and theories of talent development will be reviewed particularly focusing on the discipline of sports to ultimately find out the effective elements of talent development that can be used as an analytical tool to evaluate the current development system and environment of Korean football. The same analysis will be conducted for German football, the world number one in the current FIFA rankings (FIFA, 2014b), in order to identify any important differences between the two cases. The qualitative interviews will be carried out based on questions formulated from an analytical tool created by the researcher. This analytical framework was formulated through an in-depth review of the relevant literature on talent development. Coaches, players and administrators from Korea and Germany (n=8) were selected to

participate in the data collection process.

3. Study Purpose

The main purpose of this study is to encourage football administrators to better understand the importance of talent development and provision of a supportive environment for players in the context of Korean football. Additionally, the study pursues the examination of problems in relation to the talent development system in Korean football and presents implications for future suggestions. The outcome of this study can also serve as an important resource for football governing bodies when designing future policies related to talent development. On a last note, this study mainly relates to male football players. However, in the near future it is necessary to examine this topic in relation to women's football since it is developing into an important part of the entire system.

II. Literature Review

1. Elite Sport

1) The General Understanding of Elite Sport

Before reviewing any literature, common sense indicates that the purpose of talent development in sport is to lay a foundation for the next generation of high performance athletes. Increasing numbers of top-level players generally translates into greater potential for achieving international success on the global sporting stage.

In most countries, elite sport has been clearly distinguished from amateur sports participation and it is widely considered as sports being played at the highest level in any sporting context. Elite sport is organized in such a way that national sport governing bodies form national teams or competitively select national athletes to represent the country and compete on international level. Those athletes who are selected for their representative national teams are apparently classified as elite athletes. Hong (2011) defined elite sport as follows:

Elite sport is explained as a competition in sport at the highest international level with a priority put on sports in the Olympic Games programme, and on those sports with regular world championships, including team sports such as baseball and soccer. (p. 977)

In football, member associations recognized by FIFA, the world football governing body, are the national football governing bodies who organize and send

national teams to various international competitions. FIFA does not officially specify the definition of elite players. However, the term “elite” is often used in news articles and studies published by FIFA and other official functions such as FIFA’s annual seminars. For example, a female delegate from the German Football Association (DFB) used the term “elite female football players” in her presentation at the 4th FIFA Women’s Symposium in 2007 (FIFA, 2007). Another example is a study that was carried out to examine “Elite Players’ Perception of Football Playing Surfaces” in which the interviewees were selected from the teams in the highest tier of the French and Dutch leagues (FIFA, 2014c). Given this, we can assume that FIFA regards elite players as competing at a top class level.

2) The Elite Sport System

“A system is a way of working, organizing, or doing something which follows a fixed plan or set of rules” (Collins Cobuild Dictionary, 2001). A system can facilitate something in a positive way, however, it can also have a negative impact or does not affect anything very much. It can sometimes even restrict people’s behavior in certain ways. To understand the nature of elite sport systems and to tackle the research problems presented by this study in the following section, it is necessary to review some background on how the elite sport systems and policies have been established in both international and national arenas.

In international sport, the former German Democratic Republic (GDR) along with the former Soviet Union and other Eastern European countries were quite successful at the Olympic Games from 1952 to 1988 and their rational and scientific

approaches played an important role in the sporting success. (Green and Oakley, 2001). According to Green and Oakley (as cited in Merkel, 1995), Merkel discovered from the West German studies that the key components of the GDR's sporting achievements can be summarized as the scientific selection of youngsters at early stages, organized training under high quality facilities and coaching, a wide range of support from scientists, and investment in sports that have "German tradition."

It was asserted that this managed approach by the Eastern bloc countries in Europe was incorporated by Western countries into their elite sport development policies and it is suggested that policy transfer may have occurred (Green and Oakley, 2001).

However, despite the uniform implementation of such a managed approach, it is also suggested that diversity exists in many elite sport development systems. The differences result from the various social, political and economical contexts that exist in each country, the US government, for example, plays a minimum role in sports development whereas sport is treated as public service in France (Green and Oakley, 2001).

The ideological doctrine developed by communist countries to drive their athletes to outperform those in capitalist countries (in order to prove that communist ideology was superior to capitalism) ultimately underpinned the GDR's facilitation of elite sport. Elements of the elite sport systems created by these Eastern bloc countries were eventually transferred to western countries (Green and Oakley, 2001).

The desire for success in international sport has been no exception to South Korea. Although, further research has to be conducted in order to find out whether

Korea was also one of the countries affected by the transfer of elite sport policy from the Eastern bloc countries, it is certain that ideological conflicts have influenced Korean sport since its division into two Koreas after the Korean War in 1950.

It was indeed the military-led government of Park Chung-hee that gave birth to “sports nationalism” by laying a solid foundation for elite sport in Korea after the Korean War and attempted to claim its superiority over North Korea through sport (Ok and Park, 2014). In line with this, Park et al (2012) explained that there were some key measures instituted such as the creation of the “Athletic Specialist System” in 1972 enabling student-athletes to receive scholarships to advance to high-grade schools based on sporting performance at the expense of education. “The enactment of a military service exemption law in 1973 and the introduction of a lifelong pension system” also provided privileged status to athletes who excel in international sport (Ok and Park, 2014, p.248).

Another military government led by Chun Doo-Hwan followed in 1980. Chun used sport to draw people’s attention from politics, and strengthened the justification for the regime’s elite sport policies, by hosting mega sporting events such as the 1986 Asian Games and the 1988 Olympic Games (Park, et al, 2012). A legal framework was strengthened to promote national prestige through sport by amending the National Sports Promotion Law and further action was taken to back up the initiative such as the creation of military teams opening the doors for selected male athletes to focus on training during their mandatory military service (Park, et al, 2012).

The promotion of elite sport has been quite successful, as Korea has continued to excel in major international sporting events over the past several years. This has been

used by some as justification for continuing current policies and dismissing calls for reform and improvement. However, in reality, in the drive to support elites sports several negative aspects have emerged. These include elite athletes neglecting school education for short term sporting success, the various conflicts between athletes and coaches arising out of the success oriented system, and the physical and sexual abuse of athletes (Park, et al, 2012).

Apparently, this type of competitive sports driven system has spread across the world but, as was noted, some of its negative side effects have also been identified as is demonstrated by the Korean case. This study will later examine what needs to be done to minimize the risk of failure in athlete development and to ensure the effective nurturing of athletes in the current elite sport system particularly focusing on football. However, prior to that, the relationship between elite sport and talent development will be clarified in the next section to provide an understanding of why talent development rather than elite sport development was chosen as a research topic.

3) Talent development in elite sport

The elite sport system is concerned with the systematic and strategic development of athletes (Houlihan and Green, 2008) and establishes a developmental framework so that they can advance to a higher level of system that provides a better and advanced learning environment for their excellence of performance. Therefore, it is very crucial to design how the system first detects and identifies the athletes that have potential to become successful in the future and observes and nurtures them until they actually reach the maximization of their potential (Williams and Reilly, 2000).

These processes are crucial and are often referred to as talent identification and development as an initial step of the entire elite sport development as Gullich (2013) also introduced the two stages of the development of German football players in which the talent promotion stage precedes the elite promotion stage. Having learned the significance of talent development, this study will further draw its attention to this area and start with identifying the concepts of talent in the next section.

2. Definitions of Talent

It is very difficult to form a clear definition of talent because of its complexity of nature and the lack of theoretical certainty (Vaeyens et al, 2008). Because talent may mean the current state of a person's ability to have potential to reach high levels of achievement or talent may also mean a superior quality that has been already developed.

To avoid this ambiguity, Gagne (2004) explained in his theory that talent is “the outstanding mastery of systematically developed abilities and knowledge” (p.120). In other words, it is the end product as a result of developing natural ability. Gagne (2004) differentiated this “talent” with “giftedness” (p.120).

Howe et al (1998) did not exclude the possibility of the existence of innate talent in people. These experts referred to the view that the presence of special natural ability in some people will facilitate the attainment of excellence in particular areas. Their study examined existing evidence that children excel based on biologically transmitted capacities and that early accomplishments cannot be explained by any

environmental determinants. Presenting evidence contrary to this, Howe and colleagues (1998) showed that there is no early precursor of special ability and that we can hardly find individual differences when the initial conditions are controlled in the same manner for everyone suggesting that anyone can succeed in any domain as a consequence of training or practice. As a synthesis of these two arguments, it was also pointed out that since individual differences exist, it is fairly reasonable to acknowledge the existence of special inborn ability, however, individual differences result from early experiences such as training and practice.

Wolstencroft (2002) said the determinants of behavior result from the interaction between genetics and environmental factors. The genetically transmitted ability will facilitate the individual's effective response to training. However, it is suggested the optimum level of achievement can be reached as long as individuals get proper encouragement and opportunities that enable them to learn and practice (Wolstencroft, 2002).

In this study, despite the controversial debate on the nature of talent (either nature or nurture), a synthesis of both perspectives will be adopted with the view that talent is a special inborn quality but one that can be identified and developed over time.

3. Talent Identification and Development Models

In the business of sports, financial success is directly related to how effectively professional clubs identify athletes with talent and develop them into top level

athletes whose market value then hits the highest. Therefore, talent identification is currently a hugely important and profitable business (Wolstencroft, 2002). This justifies the reason for searching for potential star athletes even at early stages.

In many findings, talent identification is widely known as a process for recognizing potential for future success in athletes already participating in the sports system (Williams and Reilly, 2000). Traditionally, talent identification tends to predict the possibility of future success based on a mono-disciplinary approach with particular attention to one or a few combination of physical, physiological, psychological/cognitive, sociological and sport specific attributes (Williams and Reilly, 2000). In regard to this approach, the issue is that some abilities or skills of individuals are developed at different speed subject to different biological age and late maturing individuals can even catch up their early deficiency at later stages. Athletes can also improve their skills with the help of training or other supportive environment (Vaeyens, et al, 2008; Williams and Reilly, 2000). Therefore, it is important to take these characteristics into account when it comes to talent identification, particularly when early identification of talent is necessary. Williams and Reilly (2000) argued that science-based approach with a multi dimensional and longitudinal perspective was required in talent identification processes. It was therefore suggested that any program of talent identification would be able to understand the possession and characteristics of talent and the capability of such potential to be realized in the future (Wolstencroft, 2002).

Today's study focus has shifted from talent identification to talent development (Durand-Bush and Salmela, 2001). What is talent development then? Talent

development is a process created for those young athletes with potential to thrive in an appropriate environment that prepares them to successfully realize their talent (William and Reilly, 2000). Li and colleagues (2014) argue that talent development requires a series of programs to be implemented to prepare athletes to be world class performers. Their assumption is that high performance cannot be naturally attributed to innate talent and therefore requires athletes to train in a positive environment where they can pursue excellence. Unnithan et al (2012) assert that talent development is a natural continuation of the process of talent identification. It was pointed out that talent is not static but constantly changing and evolving therefore both identification and development processes are regarded as dynamic and inter-related (Abbot and Collins, 2002; Unnithan et al, 2012; Vaeyens et al, 2008).

Another concept often addressed in research findings on talent development processes is environment. Talent Development and Environment abbreviated as “TDE” stresses environmental factors that affect athlete development. Li et al (2014) mentioned the composition of environmental factors as “milieu, individuals, provisions” (p.434) in athlete development by adopting Gagne’s the Differentiated Model of Giftedness and Talent (Gagne, 2004).

What characteristics are needed to be identified for talent to be developed and how and under what specific conditions they should be developed are not independent issues but related to each other. For this reason, scholars have failed to clearly draw a line between those three notions.

While there are a number of talent related models in different disciplines, the theoretical backgrounds and focal points of each model are different from one another.

Some have placed emphasis on natural traits, some on environmental factors or some on both of them depending on their own understanding of the nature of talent. There is no standardized model which every sport practitioner can refer to as an ideal model yet since each of them has strengths and weaknesses.

It is important to create a talent development model because it will guide the way athletes are developed in terms of financial support and resources while such model will play a fundamental basis for developing talent in a coherent and consistent way (Wolstencroft, 2002). However, due to different characteristics of sports and different patterns of athlete development in each sport, it is not easy to develop a talent development model that can be applicable to all existing sports universally. Despite this limitation, many scholars have tried to come up with one that they hoped would provide a fundamental basis for sport practitioners to follow. It is therefore necessary to review some of the existing models that have attempted to apply to sports so far.

Bloom's theory of Stages of Talent Development (Bloom, 1985) presents three stages of talent development which are recognized as "Initiation", "Development", "Perfection". The performer, mentor and parents are the main actors involved in the athlete's developmental process and transition from one stage to the next stage is achieved "not by chronological age but by the completion of certain tasks, the development of relationships or attitudes or the achievement of learning." (Wolstencroft, 2002, p. 64). Similar to this stage based theory, The Pursuit of Excellence model (Williams and Reilly, 2000) introduced the four stages of talent development as "detection", "identification", "development" and "selection" which

then have been adapted by other scholars such as Vaeyen and his colleagues (2008) later. Talent identification and development remains as the core concept of the expanded theory which includes of the stage of “detection” prior to “identification” and “selection” after “development” in the whole process.

In the theory of Deliberate Practice (Ericsson, et al, 1993), what people believed as innate talent is actually the end product of 10 years of intensive practice. They believe that in order to become an expert in any domain, a tremendous amount of effort must be expended in a very structured way over a long period of time, and supported by a goal-oriented approach regardless of inborn ability. The weakness of this theory is that it puts too much emphasis on practice and disregards many other elements that are required in athlete development.

The theory of Long Term Athlete Development (Balyi & Hamilton, 2004) shares some common concepts with the Deliberate Practice theory because it acknowledges the importance of a long term approach to training rather than a short term approach with an emphasis on immediate performance. The model suggests an ideal athlete pathway requiring specific training and competition at six different stages based on chronological age. However, it also emphasizes the importance of sensitive periods of athletes during the maturation process where the design of optimal individual programs is required. Taking into account the fact that there are different patterns and characteristics of athlete development in different sports, the model classifies sports into early specialization sports and late specialization sports. The model also describes the various stages for the developmental process of athletes a bit differently.

Avoiding the existing controversies on the interpretation of talent, the

Differentiated Model of Giftedness and Talent (Gagne, 2004) clearly differentiates talent from giftedness. It explains the transformational process of giftedness into talent meaning that genetic traits of individuals can be further developed by environmental and interpersonal catalysts and chance factors. In his word, talent is “systematically developed skills” through the above process (Gagne, 2004, p.120). The model is originally designed for all domains of talent development, therefore, it would require further study on its applicability to sport.

The theory of Athletic Talent Development Environment model (Henriksen, et al, 2010) presents two working models which serve as a framework for a case study of a Danish national sailing team. The model places an elite athlete in the middle of a circle in which he interacts with the other components within the environment. The second working model is called “Environmental Success Factors” which compensates the first working model. With the human, financial and material preconditions initially provided by the environment, the model demonstrates how daily activities of training, competition and camp can lead to individual and team achievement as well as organizational development. This model places emphasis on environmental factors.

4. Effective Talent Development in Sport

The previous sections reviewed the nature or nurture debate on talent in general and explained how they are perceived in the field of sport by examining some of the theories and models and the process of talent identification and development. In continuation, the effective elements of talent development were drawn from

additional findings and formed as a basic analysis tool to compare both systems and environments of Korean and German football in Chapter IV. The researcher organized the key components of effective talent development into three conceptual constructs.

1) The System

For any plan to be implemented, a certain set of rules and structures have to be established. It is also required to have a party or organization that is held responsible for running the system, too. Without the proper establishment of event management, a sporting event cannot be organized according to plan. Although there is a different level of sport autonomy depending on the national context, the role of every national governing body is generally very important. In most cases, the national governing body is responsible for elite sport and talent development. Pankhurst & Collins (2013) described the national governing body as “system controller”, the organization held responsible for policy and systems. Therefore, it is important for the system controller to understand the effective development of young talents. The system controller should successfully deliver core values and messages to its key stakeholders which Pankhurst and Collins (2013) mentioned as organizations, coaches and parents. There should be quality relationships between the stakeholders and with the athletes themselves (Pankhurst & Collins, 2013).

In talent development, the vision of national governing bodies is related to the goal of developing high performance athletes and they should have long term goals to fulfill that objective (Martindale et al, 2005). In effective talent development, such

vision and long term goals successfully bring the whole system together to ensure that processes are effective in assisting athletes to attain their fullest potential (Martindale et al, 2005).

In this research, the Korea Football Association (KFA) and the German Football Association (DFB) are the system controllers who play a significant role in running their talent development programs. Whether they play a key part in talent development will be discovered in Chapter IV when we address the three research questions.

2) Key Supporters

Many studies have examined the roles of individuals that affect the development of athletes within the football system. Football players are directly influenced by coaches on and off the ground. The quality of coaching skills influences the youngsters in the learning process significantly. The further development of promising young players may largely depend on how well coaching is provided to the youngsters. Parents tend to seek great coaches before they send their children to football clinics. More importantly, coaches are responsible for creating an appropriate environment for players to be consistently motivated and enthusiastically participate in football. Nowadays, coaches' roles are not limited to teaching football specific skills, as the research proves, they need to take into account various elements of the developmental process of the player.

To train young athletes requires different training methods considering their ages meaning that it is required for coaches to have different skills and approaches

too (Cote et al, 2010; Bloom, 1985). Although many national governing bodies and clubs run coaching programs and issue relevant licenses that match specific age categories of young athletes accordingly, there is a lack of evidence regarding whether coaches have sufficient information to judge young athletes' "developmentally appropriate physio-mechanical and psycho-social skills" in coaching education (Pankhurst and Collins, 2013, p. 91). It is required for coaches to have good knowledge and appropriate training methods because coaches are one of the key stakeholders in the talent identification and development process (Pankhurst and Collins, 2013).

Creating an appropriate learning environment is not only the coach's responsibility. While young athletes spend a lot of time with their coaches on the training grounds, they should also be properly guided to develop their talents outside of the pitch. Most of the practical and financial assistance come from the children's parents and a variety of support networks (Bloom, 1985; Martindale et al, 2005).

According to Bloom (1985) and Cote (1999), it is important to take note that young elite athletes receive parental support to cope with the demands of sporting success. Research highlights the positive role of parents as a key requirement in the talent identification and development environment. This has been confirmed by Bloom (1985) who argues that child oriented homes effectively shape young athletes into successful ones with the help of parents who understand and foster the key qualities of performance that are required for successful athletic achievement (Pankhurst and Collins, 2013).

In school, children can develop basic physical skills by participating in physical

education, however, they may not sufficiently enhance their sport specific skills required to reach the professional level of the sport. However, many scholars suggested that schooling helps children to enhance children's cognitive and academic development (Ceci, 1991; Bailey and Morley, 2006) enabling them to learn life skills in case of failure as an athlete.

As such, the importance of school education has been highlighted in athletic development, however, it is very challenging for athletes to achieve these objectives. It was suggested that a flexible school education can help athletes to deal with this dual burden of pursuing academic and athletic training and to create a healthier and more productive process of talent development (Li et al, 2014).

3) Player Development

Scientific and multi-dimensional talent identification

It has been a common practice for coaches to use their own knowledge and experience to identify and select players who they believe to have the potential to succeed in the future. However, this approach based on the subjectivity of experts on the field can sometimes lead to misjudgment and inconsistency (Unnithan et al, 2012).

With the help of science and technology, talent identification in sport has made some notable progress. The science based system complements coaches' decisions by helping to create a holistic and multi-dimensional approach in talent identification processes (Unnithan et al, 2012). However, Abbott and Collins (2002) examined the limitations of the current science based talent identification processes which stress the

physical and performance capacities with less attention being paid to the other important skills such as psycho-behavioral capacities. As a result of that, late maturing athletes are likely to be eliminated in the identification process, therefore, in future, it was suggested that growth and maturity status should be taken into account (Vaeyens et al, 2008). Mini soccer can be a useful method to a certain degree to gain some multiple benefits of identifying technical, tactical and physiological skills on small sized pitches along with scientific assistance in football (Unnithan et al, 2012).

Avoidance of early specialization and success

There is the tendency to favor early specialization in sport. However, empirical evidence suggests that to be more successful in terms of the development of sport specific skills, athletes need to develop a broad range of basic physical skills in advance (Martindale et al, 2005). Such generic fundamental skills need to be developed in a systematic way and acquired by the age of 11-12 in order to achieve success in sports in the future (Martindale et al, 2005).

In regard to early specialization, Gullich and Emrich (2014) argue that rapid adolescent achievement can be promoted by early specialization but early specialization did not necessarily lead to future adult success. This means that although high achievement was obtained at youth level, no guarantee of success could be anticipated at adult level if senior achievement were stressed in any sport program (Pankhurst and Collins, 2013; UK Sport 2012).

Some experts assert that sports institutions would rather assess young athletes with the criteria of adult performance than develop the existing abilities in athletes

from a long term perspective (Pankhurst and Collins, 2013). This is worrisome because it is known that except mental characteristics, the other skills and abilities displayed at adult level are not apparent in youngsters (Pankhurst and Collins, 2013; Bloom, 1985). Mentality is something that cannot be trained easily at later stages, therefore, should be developed systematically from early stages.

It is suggested by many scholars that young athletes should not fall prey to early (de)selection testing and a large number of youngsters should get the appropriate developmental chances (Martindale et al, 2005).

Mental Support (Motivation and Role models)

To determine the scope of mental or psychological skills is difficult. In their study, Martindale and colleagues (2005) distinguish attitudes, emotions, motivations and desires from other practical skills such as concentration or goal setting abilities.

There has been an extensive range of studies on these psychological attributes in sport because psychological skills have been regarded as an influential factor that impact the performance level of athletes. In the research conducted by Gould et al (2002), psychological tests were conducted on successful Olympians to identify their psychological characteristics to determine success factors. The test result showed in line with the previous findings that Olympic champions possessed self control of arousal, a high level of confidence, focus and positive imagery/self-talk and concluded these skills need to be developed to be a successful athlete (Gould et al, 2002).

You may have witnessed many examples of sport stars who are struggling with

mental difficulties failing both on and off the field. Although psychological abilities may not be the most significant quality for sporting success, athletes with strong mentality can outperform competitors and maintain strong at an elite level (Martindale, et al, 2005).

Psychological skills can be learned and taught in a systematic way although there seem to be inborn mental characteristics that are transmitted by individuals, (Martindale, et al, 2005) meaning that environment plays a certain role in development. Among the institutions and individuals in the system, parents and coaches play an essential role in the development of psychological characteristics of athletes (Gould et al, 2002). Particularly, when young athletes advance to the stage of pursuing high performance in a specific sport field, they will have to face and overcome difficulties of injury, pressure, the loss of interest in the sport and many others. In such times of setbacks, positive feedback and supportive messages from parents can enhance the level of children's self esteem and motivate them to continue the sport (Cote, 1999).

Motivation is apparently a very important mental quality that acts as an inner drive for an individual to pursue sporting success (Martindale, et al, 2005). What drives people to do something comes from various reasons but mainly from within. Martindale and colleagues (2005) have referred to this as intrinsic motivation and self-determination and argued that a coaching environment with the appropriate amount of motivation and support is important to develop such skills at more advanced level. While the enhancement of motivation in individuals can take place in many different ways, the utilization of an athlete's influential person can help to make

continued efforts to fulfill the goals in the same or similar manner that the role model has accomplished in the past. Such attitude can later facilitate talent development more effectively. As seen in this, goal setting, role models and motivation are inter-related to each other and it is suggested that the coherent integration of different mental skills would therefore be effective (Martindale, et al, 2005) and they can be systematically trained as part of talent development as mentioned earlier.

Individual Growth and Maturity

In football and other team sports, many coaches would try to compensate for the shortage of skills by selecting athletes with physical superiority because there are noticeable differences of performance between individuals in the same age group at youth level due to the significance influence of physical and physiological abilities.

However, these early advantages experienced at youth level are not proven to be extended to adult level (Le Gall, et al., 2010; Unnithan, et al 2012). Research shows that there are late maturing athletes who eventually make up for their deficiency in early stages and outperform their competitors at adult level. Quite often, these late boomers are ignored by the current talent identification system in many cases which tend to select athletes based on the current performance taking advantage of superior physical attributes (Williams & Reilly, 2000).

In view of the above, the chronological age does not progress with the athlete's maturation process (Vaeyens, et al, 2008). Many scholars insist that training must be designed in a way that it meets different individual demands of youngsters who have different maturation processes and ages by introducing different types, amounts,

periods of training (Pankhurst & Collins, 2013). It requires, therefore, clubs and coaches to consider individual development processes for their effective development of young athletes.

Individualized Development

In the previous sections detailing the elements necessary for effective talent development, it was noted that the dynamic and individualized nature of development can be attributed to the unstable and variable characteristics of talent (Abbott and Collins, 2002; Unnithan et al, 2012). This makes it difficult to predict how much a person can achieve and perform in the future. Therefore, Martindale and colleagues (2005) suggested that systems must be flexible to accommodate such variations (Martindale, et al, 2005). It is important that young athletes are treated as individuals and training programs must be suitable to meet the different state of individual maturity. In transition periods, youngsters need great care because it is not easy to cope with many issues and problems during a time when they are vulnerable. This sometimes causes young athletes to drop out of the sport easily and Martindale and colleagues (2005, as cited in Rowley, 1992) have asserted that these changing periods are vital for the development of athletes in future. Therefore, individual attention is required for athletes to continue to be involved in the sport. Last but not least Martindale and colleagues (2012) placed emphasis on giving opportunities to as many youngsters as possible.

5. Research Questions

As mentioned in Chapter I, since the researcher was initially interested in talent development in Korean football, the research strategy began with raising the question of how to examine the effective development of football talent in Korea. Following a review of literature in this Chapter, the key constructs of talent development were identified and helped the researcher to decide what to analyze in the existing system. Also, the effective elements of talent development were confirmed and helped the researcher to determine how to evaluate the existing system by creating an analytic tool. Based on this approach, the first two research questions are the overview of Korean football and the analysis of its system and environment.

Along with this, a comparative analysis between two different countries, preferably by choosing one superior football powerhouse, would yield some important implications for the improvement of the current system. Therefore, the world champion, Germany, was selected. The criteria that were used to select Germany as a comparative model are as follows: the current FIFA rankings, the popularity of football, the size of the football population, the quality of professional football, the richness of football history and tradition and the level of organizational competence. Additionally recent success in international competitions was also considered. Germany lifted the champion trophy at the 2014 FIFA World Cup in Brazil and has also achieved some remarkable results at the club level. Similarly, the third and fourth research questions are the overview of German football and the analysis of its system and environment.

The last research question is a comparative analysis and discussion on the results of the two systems and implications for future suggestions for Korean football.

III. Methodology

1. The Analytical Tool

In order to answer the research questions suggested in the previous Chapter, the researcher would need to create an analytical tool and narrowed down the conceptual components to three keywords; the system, key supporters, and player development. After determining that these concepts would constitute the main framework for analysis, a subsequent round of extensive research and an in-depth review of literature particularly focused on identifying the most effective elements talent development was carried out. The relevant elements of talent development matching each construct can be summarized as follows:

Table 1: Three constructs of effective talent development

Constructs		Key Elements	Sources
System		<ul style="list-style-type: none"> ✧ The proper establishment of a system(s) and its system controller ✧ Sharing of its vision and long term goals among the stakeholders 	Pankhurst & Collins(2013), Martindale et al (2005)
Key Supporters	Coaches	✧ High quality of coaching / Creating appropriate learning environments	Pankhurst & Collins(2013)
	Parents	✧ Parental involvement and support	Bloom(1985), Cote(1999), Pankhurst & Collins (2013)

	School	<ul style="list-style-type: none"> ✧ Importance of school education ✧ Flexible approach 	Ceci (1991), Bailey and Morley (2006), Li et al (2014)
Player Development	TID Process	<ul style="list-style-type: none"> ✧ Holistic and multi-dimensional approach ✧ Using scientific methods 	Unnithan et al (2012)
	No Early specialization and success	<ul style="list-style-type: none"> ✧ Fundamental physical skills to be developed before specialization into football ✧ No adult success criteria to be adopted to youngsters, potential is important rather than performance 	Martindale et al (2005), Pankhurst and Collins (2013), Martindale et al (2005)
	Mental support	<ul style="list-style-type: none"> ✧ Psychological abilities to be developed ✧ Motivation through role models / self-motivated 	Gould et al (2002), Martindale et al (2005)
	Growth and Maturity	<ul style="list-style-type: none"> ✧ Individual's developmental characteristics to be considered and training programs to be designed accordingly (stage specific program) 	Vaeyens et al (2008), Pankhurst & Collins (2013)
	Individualized development	<ul style="list-style-type: none"> ✧ Equal opportunities to all ✧ Providing support to overcome transition periods ✧ Treating as an individual ✧ Designing a flexible system for youngsters who have variable traits changing 	Martindale et al (2005)

2. Research Methods & Data Collection

For this particular study, it was necessary to constantly research and gather both existing and new data. The existing data was mostly collected from the researcher's colleagues at the Korea Football Association (hereunder as "KFA") and affiliated organizations and the German Football Association (hereunder as "DFB") and various other sources such as internet sources. The basic methodological framework for this research, therefore, is based on a constant comparative method. This requires constant comparison between the collected data and testing of existing theories throughout the analytical process according to Strauss and Corbin (1990).

In view of the above, this study requires both primary and secondary data. Bryman and Bell (2007) said that primary data is information that the researcher gathers on his own, for instance by conducting interviews, and creating questionnaires and tests. They further refer to secondary data as relevant literature, documents and articles collected by other researchers and institutions.

To answer the research question regarding the first key construct, the system of both countries, semi-structured interviews were conducted with two KFA administrators in the registration and education department a total of three times. A telephone interview was arranged with one DFB administrator in the national youth team department however, due to the frequent business trips, further interviews were replaced by email exchanges. Notes taken from the interviews and various materials provided by both associations were analyzed and summarized after the interviews. This secondary data consists of materials provided by the KFA, the Korea

Professional Football League (hereunder as “KPFL”) and the DFB, which came in the form of power point presentation files, internal documents, benchmarking reports and internet sources, etc.

To add context to the above interviews and to address the rest of the key constructs of talent development, open-ended questions (Table 2) were formulated based on the previously mentioned analytical tool. These questionnaires were passed on to the KFA and DFB coaches, players and administrators (four from each side, n=8) with the help of the DFB and VDV (German Professional Players Association), which helped arrange the email interviews. It was decided that the interview participants (Table 3) in this study would remain anonymous. A total of 8 people participated in answering the following questions.

Table 2: Interview Questions

1.	Do you or does your affiliation (football governing bodies or elite youth clubs) use scientific or objective methods to identify the player's potential?
2.	Do you or does your affiliation emphasize fundamental physical skills before the player's specialization into a football player?
3.	What do you consider as the most important feature(s) among the following criteria in the process of talent identification? physical (ex: height), physiological (ex: power, speed, etc), psychological (ex: mental skills & cognitive skills such as intelligence) and sociological (ex: training, environments) attributes, technical abilities(sport-specific skills)
4.	Do you or does your affiliation emphasize early talent identification in progressing into successful adults?
5.	Some skills are harmful to the player when learned in early stages but some skills are effective when learned in later stages. What do you think about early specialization?
6.	Do you or does your affiliation emphasize early success of youth football? (ex: winning youth championships, etc)
7.	Do you or does your affiliation concern the development of individual players from a long term perspective?
8.	Do you think the national football governing body (KFA/DFB) shares its vision, philosophy, strategies and long term goals effectively with its football family (regional associations, youth academies, clubs, coaches, players, schools, etc) ? Do you think they are implementing these with systematic planning?
9.	Do you or does your affiliation create an environment where players do get encouragement from time to time and try to minimize stress while they progress into elite players?
10.	Do you or does your affiliation use any role models in the process of development?
11.	Are parents much involved in the player development process? What do you think about parental involvement?
12.	Do you think youth players with potential get a variety of support networks so that they do not drop out and can progress positively?
13.	Have you or has your affiliation been successful in creating learning environments where players themselves take responsibility for learning and developing autonomy?
14.	Have you or has your affiliation been helpful in making youth players self-motivated?
15.	Should players attend normal school until at least 16 years of age or should players be home

schooled to increase opportunities to football? Explain your view on getting school education for young players.

16. Do you or does your affiliation understand the importance of developmental age rather than chronological age?
 17. Do you or does your affiliation ensure not to leave out those players who are late maturing players?
 18. Do you or does your affiliation undertake the volume of practice appropriate to the player's developmental age? Or make them practice as much as possible irrespective of their developmental age?
 19. How much do you or does your affiliation use science and technology in the developmental process of young talents?
 20. Do you or does your affiliation consider variations or individual traits and design flexible programs for each individual as much as possible?
 21. Do you or does your affiliation try to offer youngsters as many opportunities as possible so that all age groups get a wide range of support.
 22. After retirement or when players get injured and have to consider other alternatives, do you or does your affiliation assist the players to build their new life pathway?
 23. What do you think are the most important elements to consider in the process of player development from young age to professional player?
 24. Any improvement to be made in relation to talent development policy in Korean/German football?
-

Table 3: The participants of interviews

Interview Stage	Korea	Germany
1st Stage	Administrator A (KFA education) Administrator B (KFA registration)	Administrator C (DFB National Youth)
2nd Stage	Player A (Former elite player) Coach A (School team) Administrator D (K League club) Administrator E (K League club)	Player B (Professional in 2 nd Bundesliga) Coach B (Youth Academy) Coach C (A Licensed coach) Administrator F (VDV)

Less than two weeks after the request for the email response, the researcher successfully collected all the information provided by the respondents. Any feedback that matched the relevant theories as well as frequent answers given by the respondents was particularly highlighted. After gathering all information through these two stages of interviews, the constant comparative method was conducted to analyze and summarize the data and record it in the table format. The researcher then contacted a highly-qualified coaching instructor at the KFA to conduct an analysis of the data together with the researcher. He was duly informed of all the necessary information related to this research and after a series of exchanges the final revised version of the study's results was confirmed by the instructor.

IV. Results

1. The Overview of Korean Football

The scope of research is only limited to the territory located on the southern part of the Korean peninsula, often referred to as South Korea. The total land mass of South Korea accounts for 100,032 square kilometers. The Korean peninsula experiences four distinct seasons each year with temperatures differing from region to region with the average being between 10 degrees and 16 degrees (Facts about Korea, 2009).

As of April 2014, South Korea's total population was estimated to be 51,202,130 (VisitKorea, 2014). Football is one of the most popular sports along with baseball. In terms of the football population, it is estimated that South Korea has more than 600,000 people who participate in football activity. However, the number of players officially registered with the national football governing body, the Korea Football Association (KFA), is only 37,488 as of June 2014. The total number of registered teams is 1,650 (KFA, 2014a). Out of these registered players, players generally known as "elite players" account for 24,136 players who play football for the purpose of advancement to higher level of academic institutions up to university.

Table 4

The number of registered teams as of June 2014

Category	Male	Female	Non elite (Youth Club)
U-10			73
U-12	363	23	225
U-15	239	20	241
U-18	167	17	134
University	80	9	
K1	12		
K2	10		
NL	10		
CL	18		
WK		9	
		Total	1650

(Source: KFA)

Table 5

The number of registered players as of June 2014

Category	Male	Female	Non elite (Youth Club)
U-10			1096
U-12	7198	402	3517
U-15	7524	494	4287
U-18	5271	360	2531
University	2689	198	
K1	423		
K2	323		
NL	306		
CL	658		
WK		211	
		Total	37,488

(Source: KFA)

They all represent school teams and participate in the officially recognized national amateur leagues. The leagues are being operated under three categories of U-12, U-15 and U-18 respectively to accommodate the organization and structure of the Korean school system. The participation of non-school teams is also possible.

In the interview with a KFA registration staff member, it was noted that the far greater numbers (estimated to be more than 600,000 players) outside the authority of the KFA are holding membership in organizations such as the Korea Council for Sport for All and other independent leagues.

Since the successful hosting of the 2002 FIFA World Cup in Korea, Korean football has made much progress both in both domestic and international football. The whole country was swept by a festive mood led by the Korean National Football Team advancing to the semi-finals of the competition. After the 2002 World Cup, although expectations for Korean football ran high, nationwide enthusiasm for football did not last long enough in its professional league. The Korea Professional Football League (KPFL) split the original K League into two divisions from the 2013 season to boost competition among the teams in the 1st division. The first division called as “K League Classic” now consists of 12 professional teams and the second division called as “K League Challenge” consists of 10 teams. According to the KPFL, the attendance per K League Classic match stands at 7,931 on average while the K League Challenge stands at 1,219 in 2014.

Despite having some domestic problems, Korean football has been quite successful on the international club level. Since the establishment of the Asian Champions League in 2003, East Asian teams, mostly the K League teams, have

excelled and earned some remarkable achievements. The Korean teams have won three out of the six championship competitions. However, in comparison the performance of the Korean national team has been relatively unsuccessful. As of December 2014, Korea has dropped to 69th place in the international football rankings after the national team's early disqualification from the Brazil World Cup (FIFA, 2014b).

2. The Analysis of Talent Development and Environment in Korea

As demonstrated in table 1 (Chapter III), the key elements of an effective talent development system for athletes were categorized into three different constructs. The collected data was then utilized to test whether each of these concepts would turn out to be an effective analytical tool or not. The results of this data collection and analysis will be discussed in the following section.

1) Talent Development System

In regard to the first construct, "the system", it was necessary to first identify how the system in relation to talent development has been organized with the help of various documents and materials obtained from the KFA and the KPFL. The proper analysis of the system is a pre-requisite for understanding all the other elements of talent development including the rest of the conceptual constructs suggested in this research. Given the importance of this systematic analysis, the researcher spent much time testing the first construct in conjunction with two KFA staff members who work

in the education and registration department. They provided assistance in this project and were able to describe precisely the current state of talent development in Korean football.

To begin with, the researcher attempted to identify the elite player's pathway for development based on a series of interviews with the KFA administrator in the registration department who used to be a former player and who had direct first-hand experience with the talent development system. It was noted that there are basically two major ways to become an elite player through the involvement in a school that runs a football team or the involvement in a school operated under the special agreement with a professional football team. Another option is through private football clubs, however, chances of success as an elite player are relatively very low under the current Korean football system.

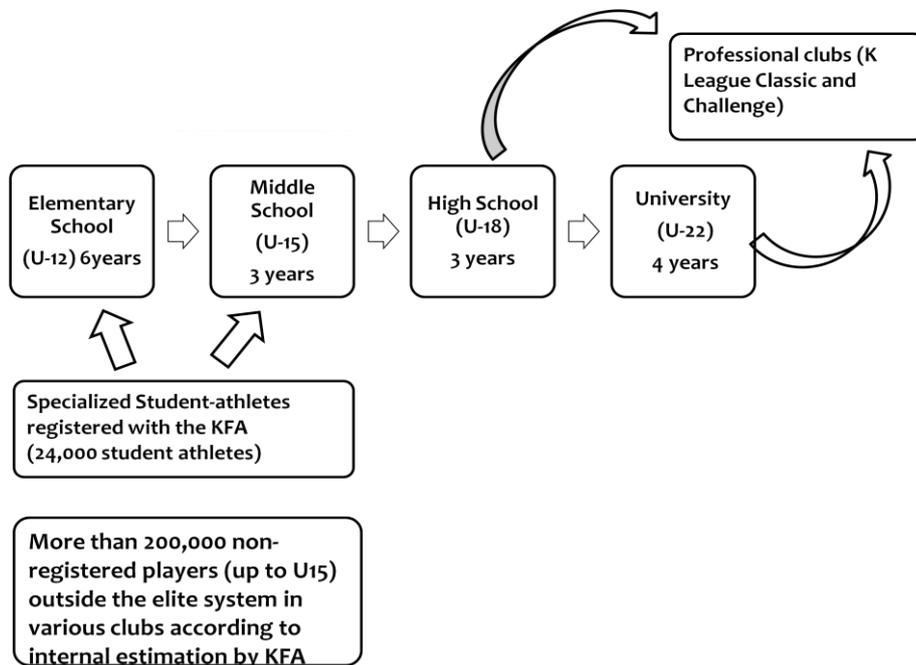
The players belonging to these two groups are called as "student-athletes" and they represent their schools and participate in the officially recognized regional-based national amateur leagues run by the KFA, held on weekends from March to October every year. Students participate in competitions under the three categories, U-12, U-15 and U-18 and they represent elementary schools, middle schools and high schools, respectively. Although there are some other age classifications depending on the organizers of competition, these are officially recognized categories aligned with the Korean education school system.

The main purpose of being associated with school football teams is to gain scholarships to attend university. This has been one of the key elite sport policies called "Athletic Specialist System" (hereunder as ASS) introduced by the Korean

government in 1972 which enabled student-athletes to obtain scholarships to pursue higher education regardless of their academic performance (Park, et al, 2012). These scholarships are applicable to athletes who have reached the final four of national championships of a team sport (Lee, 2003; Park, et al, 2012). According to recent practice as detailed by the KFA administrators, in order for students to apply for university, they should achieve a total playing record of 60% for all national league games or their teams should have reached the quarter-finals of tournament-based competitions approved by the KFA. Scores of national exams are not seriously taken into consideration.

Under the current ASS, those who want to succeed as a football player in Korea have no other choice but to join school football teams. There are some benefits of involvement in school football teams for example student-athletes can get all administrative support from the schools directly to gain academic scholarships. More importantly, parents prefer to abide by the current system just in case their children do not succeed as an elite football player, because they can still pursue their academic studies in university under the title of “student”. Figure 1 demonstrates a visual image of the elite player pathway under the current talent development system in Korea.

Figure 1: The Korean Talent Development System



The Athletic Special System (1972):

Student athletes excelling sporting performance given a special status to acquire scholarships and advance to higher education with minimum academic achievements

In addition to this, the schools managing football teams do not have facility issues since most of them have their own grounds in front of the school buildings, however, independent private clubs generally do not possess their own training grounds and would consequently need to keep looking for the place for training and games.

Student-athletes mainly focus on sports performance and often neglect proper school education because under the current system, school football teams have to excel in the official league games as well as in the tournament-based competitions

approved by the KFA in order for their student-athletes to be admitted to higher grade schools. Therefore, daily training is oriented toward bringing out good results rather than focusing on individual development. We should also take note that most coaches are not permanently employed in school and they will easily lose jobs if their teams fail to perform well in official competitions. This is one of the critical issues leading to many other derivative forms of problems not only in football but in the entire sport field elaborated by Park et al (2012).

The year 2009 was an important year for Korean football because the format of the national school competitions changed from a centralized tournament system to a regional-based league system. While the age categories of the league remained the same as previously, classified as elementary school (U-12), middle school (U-15) and high school (U-18) according to the Korean school system, the new league system divided the country into several regions and each region was responsible for organizing its own league on the weekends to promote young players' academic pursuit during weekdays. The new leagues opened the doors for non-school football teams to participate in the leagues. However, before the change of the competition system, it was not possible for non school football teams to take part in the previous edition of national competitions. This is the reason why the professional clubs in the K League that had formed youth teams in the early 2000 to nurture home grown players had to find an alternative way by making special agreement with schools near the location of the clubs. The new system was designed by professional clubs in order to facilitate participation of players who had joined professional clubs but were required to represent by their affiliated local schools in order to participate in

competitions. Most professional clubs provide high quality training programs using their coaching staff and training facilities while the players continue their school studies. The club licensing system introduced by the Asian Football Confederation in 2012 strengthened the domestic legal framework by making it mandatory for any professional club that wishes to participate in the highest level of Asian club championship to meet several requirements stipulated by the relevant regulations including the forming of youth teams (AFC, 2014). Table 6 shows the names of the list of schools under special agreement with the professional clubs as of 2014.

Table 6:

The list of youth teams operated by professional clubs as of 2014

Category	No	Club	Age		
			U18	U15	U12
Classic	1	Pohang Steelers	Pohang Jecheol High School	Pohang Jecheol Middle School	Pohang Jecheol Dong Elementary School
	2	Ulsan Hyundai	Hyundai High School	Hyundai Middle School	Ulsan Hyundai U12
	3	Jeonbuk Motors	Youngsaeng High School	Keumsan Middle School	Jeonbuk Hyundai U12
	4	FC Seoul	Osan High School	Osan Middle School	FC Seoul U12
	5	Suwon Samsung	Maetan High School	Maetan Middle School	Suwon Samsung U12
	6	Busan IPark	Gaesung High School	Shilla Middle School	Busan IPark U12
	7	Incheon United	Daegun High School	Gwangseong Middle School	Incheon United U12
	8	Seongnam FC	Poongsang High School	Seongnam FC U15	Seongnam FC U12
	9	Jeju United	Jeju U18	Jeju U15	Jeju U12
	10	Jeonnam Dragons	Gwangyang Jecheol High School	Gwangyang Jecheol Middle School	Gwangyang Jecheolnam Elementary School
	11	Gyeongnam FC	Jinju High School	Towon Middle School	Gyeongnam FC U12
	12	Sangju	Yongwoon High School	Hamchang Middle School	Sangju U12
Challenge	1	Gangwon FC	Gangneung Jeil High School	Jumunjin Middle School	Gangwon U12
	2	Daegu FC	Hyunpoong High School	Yoolwon Middle School	Shinheung Elementary School
	3	Daejeon Citizen	Chungnam Machinery High School	Yusung Middle School	Daejeon U12
	4	Ansan	To be prepared		
	5	Gwangju	Gwangju Geumho High School	Gwangju Gwangduk Middle School	Gwangju U12
	6	SuwonFC	Suwon FC U18	Suwon FC U15	Suwon FC U12
	7	Anyang	Anyang Technical High School	Anyang Middle School	Anyang Elementary School
	8	Goyang	Goyang U18	Goyang U15	Goyang U12
	9	Bucheon	Bucheon U18	Bucheon U15	Bucheon U12
	10	Chungju	Chungju Commercial High School	Shinmyung Middle School	Gyohyun Elementary School

Source: Korea Professional Football League

Once student-athletes reach 19 years old, they have the chances to apply for the professional clubs through the K League drafting system at the end of the year or apply for universities that have football teams. The drafting system will, however, be abolished from the season of 2016 according to the KPFL. In other words, the most outstanding players that have grown out of this school affiliated system will be picked by one of the 22 professional clubs directly or will gain a scholarship to enter one of the 80 universities as an alternative if they were not selected by any of the professional clubs. Due to the limited number of slots for the professional teams and the university football teams, the far greater number of players should consider other possibilities to continue their football career outside the mainstream of the football system in the lower leagues or quit football and look for other opportunities.

It was identified that school plays an important role in talent development in Korean football. The ASS has been the key player behind this school based structure and competition system to keep student athletes competing in elite football by awarding scholarships despite its negative effects.

The KFA is a national football governing body that is responsible for the promotion of elite football. Despite the importance of the promotion of young talent, it took quite a long time for the KFA to finally launch a program in the early 2014.

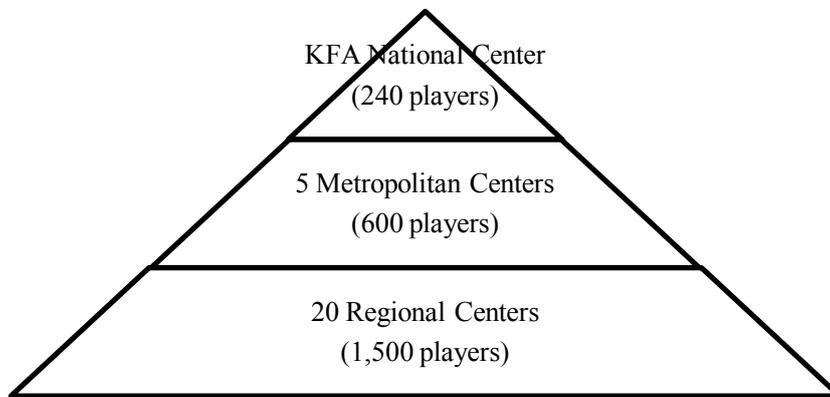
According to interviews with Administrator A at the KFA in the education department, the Golden Age is the official name of the project and it is aimed at nurturing young talent through training programs appropriate to the players' respective age and developing basic skills which most Korean young players lack so

that creativity on the field can be enhanced. Through this centrally-driven model benchmarked from a few European models, the KFA hopes to spot and recruit every talented youth players across the nation in cooperation with its regional associations.

Before the introduction of the Golden Age, talent development was mainly meant to be the selection and training of players determined by national representative teams for each age group. Utilizing a group of KFA coaches specialized in each of the designated regions, talent searches were continuously conducted to recruit qualified youth for national teams before the teams participate in major international tournaments.

Now, the Golden Age provides opportunities for all registered players between 11 and 15 years old to participate in regular training programs organized by the KFA in cooperation with regional associations. The KFA as a central center trains youngsters qualified from the lower level of regional centers. The KFA then divided the nation into five regions in which the same number of centers is being operated. Out of these regions, another 20 sub-regions were formed to nurture and develop young players found in remote local areas. The mechanism used is the admittance of players into higher level training centers once a player is selected, trained, evaluated and qualified at the sub regional level. The KFA national center consists of those youngsters whose ability has already been tested and proven at regional centers. The Golden Age is complementary to the existing school-based talent development system, the details of which are described in figure 2.

Figure 2: The Golden Age Program



Source from KFA website

The KFA does not specifically provide the long term vision for talent development but the initiative of the Golden Age has been clearly emphasized since its launch in the early 2014 in its internal reports and official website. The Golden Age certainly gives due consideration to players between the age of 11 and 15 for their talent to be recognized by the KFA for developmental assistance as they move into the upper age groups. Given that the characteristics of talent being unstable and variable (Abbott & Collins, 2002; Unnithan et al, 2012), the KFA's long term development approach is absolutely necessary. Further plans of how talent will be managed for youngsters above 15 years old have yet to be properly established within the entire framework of the KFA talent development system. This implies the KFA's lack of clear, coherent and long term policy on the talent development area. But, on a positive note, the Golden Age Program can be an initial driving force and a cornerstone on which to build further talent development plans in the years ahead.

The Golden Age Program has many positive elements of effective talent development. It is an age specific program that provides opportunities for all the registered players to participate in the training program and prove their potential in front of the highly qualified KFA instructors. However, the Golden Age Program does not function as a complete system yet but it is rather a specially designed program for the development of selected young players that fall under certain ages. It apparently assists the participants to enhance their individual skills relevant to their ages since they do not have good opportunities to do so in their school football teams. Having known the significance of the issue, the KFA has finally introduced the program to benefit the youngsters lacking such skills. However, according to the former elite player, the reality is that when players return to their original school teams after a short period of training with the Golden Age, the benefits and positive feedback earned from training as well as the program's training philosophy, vision and goals are not transferred to and adopted by the coaches in charge. In other words, the Golden Age Program and the current talent development system mentioned earlier are not coherently bound together to form what we call as a "system".

It can therefore be concluded that the program will truly become part of the whole "system" as long as the KFA has a long term vision and goals that satisfy the points mentioned above and is able to share them effectively with its stakeholders in the school based football system.

2) Key Supporters

Under the KFA coaching license system, the coaches of all registered school teams and youth clubs must hold the appropriate level of licenses in order to coach the relevant teams participating in the official leagues according to the current KFA Registration Regulations. The KFA has strengthened the education of coaches and now there are 95 AFC P-License holders sitting at the highest, qualified for all levels of teams including the professional clubs, 893 AFC A-License holders, eligible for all levels of teams as well, 1755 AFC B-License holders, qualified for U-18 and below, 3969 AFC C-License holders, eligible for U-12 and below and finally D-License holders, qualified for small kids (Source from the KFA education department).

The coaches of professional youth clubs under special agreement with local schools are usually the ones with high level of football knowledge and experience. They run their own training programs underpinned by the professional clubs' stage specific player development. Along with this good coaching environment and excellent quality of training, there is some beneficial support that school football teams usually do not offer such as the good maintenance level of football infrastructure and personal care and developmental assistance such as mentoring programs, etc.

Meanwhile, it was pointed out by the former elite player that although coaches of school football teams have improved their quality significantly due to the coaching license system, they do not seem to care much about the characteristic of individual development of talent but would rather concentrate on physically demanding training and early success, largely due to the significant influence of the ASS which was pointed out earlier.

He further continued saying that the school teams have to collect fees from parents and use them as operational expenses in running the school teams. Their salaries even come from the parents' pocket too. As such, the coaches have to bank on the support from the parents of their players in many ways. The coaches' status is not like regular teachers whose employment status is secured by the relevant school authorities with good employment conditions. However, the sport coaches' lifeline depends on the performance of their teams and no matter how good the coach is, everything is being driven towards achieving the goal of winning matches rather than giving due consideration to the development of players from a long term perspective. It was identified that the current system doesn't support for teams and coaches to provide appropriate learning environment to student-athletes due to this short term goal, summarized as the pursuit of early success. To sum up, the coaching role in the Korean context is very limited by the existing system and does not effectively nurture the players in the way as in the literature.

It was noted that all of the interviewees agreed parents play a significant part in the developmental process of players and much support and building close relationships are needed to successfully develop them into elite players. However, as they put it, in certain cases, it appears that the coach's decision may be influenced by parent involvement particularly when it comes to player selection. According to the ASS, the players are required to satisfy the sporting requirements decided by the education authorities and the university he wants to apply for. For instance, in order to apply for university, it is a prerequisite for the player to have played the total

playing time required by each university according to Administrator B at the KFA in the registration department. Because of this, unless players are the automatic first choices due to their excellent quality, parents tend to lobby against the coaches who have the authority to select the players for the upcoming official matches. It was also noted that some financial deals may occur in the process.

It was also confirmed through the interviews that the school system does not provide an alternative way for the players in case of failure to advance to higher education through the ASS. In order for their children to at least get scholarships, the parents try to keep their children in the system at all costs regardless of all negative effects arising out of the ASS which were frequently mentioned in this study. It turned out to be a common practice that the coaches and parents are interacting with each other in both positive and negative ways under the current system.

The situation is a bit different to the players under the professional youth club system. Acknowledging the importance of the roles of parents, most professional clubs arrange an annual meeting where the club officials and parents meet to communicate to each other. According to professional club official A, his club regularly sends a report to the parents to inform them of the status of player development. It was noted that relationship building is active between coaches and parents in various forms. All four interviewees mentioned that parent involvement and support is necessary and most Korean players do actually get support from the parents in many different ways, though the quality of support varies depending on their financial capability.

All interviewees expressed their view that receiving proper education in school is

very essential for the development of players as a human being before an athlete. They all believe that school education could eventually enable them to find alternatives after retiring or quitting as a football player. However, it is extremely difficult for student athletes to catch up with school work under the current system although the education policy obligates them to do training after class.

Player A was concerned about the fact that schools pay no attention to those young athletes who drop out of football in the middle of their football career. He further commented that student athletes certainly do have many difficulties adapting to regular school life when they are not in training.

Again, this is due to the fact that much emphasis is still placed on football activity. It would be more effective for the system to provide an adequate level of education to student-athletes who are not able to catch up with school work. Vocational training may be much more effective for those who fail to make it as elite player. It was noted that school participation is enforced by the educational authorities, however, its curriculums and programs are not properly and flexibly designed for athlete students to effectively carry out sport activities after school.

It was noted that while players with professional youth clubs have a better quality of additional support programs compared to school teams, such as mentoring programs, the players in school teams will have to mainly rely on their coaches and teachers for any necessary assistance. According to Administrator A, the KFA organizes for youth national team players and other young participants various programs such as special lectures on nutrition and psychology, examined by many studies to be conducive to the development of players. Generally speaking, it turned

out that there is still much needed improvement in the scope and quality of player support in this area.

3) Player Development

In Korean school teams, it is a common practice that almost all levels of coaches use their subjective judgment when detecting the player's potential for the first time. It was noted that school teams do not particularly use scientific methods and mostly rely on the coaches' sense and decision. However, it is not just a single dimensional approach focusing on one particular aspect. It concentrates on a combination of two or more measures. There are a few exceptions in the youth professional club system. According to Administrator D at a K League club, their coaches get more support from their club to identify talent using a multiple number of indicators considered for the different positions of players in the player's developmental process.

The general perception was that the efforts to identify talent in early stages are not necessarily negative as long as there is appropriate age-specific training combined with fun factors. Administrator E at another K League club said instead of focusing on fundamental skills before specialization, they can be jointly enhanced through developing ball handling skills. Additionally, Administrator D and E commented that it may be effective to learn coordination skills such as balancing at early stages.

Player A pointed out that there are the two sides of early success in Korean football. He said that it is not necessarily negative for the development of players. The point is that we need to create an environment where players can get good

coaching and support. He was then concerned about the whole system oriented towards winning instead of developing individual skills of players. Unfortunately, early specialization is a by-product of the current system, he further made the point.

Players would need to be psychologically ready for matches in addition to their technical skills and physical conditions. These qualities have become more relevant recently as the general pressure on football has increased.

Mental skills are known to be a distinct feature that differentiates elite level players from others (Marthindale et al 2012) such as handling pressure, confidence and courage. These are skills that need to be fostered in line with the appropriate age of the player (Gould et al, 2002).

It was noted that there is a different level of mental support existing between the school teams and the school teams operated by the professional youth system. Motivation has been always an important issue in sport because this inner driving force enables the players to become stronger and to ultimately reach their goals. Role models are often used as an effective tool to motivate anyone to move forward. All the interviewees agree on the importance of having role models in football. It was noted that players in school teams can hardly have chances to receive specific assistance related to mental training. Player A said, "...for us, the goal of advancing to higher education successfully through the ASS is the motivation itself."

According to Administrators D and E, youth players regularly meet senior players, share their problems with each other and get advice from them. In addition to developing some of the key psychological abilities such as enhancing concentration,

special lectures are provided to the players.

To sum up, motivation and mental support are understood as an important element for success, but are not treated as equally seriously as other important elements, such as technical and physical skills in Korean football except a few examples of the professional clubs.

As Pankhurst & Collins (2013) summarized, the age and the stage of athletic development are important considerations in determining type, length and methods and purpose of practice for young athletes. However, contrary to the researcher's theories it was confirmed by all the interviewees that intensive physical training is still the dominant training method mostly adopted by school teams in preparation for games. Teamwork and physical readiness come ahead of individual skills in order to win matches even at elementary level (U-12). Player A said, "We need to avoid intensive training at young ages, for physical training is applicable when players are physically ready to accept the amount of training required for that specific age."

On the other hand, it was noted that professional youth teams are taking a long term approach to player development which is quite relevant to the theory. They deliver training programs to young players appropriate to their ages and they care about the effective development of individual players rather than focusing on enhancing teamwork only.

Although the importance of individual attention to the eventual development of high-level talent has been highlighted by many scholars (Matindale, et al, 2012;

Bloom, 1985; Csikszentmihalyi et al., 1993; Gould et al., 2002), there seems to be little individualized support provided to the young players in Korea. All the interviewees understand the importance of individualized programs designed for each player, it is realistically difficult to take into account the transition period of each player and implement the relevant tailor made plans. Football being a team sport, coaches and clubs tend to expect the players to work as a team coherently. In the Korean sport context, it seems too early to discuss this topic as there is a huge room for improvement in this specific area. On a positive note, the KFA Golden Age and the professional youth system understand this important concept in the player's development process though it is applied only in very limited contexts.

3. The Overview of German Football

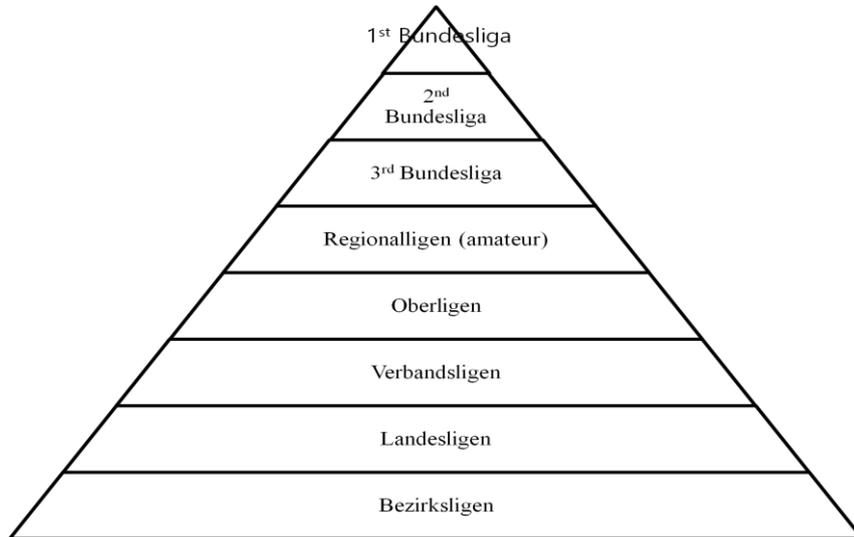
Germany is situated in Western Europe and contains many varying geographical features. Germany covers an area of 357,021 square kilometers and has a largely temperate seasonal climate (Wikipedia, 2014a). Summer temperatures are between 20 and 30 Celcius and winter temperatures vary from east to west. Germany has the population of 83,251,851 (About Germany, 2014). The season of the professional league generally starts at the beginning of August and ends at the end of May with a winter break from December to January.

The German Football Association (German: *Deutscher Fußball-Bund* or *DFB*) is the national football governing body, with 6,851,892 million members (DFB, 2014a). The total number of teams is 164,384 (DFB, 2014a) and approximately 2.5 million

members are currently active players (DFB, 2014b).

At the top of the German football league system, the Fußball-Bundesliga ['fu:sbal 'bɒndəs,li:ga] (English: Football Federal League), is Germany's primary football competition. The Bundesliga is one of the highly recognized football leagues in the world with the highest average stadium attendance worldwide (Wikipedia, 2014b). The average of attendance for the 2013 – 2014 season was 43,502 (Wikipedia, 2014b). The Bundesliga was initially founded by the DFB, but along with its 2nd division it is now managed by the Deutsche Fußball Liga (English: German Football League). The 3rd division is currently run by the DFB and each division consists of 18 professional teams. Under the 3rd division, the DFB operates three regional amateur leagues consisting of 18 teams respectively. Teams are promoted and relegated between the divisions based on their performance for the completed season. Figure 3 shows the pyramidal structure of the German football league system.

Figure 3: The German League Structure



Source from DFB (DFB, 2014b)

Internationally, Germany is one of the most successful football nations in the world. The German national football team has recently won the 2014 FIFA World Cup in Brazil and the other two titles in 1974 and 1990. In European club competitions, German clubs have been very successful with Bayern Munich and Borussia Dortmund being the regular participants in the UEFA Champions League over the years. Bayer Munich recently lifted the trophy by defeating its domestic archrival Borussia Dortmund in the 2012-2013 season. Germany was the host of the 1974 FIFA World Cup, the UEFA Euro 1988 and the 2006 FIFA World Cup (Wikipedia, 2014a).

4. The Analysis of Talent Development and Environment in Germany

1) System

After the initial interview and the review of the secondary sources provided by the DFB, it was noted that there is an incredible breadth and depth of grassroots football in Germany. Most of them play football for fun but people who want to succeed as professional player will play for various levels of clubs that exist across the nation. As in other major European powerhouses, Germany is also a country where the youth club football system is well established. Young talents will get chances to show their potential to the scouts of professional clubs by participating in the programs run by the regional excellence centers. They could even directly play for the youth academies of professional clubs to develop high level performance skills in a supportive environment if accepted.

The major stakeholders in German football all agree on the importance of youth football, however, this concept has been further developed into an advanced system by utilizing the DFB's new policy that was introduced in 2002. After Germany's disastrous performances at Euro 2000, an overhaul of youth football was carried out (The Guardian, 2013). In the summer of 2002, when Germany was defeated by Brazil in the final of the 2002 FIFA World Cup in South Korea and Japan, the DFB introduced the "Talent Development Programme" (DFB, 2014b). According to Gullich (2014) and presentation materials obtained from the DFB, the DFB together with the association of professional clubs (DFL) agreed in 2001 to expand their Talent Development program and structure in two stages:

The “Talent Development (promotion)” stage is the initial stage for the development of elite players which involves 29 fulltime coordinators and 1000 part-time coaches. The coaches scout 600,000 young footballers annually out of which 14,000 players of unrecognized talent (between 11 and 14 years old) are selected through the talent development programme run by the DFB. One weekly session is provided at 366 bases (Schott, 2010; Gullich, 2014) and these DFB sessions are a good opportunity for Bundesliga teams to find talents (The Guardian, 2013). The regional associations provide assistance.

The “Elite Development (promotion)” stage includes the players whose potential has been recognized by the Talent Development stage to further get chances to develop their talent in youth academies. There are 49 youth academies across the country that play a central role in further nurturing these elite players into the next level, enabling them to join national junior teams and to become successful senior professional players. 36 clubs from the first and second division (Bundesliga) and 13 clubs from lower leagues are currently authorized to run the youth academies under the strict club licensing system requiring the youth academies to meet certain criteria, otherwise a license will not be granted. Some of the main requirements are infrastructural conditions, cooperation with schools, medical and scientific staff and full-time coaches (Liew, 2013; Gullich, 2014).

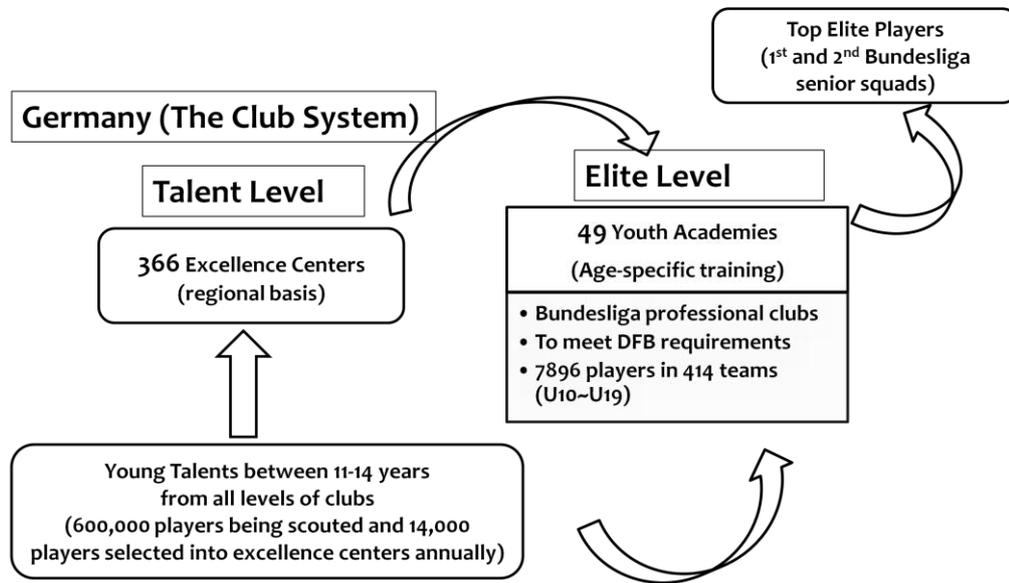
Over the last 10 years, the strengthening of the youth football system has been statistically confirmed by the number of full-time coaches in the youth academies which has increased from 50 to 271. A total of 650 coaches are currently training 7896 footballers in 414 junior teams of U10 to U19 (Schott, 2010; Gullich, 2014). For

the national junior teams, the DFB has also increased their full-time coaches from 60 to 100 (DFB 2014b; Schott, 2010) and has hired more staff for individual athletic training and provided medical and scientific support for U15 to U21 national junior team players (Schott, 2010; Gullich, 2014).

Through a nationwide “Elite School Programme” supported by the DFB, the players in these youth academies go to these elite football schools. There are about 20 elite football schools across the country near the Bundesliga club houses. Although training comes after the school curriculum, most of these elite football schools offer a flexible program for football players. Players get the opportunity to make up for missed class in the afternoon or individually. There is a very close relationship and cooperation between the organizations in the process of player development as a whole person. It suggests that the system does not solely concern nurturing football machines.

The following figure 4 is the visualized concept of the youth club system of German football which demonstrates the pathway of young elite players being elevated from talent level through elite level to top level. The youth academies play a key role in the process in developing high quality talent into senior professional clubs and the senior German national team. (Gullich, 2014).

Figure 4: The German Talent Development System



The DFB took the initiative to set up the system and the relevant regulations for talent not to be missed out and nurtured effectively in cooperation with its stakeholders

In the meantime, not every elite player follows the above pathway. There are a great number of players who play football on so many different levels of youth clubs. Miroslav Klose, famous German star, was still playing amateur football until 21 years old (Hesse, 2014). The doors are open to everyone who wants to be successful in football in Germany.

As seen above, the DFB and regional associations play a significant role to identify and develop local talent. In his interview with the Guardian, Robin Dutt, the sporting director at the DFB in 2013, said that the DFB are doing the clubs' recruitment for them. "But if we help the clubs, we help us, because the players of our national teams – the youth teams and Joachim Low's team (The current German

national team head coach) – come from the clubs” (The Guardian, 2013).

It was noted that the DFB as central governing body has addressed the importance of the development of youth talent and successfully paved the way for talent to be effectively found at every corner of the country and nurtured through its unique system in a systematic and coherent way in close cooperation with its stakeholders. It was also important to take note that the DFB stakeholders including regional associations, the DFL and its affiliated clubs all share the same goals and vision and effectively implement what has been decided by the DFB.

2) Key Supporters

“According to UEFA, Germany has 28,400 coaches with the B license, 5,500 with the A license and 1,070 with the Pro license, the highest qualification” (The Guardian, 2013). The Guardian (2013) further commented Germany’s abundant coaching resources and the DFB’s close relationship with Bundesliga clubs help to make the system.

It was noted that 1000 coaches licensed with the B level working at the 366 regional bases get paid for their contributions to the DFB Talent Development Program. Most importantly, more emphasis was put on the importance of youth development and the employment status of overall youth coaching position has been elevated significantly since the launch of the Talent Development Program. The DFB statistics shows that the number of regional coaches has increased from 60 to 100 since 2000. In 49 youth academies, there are more than 200 coaches available. The outcome of the interviews suggests that the German coaches also feel the vision and

long term goals of the DFB in the same way. It was also noted that there is no particular discrepancy of their perception as well as their actual practice against the effective elements of talent development suggested in this research. Although each club has its autonomy and its own training programs are being operated, the key concepts and principles of the DFB are effectively shared among the stakeholders in terms of talent development. The coaches' behavior and attitude is also positively affected by this while they all pursue their coaching philosophy of their own effectively.

In the interviews, it was noted that school education is a crucial element in player development. There is no such system as “the Athletic Specialist System” in Germany specifically designed for elite athletes to acquire special status to advance to higher education like in Korea. Instead, as previously mentioned, the players who go to the “elite school” can receive school education more effectively because the curriculums are flexibly designed for the football players in the youth academies. As Coach C said these schools provide excellent sportive and school education. For those players not in the youth academies, they have to go to ordinary school. Therefore, training has to take place after school since these schools cannot accommodate every need of athletes. In the interviews, it was noted by Coach C and Administrator F that players manage to do both sport and education before 19 years old when they are under control by the school system. However, as Administrator F further pointed out, vocational training has to be effectively provided to the players after 19 years because many start to fail by the age of 23.

German parents are generally supportive according to the outcome of the interview. Coaches try to have conversations with parents frequently. All the interviewees said that parents' care and attention is very important at all ages. Player B in the interview said "especially in young age groups a lot is made possible by parent support." Coach C said "in conjunction with teachers and coaches, parents have the greatest responsibility for their children's life. Therefore, they must be included in the decision making process." Thus, both coaches emphasized the importance of parental involvement.

They think that parental involvement is positive in the process of player development. However, it was noted by Coach C and Administrator F that it is problematic for them when they have conflict of interests with each other.

Players generally need specific persons they can talk to regarding their problems and questions that might occur and it was noted that they get assistance from their clubs, schools directly and the German Professional Players Union (VDV), if necessary. It seems that the lack of social networks is not a critical issue in Germany.

3) Player Development

As described in the previous literature review section, it is not easy to make decision whether a player has potential or not at young age. As in most cases, coaches' subjective judgment plays an important part in the early stage of talent identification in Germany. Generally, good coaches consider all the necessary talent predictors identified in Chapter II, however, they may somewhat vary depending on the coaches' subjectivity and philosophy.

Once the player has joined the club, the coach tries to use the best possible multi-dimensional method to judge the player's ability and potential with the help of scientific assistance. The Bundesliga youth academies use science and technology to measure the player's fitness parameters and keep track of the developmental process according to the Player B in the interview. Similarly, Coach B said that there is "footbonaut" which is a football specific machine used as a training device at the academies of Borussia Dortmund and 1899 Hoffenheim. Coach C said that he is using "training and observation" concepts provided by the Bundesliga Youth Academy Guidelines, signifying that the DFB's talent development program is running as a whole in a way that the key messages and relevant information are effectively shared among the members in the system.

It was noted that early identification of talent is not necessarily harmful to the development of players. However, there was a consensus that early specialization and focus on performance and success is negative for young players. Under the Talent Development Program, it was noted that this point also has been highlighted through its sub-programs and the interviewees perceive the current situation as follows.

Coach C even commented that the sooner the player gets into training, the better he promotes football skills. He added that at young age basic skills must be trained and it makes sense to train skills during sensitive periods for the proper development of young players. However, Coach C did not support early specialization. The evaluation of true skills can be done at a later stage like other life skills you learn in school.

Coach B said that skills that are important in various sports such as coordinative skills are effective when learned in early stages. He added that kids should not specialize into football early and suggested that it should start at the age of 13 to 15. He believes that early success does not guarantee adult success because success can only be achieved through continuous development and improvement.

From a player's point of view, winning has been taught as an important aspect of football education said Player B in his interview. He maintained the view that specialization should occur from the age of 13 to 14 and further commented that although to be a successful football player should be the main goal, the player should be encouraged to develop into an adult who can achieve success in other areas as well.

As previously mentioned, psychological qualities of players are also crucial in their development process. Most interviewees shared the importance of obtaining strong mental skills as part of the development process of players and acknowledged that the system tries to help the players to develop these psychological qualities in many different ways. It was also noted that the German football system poured much effort into this specialized area by developing various support programs run by schools and clubs. Evidence of this is shown by the Bundesliga clubs' committed efforts to establish professional psychological support for the players during the 2013 season, according to Administrator F. But, Coach B admitted that mental qualities have become more relevant over the last decade, as the general pressure on professional players to perform has increased, however, he believes that such characteristics are not as important during the early phase of development.

According to Player B, the pressure on young players is high from an early age and the kids have to deal with that but the coaches try to prevent extra pressure from being added by parents. All the interviewees agreed that role models can play an important part in developing young players. Player B said that some youth academies introduced a mentoring system using professional players. Player B himself turned out to be the mentor for the players in the U-20 age group at his club. All agreed that role models can be used to demonstrate mental toughness or to teach players how to have the will to win and overcome obstacles. Motivation is also another important mental skill. Coach B said since players themselves are hard to be self-motivated, coaches need to demonstrate passion and motivation to the players themselves. Player B said self-motivation is hard to teach but it is important to provide the appropriate environment and conditions which will allow players to develop their own sense of motivation.

Designing a stage-specific program is an important element in the development process of players. Coaches and clubs are required to have a long term perspective with some patience before the player's potential is maximized. The DFB emphasized this specific-stage developmental process and it was noted that all the interviewees agreed that the relevant programs are being implemented according to the DFB's initiatives.

Coach B said that the developmental age of the players should be the principal criterion for technical development. He also asserted that there should be with different types of training pursued at different ages. Administrator F pointed out that

famous German football star, Miroslav Klose was also a late maturing player. But he thinks the German talent development system helps to identify this kind of late boomers. Player B added that scouting continues until 19 to 20 years old and thinks that the system is properly in place.

Player B said that things have changed from 20 years ago and that the concept of age groups tends to be looser these days, especially from 15 years old and above when it matters most. Coach C said that there is enough room for both possibilities when it comes to the age grouping issue. He thinks that the current system helps to complement late maturing players who have initially missed out on early training provided to other players.

The DFB has standardized training concepts and programs related to talent development. However, it also leaves room for such programs to be flexible for each person. It is also important to show care and interest in every individual and to make sure that everyone gets opportunities. Most interviewees agreed that development should be pursued according to individual situation applicable to each person and that the system helps to do so generally. Although it was pointed out that football is a team sport that individual traits tend to be overlooked, the whole system takes note of this important element and tries to implement it in practice.

Coach C and Administrator F said although most of the DFB's training concepts are standardized, there are ways to consider and develop individual characteristics of talent.

Player B said there is no flexible program in football because he believes

football is always seen as a team sport and players are expected to prioritize the sport and teammates. Coach B would not entirely apply a flexible program for every single individual but use exercises for different groups of individuals depending on their football level. He further added that fitness programs and weight training, or diet programs and standards should be adjusted to every individual, showing the importance of individualized development.

Player B thinks that players get all the support they could hope for today. Coach C believes that there is teamwork between the DFB, the DFL and clubs to support young talents in the last 10 years and that players get opportunities as much as possible.

5. The Summary of Results and Implications for future suggestions

As noted previously, the three constructs of talent development were identified as the talent development system, the key supporters and the player development in Chapter III. The talent development system identifies which sport organization administers the development of football talent and demonstrates how such organization establishes a developmental framework in which football talent is recognized and developed into the elite player. It was also examined whether the vision and goals of the identified sporting governing body are effectively shared among the members of the system.

The key supporters were suggested as coaches, parents and academic institutions and other social networks. How these key supporters interact with the system and

whether these key supporters play a positive role in the system was examined. Taking note of the importance of coaching roles in player development, the research addressed the characteristics of coaching environment along with the level of coaching skills and employment status in both countries. Since parent involvement was noted as an effective element for player development, the form of parent support was also examined. Finally, the establishment of proper school education and other social networks was examined to find out whether the player gets appropriate support outside the football system.

The player development construct suggests the five key elements that should be integrated into the system by the sports organization and indicates what type of environment is best suited for the successful development of athletic talent. The use of scientific methods and multi-dimensional approach to talent identification, the avoidance of early specialization and success, the provision of psychological support, the consideration of individual growth and maturity in the development process and individual-oriented development were the factors that were considered in the analysis of talent development in both countries.

It is worth taking note that all the three constructs are interrelated with one another within the system. For example, without having skilful coaches and the appropriate establishment of coaching environment, the key elements for athletic success mentioned in the player development construct cannot be achieved. Therefore, the judgment on which model is superior should not be based on a single or a combination of constructs, but must be formed based on a holistic viewpoint taking into consideration all three constructs and the included elements.

The German talent development model is a club based football system. While kids play football at different club levels across the country, the DFB, central governing body, has established a system for promising talent to be recognized by its regional bases under the talent development program and further elevated to the youth academies at elite level. The DFB cooperates with its affiliated associations and clubs effectively to run the whole system by integrating the two different levels of player development under its leadership and facilitating the smooth process of player development. The DFB's efforts have been so effective over the past 10 years that all the interviewees positively evaluated the progress made so far and agreed that the programs satisfy most of the key elements required for athletic success.

Despite a few weak points in the area of parental involvement and mental support, they are moving in the right direction as noted by the interviewees. It was additionally noted that the DFB has taken the initiative to complement these shortcomings in cooperation with its stakeholders and external institutions such as schools and the German Football Players Union. To sum up, the DFB, as a system controller, has succeeded in creating the best possible environment for the individually-oriented development of football players from a long-term perspective. This may not entirely be applicable to every club or individual, but it is generally fair to conclude that the German talent development system satisfies all effective elements necessary for athletic success. The analysis of the German case also shows that there is congruence between the actual system and people's perceptions that a positive environment has been established for further talent development.

On the contrary, the Korean model is a school based football system. Under the status of “student athlete”, kids start to specialize themselves into football at early stages by representing school football teams. When it comes to talent development, the role of the KFA, national football governing body, has been limited by the Athletic Specialist System (ASS) under the national sport policy that gives a special status to student athletes excelling in the sport. The selected student athletes are admitted to schools based on outstanding athletic performance and continue to pursue both football training and school education at the same time. In other words, the student athletes are pushed into fierce competition at young age where winning is emphasized as the most important thing, leaving coaches to design programs for short term success deviating from individual oriented development. To thrive in the football world the system even encourages several ineffective factors not recommended in this study.

Given the above, it is necessary for the entire Korean sports to conduct a complete review of the ASS. In other words, the current paradigm of talent development should be reconsidered and changed from success driven athlete development towards individual oriented development enabling all players to learn life management skills outside the pitch if unsuccessful on the pitch. Otherwise the future looks hopeless for young Korean football players according to the result of the study. Many of the interviewees identified the same type of problems in the current system and argued that steps should be taken to correct the inefficiencies and problems. However, as pointed out by Administrator B, the most challenging part is that joint cooperation is needed to tackle issues and different conflict of interests

related to the ASS as it involves many entities and parties such as the education and sport authorities from the government side as well as all affiliated sport organizations.

The KFA Golden Age is a good initiative to redeem the current system. However, it is not an essential solution to complement the defects of the ASS. It is designed to provide the young players with better learning opportunities and to ultimately scout potential football talent across the country. The selected players from the current school system certainly get benefits from the program, however, once they return to school, they have to adapt again to the success oriented environment where the school teams' objective and orientation are completely different from what they have learned during the program. This inconsistency suggests that the whole system should find a way to create a shared vision among its various sub-parts and search for effective methods to formulate a long-term talent development policy.

Last but not least, this study provided evidence that there is a huge potential of talent outside the ASS that could be tapped by coaches. These are players that are not registered with the KFA but could provide an additional pool of talent to draw from. While the coach instructor views the outcome of this research positively, it is necessary to expand the existing pool of players by incorporating this population into the KFA system. This will open the way for more talent to be observed and searched. In other words, apart from the elite talent development approach suggested in this study, an additional approach was also recommended.

V. Conclusion

The effective elements of talent development derived from a review of the relevant literature were used to create an analytical tool that helped the researcher examine both systems and environments of Korean and German football. The German case was selected for comparative analysis in order to identify whether there were actual differences between the two countries. Superficial evidence indicated that there are some significant differences between the two systems but this study undertook an in-depth examination of various factors to confirm whether or not these differences actually had an impact on elite players' competitive performance. A reliable and appropriate analytical tool was developed by the researcher to test the initial proposed theories at the beginning of this study.

Consequently, the results show that there are many improvements to be made in the Korean case while the German case basically meets most of the requirements suggested by the self-designed analysis tool. The results are relevant and meaningful in a sense that they are aligned with the difference in FIFA rankings and are congruent with how people generally perceive the differences in the real football world. The researcher has argued that reforming the current system may be one possible way to improve the current situation. However, he also cautions against blindly following a system adopted by many advanced countries in football. This is because the system reforms would require a lot of deliberation and many social, political, economical and culture differences need to be considered in the process.

The adoption of a new system can be very complex and can create many unforeseen problems when copied or benchmarked from others (Boehlke and Robinson, 2009).

The study was conducted using a qualitative methodology but the reliability and validity of findings in this study were complemented by a review of the relevant literature. A limitation found in this study is the fact that it may be possible to examine whether a certain model is effective or not, however, concretely determining to what degree such model has to be improved is extremely difficult under these circumstances.

This study suggests the concrete elements of effective talent development and environment which can be adopted by other football associations who do not have a guideline to establish a foundation for talent development. It could also be conducive to those who wish to understand whether the existing system is functioning effectively or not and what needs to be improved to achieve athletic success in the sport.

For future research, several issues may be raised. It could be meaningful to examine how to improve the current talent development in Korean football within the current context under the influence by the “Athletic Specialist System”. In a more radical study, it could also suggest completely a new paradigm that can replace the Athletic Specialist System that will possibly have consequences of facing new challenges and issues which need to be carefully examined in advance.

VI. List of References

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국문 초록

한국축구와 독일축구의 재능개발에 대한 분석

국제 경기에서의 성공을 위하여 재능 있는 축구선수를 육성해야 하는 중요성에도 불구하고, 현재까지 한국축구의 재능개발에 필요한 중요 요소들에 대한 분석적 접근이 없었다. 본 연구에서는 기존 문헌연구를 토대로 고안된 분석도구를 바탕으로 현재 진행되고 있는 한국축구의 재능개발 시스템을 평가하기 위해 축구 재능개발에 필요한 효과적인 요구사항들을 철저히 분석하였다. 본 연구는 독일과 한국축구 재능개발 시스템의 유사점과 차이점을 확인하기 위해 비교 연구에 기반을 두었다. 선진 모델로 입증된 독일축구가 한국축구의 비교대상으로 사용되었으며 이는 본 연구를 통해서 고안된 분석도구의 신뢰성을 확인하기 위함이다. 결과적으로, 이러한 접근이 효과적인 것으로 나타났는데 그 이유는 두 국가에서 차이점이 나타났기 때문이며 향후 다른 사례에도 적용 가능성을 확인하였다. 두 국가들로부터 입수된 문서 데이터와 인터뷰 (n=8) 결과를 향시비교법 (Strauss and Corbin, 1994)으로 분석하였다. 독일 모델이 선수들에게 효과적인 축구 학습의 환경으로 나타난 가운데 한국 모델은 많은 부분에 있어서 개선이 요구되는 것으로 나타났다. 본 연구를 통해 나타난 많은 핵심적인 문제들이 한국의 전체 축구시스템에 부정적인 영향을 주고 있는 체육특기자 제도와 관련이 있는 것으로 나타났다.

주요어: 엘리트 스포츠, 축구, 재능, 재능식별, 재능개발

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