

Nigerian Football System: Examining Micro-Level Practices against a Global Model for Integrated Development of Mass and Elite Sport

I. Derek Kaka'an, P. Smolianov, S. Dion, C. Schoen, J. Norberg, C. G. Iortimah

Abstract—This study examines the current state of football in Nigeria to identify the country's practices, which could be useful internationally, and to determine areas for improvement. Over 200 sources of literature on sport delivery systems in successful sports nations were analyzed to construct a globally applicable model of elite football integrated with mass participation, comprising of the following three levels: macro (socio-economic, cultural, legislative, and organizational), meso (infrastructures, personnel, and services enabling sports programs) and micro level (operations, processes, and methodologies for the development of individual athletes). The model has received scholarly validation and has shown to be a framework for program analysis that is not culturally bound. It has recently been utilized for further understanding such sports systems as US rugby, tennis, soccer, swimming, and volleyball, as well as Dutch and Russian swimming. A questionnaire was developed using the above-mentioned model. Survey questions were validated by 12 experts including academicians, executives from sports governing bodies, football coaches, and administrators. To identify best practices and determine areas for improvement of football in Nigeria, 116 coaches completed the questionnaire. Useful exemplars and possible improvements were further identified through semi-structured discussions with 10 Nigerian football administrators and experts. Finally, a content analysis of the Nigeria Football Federation's website and organizational documentation was conducted. This paper focuses on the micro level of Nigerian football delivery, particularly talent search and development as well as advanced athlete preparation and support. Results suggested that Nigeria could share such progressive practices as the provision of football programs in all schools and full-time coaches paid by governments based on the level of coach education. Nigerian football administrators and coaches could provide better football services affordable for all, where success in mass and elite sports is guided by science focused on athletes' needs. Better implemented could be international best practices such as lifelong guidelines for health and excellence of everyone and integration of fitness tests into player development and ranking as done in best Dutch, English, French, Russian, Spanish, and other European clubs; integration of educational and competitive events for elite and developing athletes as well as fans as done at the 2018 World Cup Russia; and academies with multi-stage athlete nurturing as done by Ajax in Africa as well as Barcelona FC and other top clubs expanding across the world. The methodical integration of these practices into the balanced development of mass and elite football will help contribute to international sports success as well as national health, education, crime control, and social harmony in Nigeria.

Iorwase Derek Kaka'an, PhD, is a lecturer at Benue State University, Makurdi, Nigeria (phone: +2347085618347, e-mail: dkakaan@bsu.edu.ng).

Peter Smolianov, Ph.D., is a Professor at Salem State University, Salem, MA 01970, USA (phone: +1-647-295-2404, e-mail: psmolianov@salemstate.edu).

Steven Dion, EdD, is an Associate Professor at Salem State University, Salem, MA 01970, USA (phone: 1-978-542-6580, e-mail: sdion@salemstate.edu).

Keywords—Football, high performance, mass participation, Nigeria, sport development.

I. INTRODUCTION

NIGERIA has made a major impact at age-grade international competitions, becoming the most successful nation in the history of the FIFA under-17 World Cup after recording victories in 1985, 1993, 2007, 2013, and 2015 [1]. The country also won a gold medal in football at the 1996 Olympics which was achieved by the national U-23 team. On a senior cadre, Nigeria has won the African nations' cup three times (1980, 1994, 2013), four times runner-up (1984, 1988, 1990, 2000) and seven times third position finishes (1976, 1978, 1992, 2002, 2004, 2006, 2010). The Nigeria National team has also qualified for six of the last seven FIFA World Cups, reaching the round of 16 three times. The Nigerian Women's football team, the Super Falcons has had seven World Cup appearances and three Olympic football appearances with 10 African Women's Championship titles. According to the International Centre for Sports Studies (CIES) observatory monthly report, May 2018, Nigeria is the biggest supplier of football talent in Africa and eleventh in the world [2].

Despite the achievements recorded by the Nigerian football team, a major challenge that faces football administration in Nigeria is a lack of conceptual and practical frameworks focused on maximizing the number of participants and providing their gradual progression to the highest desired level of performance [3].

Nigerian football is plagued with a variety of athlete development or micro-level issues that could be resolved with the right policies to further advance Nigerian football from recreation to international competitions [4]. Most young football players are not trained based on clear guidelines for multiple development stages of football development [5]. Nigeria has a non-functional national sports policy [6]. Some of the key aspects of the policy include the coordination of sports development programs at all levels of government. But with the dysfunctionality or inability of those policies to be implemented, the Nigerian Football Federation has also failed

Christopher Schoen, Ph.D., is an Associate Professor at Salem State University, Salem, MA 01970, USA (phone: 1-978-542-6545, e-mail: cschoen@salemstate.edu).

Jaclyn Norberg, Ph.D., is an Assistant Professor at Salem State University, Salem, MA 01970, USA (phone: 1-978-542-2776, e-mail: jnorberg@salemstate.edu).

Charles Gabriel Iortimah, Ph.D., is a professor at Benue State University, Makurdi, Nigeria (phone: +2348059117360, e-mail: ciortimah@bsu.edu.ng)

to provide clear guidelines for nurturing players from introduction to football through the achievement of peak performance to retirement from the game [7]. Sufficient resources (coaching, facilities, equipment, cash, etc.) are not available for developmental football projects and there are no tools or databases to monitor the development of footballers from the grassroots to the professional level [8]. Football expertise is difficult to acquire by football administrators in Nigeria as there are no institutions offering sport management degrees and the national institute for sports have not lived up to the expected standard [9]. Footballers are not assisted with formal education and training for career opportunities outside of football by either their clubs or the Nigerian Football Federation, as a result, it is difficult for footballers to maintain their health and wealth upon retirement [10]. Football coaches in Nigeria often provide the physical training of players, psychological and nutritional support as well as other areas of athlete support that the coaches are not qualified to mentor [11]. The lack of division of labor among football experts often proves detrimental to the players. Scientific research which is supposed to benefit the footballers' performance is often unheard of in Nigeria. Many players engage in doping to boost their performance and the football league management has no measures to control doping in Nigerian football, resulting in dangerous effects on the physical and psychological health of footballers [12].

The objective of this research is to assess the micro-level practices of football management in Nigeria against a global model for integrated development of mass and high-performance (HP) sports [13]-[15]. By referencing domestic and global practices, we will answer the research question: what might be implemented as the "best micro-level football practice" across Nigeria for both elite athlete preparation as well as mass participation structures, processes, and programs [16]? The ultimate goals are to further advance Nigeria's international football performance and improve the well-being of Nigerian society through football.

Green and Houlihan [17], De Bosscher et al. [18], [19] stated the composition of micro-element policy and support consist of operations, processes, and methodologies for the development of individual athletes. This involves talent identification and development as well as advanced athlete support.

In order to identify talent, performances have to be predicted by measuring a players physiological, sociological, psychological and cognitive and technical abilities over a considerable period of time [20]. Talent identification is a part of talent development in which identification may occur at several stages within the process. The advanced practice of talent development supposes that players are given an appropriate learning environment so that they can realize their maximum potential.

The Athlete Support Program is an athlete-led development program whereby monetary support and a network of assistance services are planned to meet the distinct needs of elite and HP athletes [21]. Maximizing and optimizing support of larger numbers of athletes across all developmental levels provide mass sport participation which achieves HP at increasingly

competitive international events at the same time positively influencing national health and well-being [22]-[24].

The authors built the model of integrated elite and mass sports development from past research and formed the foundation of a questionnaire and interviews for Nigerian football coaches and administrators to generate a snapshot of perceptions of the current sports system and possibilities for its further development.

II. THEORETICAL FRAMEWORK

The Smolianov and Zakus model [13], which served as a theoretical framework for this study, emerged from the integration of instruments that were used to analyze and compare national elite sport systems [18], [25]-[27]. The model has been previously validated [14], and shown to be a framework for analyzing programs that are culturally bound. The Smolianov and Zakus model is accepted as a model for further understanding various sports systems including US rugby [32], US tennis [33], and US soccer [31], US swimming [28], US ice hockey [29], volleyball [30], and Dutch swimming [34]. As part of these studies, over 60 coaches who also served as administrators, including leaders of national sports organizations, had contributed to review and advance the model.

This refined model integrates the "best practice" at each level of current and previous sport development systems. This includes some of the practices that have not been previously highlighted by other models such as an affordable access to facilities, quality coaching and events at both recreational and HP levels of participation, as well as rewards for all participants based on multi-stage methodologies that have been scientifically tested [35]-[38].

This study's theoretical framework builds on the scholarship of Bravo et al. [39]; De Bosscher and associates [18]; Digel [26]; Fetisov [36]; Platonov [38]; and Smolianov & Zakus [13], [14], highlighted the initial role of extensive sport participation leading to the advancement of elite athletic performances. One of the major ideas in the process of developing participants from mass to elite sports performance involves macro-, meso-, and micro-levels of policy and support (see Fig. 1), as adapted from Green and Houlihan [17], De Bosscher et al. [18], [19]. The macro-level elements refer to cultural, socio-economic, organizational and legislative, support for a national sports system. The meso-level elements refer to the personnel, infrastructures, and services enabling the delivery of sport policy. The micro-level comprises processes, operations, and methodologies for the development of individual athletes. This research focuses on the micro-level elements of football development. However, HP elements overlap at different levels [18], supporting and influencing each other.

However, significant challenges face sports developers due to insufficient conceptual and practical frameworks, resulting in poorly functioning sports systems [17].

Details of the model are based on the literature mentioned above as well as more than 200 sources detailed by Smolianov et al. [24] showing a wide range of interests in understanding sports development, particularly successful sports systems [40],

[41].

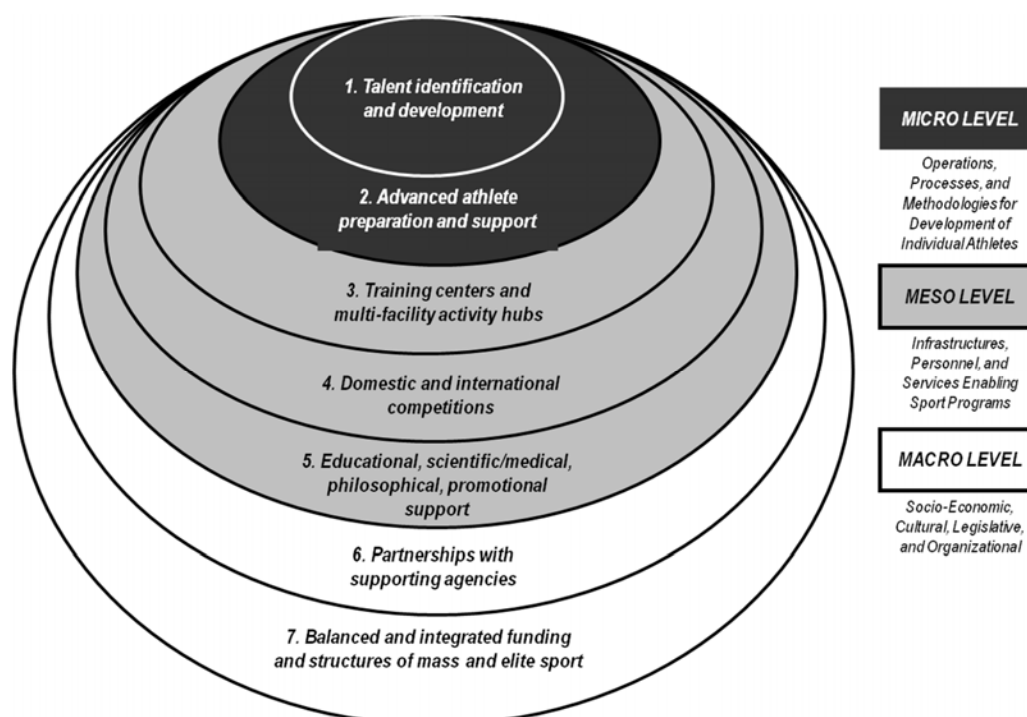


Fig. 1 Ideal-type Model of Integrated High Performance and Mass Sport Development

The micro-level elements one and two in Fig. 1 indicate that successful systems for most sports, including Nigerian football, often identify potential talents and develop them from recreation to elite performers.

The functioning of the micro-level requires element three in Fig. 1, which includes easily accessible, high-quality coaching and appropriate equipment for each age and level of an athlete's participation. In each of the communities, football could be part of a multi-sport hub. A system where sports resources are shared; and the distance covered by an athlete to move between their homes, the training centers, and school; is reasonable. Also, provision is made for medical and cultural venues. Element four in Fig. 1 is also an important condition for the micro-level elements, regularly organized competitions at all levels to gradually preparing athletes to achieve best performances at major events. There should be medical, educational, philosophical, scientific, and promotional support (element five in Fig. 1) at each level of participation.

Provision of the meso-level services results from multiple partnerships (element six in Fig. 1) that can obtain sufficient resources and exchange expertise to achieve common goals that influence both mass, elite sports environments, and society at large. Some of the examples include the participation of mass media and event sponsors. For a sustainable long-term functioning of these elements, funding, and structures of mass and elite sports systems must be balanced and integrated (element seven in Fig. 1), which relates more to legislative, ideological, and systemic governmental input.

Successful sports systems require macro-level societal support and a balance of funding for elite and mass sports from

numerous sources. The following macro-level structures are mostly important: recreation and elite programs and facilities development in partnership with various governments, clubs, nation's Olympic Committee, and balanced power between the various governments and NGBs, and local communities; clubs, training centers, and PE programs at schools and universities; with an aim of maximizing the number of sports participants and reward for coaches with regards to their performances; and a provision of incentives for recreational and elite sport participation.

If HP and recreational sports connect on the above points of development, they can reach the goals of supporting agencies. These goals include commercial objectives, positive levels of health and fitness, as well as improvement in social capital and overall community development. This can bring about success in major tournaments and develop an enormous sense of national pride. Therefore, there is a need to examine the practices of Nigerian football against a global model for the integrated development of mass and HP sports.

The model's statements presented in Figs. 1 and 2 indicate the key difference of this model compared to previously used instruments; the development of both higher performance for national prestige and greater participation for national health. This concept is further validated and advanced by this study as many Nigerian and international practices discussed below provide opportunities to positively influence both sports achievements and the well-being of every community.

III. METHODOLOGY

This paper aims to identify the needs of Nigerian football to

propel them towards international standards by referencing best micro-element practices which consist of operations, processes, and methodologies for the development of individual athletes to determine areas for improvement in Nigerian football, national health, education and crime control.

The exploration was based on the model of integrated HP and mass sports development and focuses on the practices of elements at the micro (talent search and development, advanced athlete support) level.

To explore and identify the needs, this study utilizes mixed research method to provide strengths that balances the weaknesses of both quantitative and qualitative research methods: Three modes of data collection was conducted during this study, namely (1) questionnaire, (2) semi-structured interviews and (3) analysis of documents.

A. Questionnaire

A previous theoretical framework and a comprehensive literature review were used for the development of a questionnaire (Figs. 1 and 2). The adopted questionnaire was developed to measure the management practices of sports based on the model of integrated HP and mass sports development to identify the needs of a sports ecosystem. The questionnaire was validated by six international experts including academicians, executives from sports governing bodies, administrators, and coaches who have previously played football and have coached to a World Cup level at various FIFA youth categories.

In distributing the questionnaires, a stratified sampling technique was used. The questionnaires were delivered to football coaches from six key geopolitical zones of Nigeria: The North Central, North East, North West, South East, South-South, and South West. Survey instructions asked respondents to think about Nigerian football's current systems and structures and to indicate how often the practices were evident, from 'never' (1) to 'always' (5), on a five-point Likert-type scale. They were also asked to elaborate, through written comments, on the elements. The questionnaires were collected for analysis using Excel.

Cronbach's alpha analysis was conducted to measure the internal reliability of the questionnaire from 116 responses. The total inventory was found to be highly reliable ($\alpha = 0.92$, 54 items), confirming similar reliability levels of the model's survey questions indicated by previous studies [34].

B. Semi-Structured Interviews

The aim of conducting a semi-structured interview was to combine a pre-determined set of open-ended questions prompting discussion to provide uniformity and opportunity to explore particular themes while seeking valuable information from the context of respondents' experiences.

Interviews were conducted with 10 Nigerian football administrators and experts including; three ex-Nigerian national team coaches who participated at various youth World Cups, a state sports council director, a state government football marketing consultant, a Nigerian FIFA badged assistant referee, an international football journalist and football commentator veteran of over 20 years, a Nigerian professional league football

club chairman, and a university professor in sport management and special adviser to the Nigerian government on sports. Also interviewed was the former director of grassroots sports development, the former general director of the now-defunct Nigerian National Sports Commission, and a former board member of the Nigerian Football League Management Company.

Through purposive sampling, the selected administrators and experts were shown the coaches' survey results and asked to comment on statements/practices which received high and low scores, particularly on how to increase the scores of practices that coaches indicated to be performed 'rarely' and 'never'. The interviews were based on the seven elements of the model.

C. Document Analysis

Content analysis was done on the Nigeria Football Federation's website, organizational documentation (books, newspaper articles, speeches, videos, emails, etc.) literature review of Nigerian football management, administration, and policies.

D. Interview Analysis

Inductive coding techniques were followed by researcher interviews and discussions which led to the refinement of themes. The coding process was used to convert the qualitative data to quantitative data for interpretation. Triangulation of the findings was achieved by comparing the three types of data (survey, interview, and literature/documents).

IV. RESULTS AND DISCUSSION

Questionnaires delivered in person to 120 coaches resulted in 102 fully completed surveys; a response rate of 85%. Of these respondents, 11% were female, and 89% male (a strong indicator of the need to attract more females to coaching). The sample represents Nigerian football coaches from different ethnic groups; 22% were Hausa-Fulani, 20% were Igbo, 21% were Yoruba and 37% did not indicate their ethnicity. The majority of the coaches (60%) were full-time paid coaches who were employed either by the government or various football clubs in Nigeria; 25% were part-time coaches and 15% were volunteer coaches who were mostly involved with grassroots. The analysis shows that most sampled coaches worked with players at colleges, universities, and professional clubs, which means that respondents from the survey were well-informed about practices and dynamics of mass and elite football systems.

Most of the surveyed coaches in Nigeria had coaching training. However, 9% of the respondents had no identified coaching qualification. That implies that 91% of the surveyed coaches were certified. About nine percent of the coaches indicated to have the highest level of football/soccer qualification/certificate.

Most (64%) of the responding Nigerian coaches were involved with HP athletes, 29% with intermediate, and 7% with beginner-level participants. Responses for the surveys are presented in two parts, this includes the average score as well as the aggregated percentages of the perceived current football

practices.

A. Talent Identification and Development

As shown in Fig. 2, opinions regarding this element were divided: 35% of respondents had overall positive perceptions and 22% had negative. Some of the challenges within the Nigerian football system are revealed through the scores in Fig. 2 and stressed in open responses, namely: lack of funds, bias in athlete selection, lack of coaching training, and unclear criteria for policy implementation. A significant 67% of coaches indicated in the first item that potential football players are attracted from outside the sport's participation base always or often. Administrator F (17 July 2017) supported this opinion as he stated: "When we talk about grassroots, it's your first contact with sports and many of the kids are first introduced to football through schools." Item 10 with a high positive score of 71% indicated that Nigerian football training is well integrated with school, college, and university education, requiring additional investigation of specific integration methods proven to benefit participants. Administrator E (13 July 2017) explained that the establishment of schools in Nigeria comes with a basic requirement of sports facilities.

Four out of 10 items in this element (practices two, three, four, and five) had more negative than positive perceptions revealing a lack of proper training guidelines and structures for nurturing players from the introduction to football through the achievement of peak performance on to retirement. Coach 33 (23 May 2017) has stated that, "the lack of clear policies and implementation issues could be improved by employing professionals to coordinate sports in Nigeria". Another significant challenge within the Nigerian football system relates to insufficient resources (coaching, facilities, equipment, cash, etc.) indicated by 49% of respondents. Nearly half (46%) of the respondents indicated that football coaches are paid according to multi-level certification based on coaches' education and achievements of entrusted players. Administrator F (17 July 2017) has explained, "The rating is high because most clubs in Nigeria are owned by the government and coaches who are in the civil service and attached to these clubs, the civil service rules apply and that is why they are paid based on their level of certification."

More than 60% of the respondents were uncertain of or not sure if the performance of football players in each competitive age group is monitored and developed using a national database. In his explanation, Administrator F (17 July 2017) explained "We don't have a database in Nigerian sports and that is why we always cheat with age. If we have a database, then we can be able to tell the exact ages of these players." Football coach expertise may be higher at professional club level but 60% of respondents were not certain if such expertise is equally high across all participant ages and levels, and responded coaches were divided (20% positive while 20% negative) on this issue. Administrator J (26 September 2017) clarified that the National Institute for Sports (NIS) has programs for grassroots coaches but most people do not participate in these programs because there is little remuneration for grassroots coaching. He advised that the NIS should rekindle the

decentralization of their courses so that their courses can be available for coaches from more parts of the country.

Desired Practices	Distribution of Responses			
	Average Score	Negative Perceptions* (%)	Neutral Perceptions* (%)	Positive Perceptions* (%)
1. In addition to being introduced to football by themselves and parents, potential football players are attracted from outside the sport's participation base (e.g., by a search at schools).	3.9	8	25	67
2. Young football players are trained based on clear guidelines for multiple development stages recommended by the Nigeria Football Federation in collaboration with the National Institute for sports. (Many National Sports Federations have guidelines for nurturing players from the introduction to the sport through the achievement of peak performance on to retirement from the sport. The Federal Ministry of Youth and Sports encourages and supports all the national sports federations to implement such guidelines as Nigerian Development Model).	2.8	33	36	21
3. Sufficient resources (coaching, facilities, equipment, cash, etc.) are available collectively from various supporting organizations for all young talented football players to progress through all developmental stages.	2.7	39	32	19
4. A multi-stage system of player qualification based on results/ranking within age groups is used to reward football players' progress from beginner to top international level.	3.0	23	57	20
5. Performance of football players in each competitive age group is monitored and developed using a national database.	3.0	19	64	17
6. A high number of full-time football coaches are available making the	3.2	19	32	49

Fig. 2 Talent Identification and Development

*Note. Negative Perception is a sum of '1 = never' and '2 = rarely' responses. Neutral Perception is a sum of '3 = sometimes' and 'Do not know' responses. Positive Perceptions is a sum of '4 = often' and '5 = always' responses

From the open responses on this element, 34% were related to a lack of resources, 19% to a lack of quality coaches training, and 47% to a range of other issues affecting football in Nigeria such as bias in team selection, corruption, and inadequate policy implementation strategies. As summarized by Administrator A (7 June 2017): "Lack of funds is a barrier to sports development in Nigeria." The highest score in this element was item 10 with 71% positive perception of coaches indicating that Nigerian football training is well integrated with school, college, and university education.

B. Advanced Athlete Support

Fig. 3 shows that this is a weaker element with less positive (16%) and more negative (54%) perceptions overall. Open responses on this element revealed some of the problems affecting Nigerian football which include: a lack of doping control policies, neglect of grassroots programs, and lack of funds and expertise on the part of football administrators. 25% of coaches who provided open responses on element two agreed that lack of doping policy implementation is a barrier that is

holding back the advancement of Nigerian football while 18% of the open responses attribute the problem to lack of funds. Item six, with 61% of positive responses, indicates good availability of knowledgeable medical personnel. Most items in this element had more negative than positive responses, particularly items one (62% negative), three (75%), four (65%), five (67%), seven (68%), and eight (69% negative), suggesting that more footballers should be provided with better financial, technical and scientific support for gradual progression to HP and, most importantly, with better education, career, and health care to ensure their productive life "after football."

Coach 63 (5 May 2017) expressed a common view: "Most athletes self-medicate. There are hardly proper medical services made available to them. Some of the athletes abuse drugs because they hardly get doping tests carried out on them." Administrator A (7 July 2017) agreed: "Doping in football is not controlled in Nigeria. I recommend the introduction of random testing." Smolianov et al. [24]; Reid et al. [41]; and De Bosscher et al. [42] mentioned that we could learn from successful sports nations to allocate resources more effectively to talent development, coordination of affiliated bodies, and personalized athlete support. In this element, the Nigerian research has only one positive review out of the eight items which is on "player career being prolonged by medical personnel": 61% of the respondents had positive perceptions of this item. The most negatively viewed statement (75%) of the survey in this element is on the question of whether "athletes are assisted with formal education and career outside sport by clubs, state and national football governing bodies."

V.CONCLUSION

In total, there are three positive microelement practices as indicated in the survey where Nigeria is doing very well. Despite Nigeria's football achievements at the international level, respondents were not satisfied with many current practices. Based on the responses of administrators and coaches in Nigeria and the analyzed literature, the following improvements are recommended at the micro-levels of Nigerian football.

While indicating positive Nigerian medical practices that should be researched further, survey results suggested that Nigeria could share such progressive practices as the provision of football programs in all schools. In the Netherlands, primary education focuses on sport and movement as one of the compulsory subjects [43]. According to the report, Dutch children learn their preferred sports (hockey and football in particular) at local sports clubs which often have very high standards and often demand training three times a week which is fundamental to mass participation in sports.

Clubs in Nigeria could follow such international practices and invest in academies where players will not only be taught how to play the game of football but their personal educational needs will be provided to ensure the players have a good mentality towards the game and be adequately prepared for their retirement from competitive football.

Desired Practices	Average Score	Distribution of Responses		
		Negative Perceptions* (%)	Neutral Perceptions* (%)	Positive Perceptions* (%)
1. Athletes, including football players, are supported at places of work where they are given paid time to train and compete.	2.4	62	28	10
2. High-performance football players are ranked into hierarchical levels/pools with appropriate financial and technical support.	2.9	22	68	10
3. Athletes are assisted with formal education and career outside sport by clubs, state and national football governing bodies, Nigeria Olympic Committee, and/or sponsors.	1.8	75	20	5
4. Athlete support is well shared/balanced between coaches and advisors (e.g., a coach may provide psychological, nutritional, and performance science support, while independent advisors may best assist with medicine, career, education, and personal finances).	2.3	65	30	5
5. Scientific research (e.g., biomechanics of athlete movement and psychophysiological analysis) is applied quickly and effectively to immediately benefit a players' performance.	2.4	67	22	11
6. A football career is prolonged by medical personnel knowledgeable in football (helping with such things as injury prevention, adjustment of training levels, nutrition, pharmacology, rest and stimulation therapy, doping use prevention).	3.4	9	30	61
7. Doping in football is controlled by National Anti-Doping Organization and is based on the most recent guidelines from World	2.0	68	21	11

Fig. 3 Advanced Athlete Support

*Note. Negative Perception is a sum of '1 = never' and '2 = rarely' responses. Neutral Perception is a sum of '3 = sometimes' and 'Do not know' responses. Positive Perceptions is a sum of '4 = often' and '5 = always' responses

For almost 16 years, Spain has reached 22 tournament finals from the under-16 to senior level with the 2010 World Cup win being their 14th win [44]. This accomplishment is a result of their Long-Term Athlete Development (LTAD), a multi-stage model of training that was first proposed by Balyi in 1995 [45]. Most previous models had focused on the performance aspects of identifying and developing athletes for national success. Balyi's model encourages the development of athletes as well as positive participation in sports as an informed parent, coach, official, or administrator [46].

At Barcelona FC, much is invested in player development. It is one of the clubs with the best management practices that many countries can learn from, creating strong identities, policies, and models where education is incorporated into the player's training [47]. At the 2010 World Cup, Spain had started the World Cup final match with seven players from Barcelona out of which six of the starters were products of their development system [48]. It is clear to see that LTAD has become widely adopted as an outline for progress by many governing bodies globally.

In Barcelona, the players are disciplined to ensure great attitude and respect towards each other as well as their

opponents. They are often exposed to several cultural activities to foster a sense of curiosity among the players. For instance, the academy regularly invites guests from cardiologists to musicians, to inspire the players. It takes an average of 10 years of coaching for a player to make the grade from Barcelona's academy to the first team [48].

In consideration of the Spanish practices, Spain had 37,742 B licensed coaches in 2015 [49], and the youth football training was only entrusted to qualified coaches who are experts at how kids learn and make progress with emphasis on broader principles behind the way football should be organized and managed. Comparatively, Nigeria had only graded 400 CAF 'C' License coaches in 2015, Ghana with a lower population than Nigeria had graded more than 2000 and Egypt had graded more than 8000 coaches [5]. This shows that an improvement in coaching education is required in Nigeria, and the Nigerian coaches should have immediate access to the LTAD guidelines focused on age-appropriate training implemented by national governing bodies such as Canada and other English-speaking countries including Australia, New Zealand, the United Kingdom, South Africa, and in the United States, particularly by USA Hockey [29]. These guidelines, authored by Balyi [45] from Hungary, stem from the USSR and Eastern European sports development approaches outlined by Riordan [22] and Shneidman [23]. Also, Nigeria could send coaches for training and attachments to clubs such as Barcelona FC where the coaches could bring back educational materials to Nigeria to introduce or advance the LTAD model in the country and develop better footballers from mass participation to HP within an average period of 10 years as evident in countries such as Spain [48] and England [49].

As in the USSR, Nigerian football players should be supported by the GTO fitness tests and then could progress through three junior, three senior, and four master ranks offered for 143 sports in current Russia: each football rank requires specific results against such criteria as victories in competitions of a certain level. The guidelines for coaches include age-specific training and educational curricula. Nigeria should create networks of public sports schools and colleges connecting mass and elite sports and supporting LTAD developed in 1950-70s across the USSR and emulated across the world from China and Cuba to Australia, Belgium, Canada, Finland, Germany, Italy, Netherlands, Singapore, Sweden and the United Kingdom [50]-[54]. To ensure the continuation of Nigerian football players' careers, they should be offered coaching education at colleges and universities and then progress through five certification stages. In the last 10 years, England has implemented a progressive approach to youth development which has also seen 9,548 of the English coaches having B-license [49]. There has been a greater awareness among English coaches about the importance of creating age-appropriate environments for young people to flourish, and their teams are doing better in international youth tournaments winning 2017 the FIFA U-17 World Cup in India, the U-19 UEFA Championship in Georgia, and the FIFA U-20 World Cup in South Korea [55]. There are Universities in the UK that offer broad football courses which aim at developing a level of

knowledge and skill acquisition that has the potential to be transferred and applied to provide a sound basis for professional development and planning within the football industry. As in many countries, most elite Nigerian players receive more cash than high-quality education and care, particularly doping prevention, which has caused bankruptcy and illness to occur quickly after their football careers are over. In the UK, the Professional Footballers Association (PFA) provides grants for educational and vocational training for current and former PFA members [56]. As the playing career of an active footballer is on average only eight years [57], that makes it more important for players of all ages to weigh up their options and consider an alternative career path. The main aim of the PFA education department is to encourage as many current and ex-professionals to undertake suitable academic/vocational qualifications to develop their career prospects both within and outside the game. An initiative that the National Union of Professional Football Players in Nigeria could learn from and possibly emulate. Sports universities are important for successful sports systems in Eastern Europe as well as in China, France, and Germany [58], with the number and variety of sports degrees in coaching science being greatest in Russia, including the specialization in football coaching, which should be considered when advancing the Nigerian football system. There is at least one university in each of the 36 states in Nigeria, none of which offers first-degree training in football management, marketing, sponsorship, and fundraising. With the current international practices, Nigeria can only develop the best people to manage sports from recreational to HP if a Nigerian institution can train sports managers and administrators. In return, the administrators will be able to develop better ideas and manage the resources that are made available for sports development projects through governmental and corporate sponsorships. Borrowed should also be Norwegian practices based on good healthcare, education, and sports services affordable for all, where success in mass and elite sports is guided by international best practices and by science focused on athletes' needs [35].

When the US women's national team won gold at the 2008 Beijing Olympics, 17 of the 18 players on the roster had spent at least part of their youth playing in the US youth soccer's (football) Olympic Development Program (ODP) [59]. ODP aims to discover players in each age group from which a United States National Team will be selected for age-group international competitions. Every state in the US has an ODP program, with regional competitions where the kids are selected for the national camps, and anyone within the age parameters has a chance to try out as the teams are divided based on the ages of the kids. At the state association level, players are identified in each age group to develop their skills through training and competition. From the state level, players are identified for regional teams, and from the regional teams, players are identified for the national teams. Players are evaluated on four components: technique, tactics, psychological component (attitude), fitness, and athletic ability. If selected players are not available for a specific event, another player from their pool may replace them ensuring that the best

kids in the country are given a fair opportunity to develop and compete. Some of the best US footballers were a part of the ODP program. Nigeria could emulate the US soccer system components in implementing the Olympic development program which will help in the development of youth players, providing them with an opportunity to play with the best players in their age group, quality instruction from nationally licensed coaches, games against other state association ODP teams, exposure to regional and national team coaches, the opportunity to represent their state, region and country.

Ajax Amsterdam is known for having one of the best youth academies in the world [60]. The club has branched out to South Africa, Greece, and China, sharing their knowledge of developing youth, and scouting talent. The Ajax Academy has implemented some of the most nurturing LTAD practices. For example, children are only allowed to train three times per week with one game each weekend until the age of 12 years. By age 15 years, the players are practicing five times a week. Developing footballers are allowed to play games outside of structured practices as the value of not having anyone telling them what to do with the ball is considered essential for future development. The young players are also taught proper running and overall fitness techniques. Small-sided games are the heart of football practice with Ajax giving children more touches on the ball than playing 11 vs. 11. It also teaches them to make quicker decisions and learn to move and control the ball in a small space. With the abundance of raw talent in Nigeria, the country could follow such advanced practices by collaborating with established clubs in Europe and building academies across Nigeria and Africa, and also providing all the required expertise to grow mass football participation.

After the Euro 2000 where Germany finished bottom of their group, the Germans decided to invest heavily in the development of their young players and coaches [52]. The German Football Association (DFB), the Bundesliga, and the clubs decided that the development of talented homegrown players would be in everyone's best interests. This led to the creation of academies across the top two divisions in Germany [61]. The talent development program was introduced in 2003 to identify promising youngsters and provide them with technical skills and tactical knowledge. The initiative caters to children aged 8 years to 14 years and is served by 1,000 part-time DFB coaches, all of whom must hold the UEFA B license and are expected to scout as well as train the players. According to UEFA, Germany had 28,400 coaches with the B license, 5,500 with the A license, and 1,070 with the Pro license, the highest qualification [52]. The German Football Association had built a wide network of youth centers, training camps, district clinics coaches, and scouts to systematically develop and integrate young players in the vision to become and remain number one in world football. As part of the restoration of youth support, from the 2002/2003 season, all first and second-league clubs were mandated to have a youth development center as part of their licensing process to play in the top professional divisions. Some of the minimum requirements for the youth development centers every team must maintain include: at least one team each for the A-D Youth (U-19 through U-13), three

grass pitches (two of which need to have floodlights), an indoor practice opportunity during winter nearby, a coach for each youth division with at least three coaches being full-time employees, physical therapy area with two massage rooms, sauna, and relaxation bath, one physical therapist and one sports coach, both full-time employees for rehabilitation and coordination programs. Ten years after the investment, other nations are now seeking Germany's best football management practices to improve their grassroots talent development from recreation to HP [62].

The methodical integration of these micro-element practices into the balanced development of mass and HP football will help contribute to international sports success as well as national health, education, and social harmony in Nigeria.

This paper is focused on examining the micro-level practices against a global model for the integrated development of mass and elite sports. As new practices appear particularly fast, similar studies on global innovations in nurturing participants for healthy HP should be published every four years following the developmental cycles of the Olympic Games and FIFA Football World Cup.

REFERENCES

- [1] Vanguard. (2015). Eaglets are Champions. Win FIFA U-17 World cup again. Retrieved from <https://www.vanguardngr.com/2015/11/braking-news-golden-eaglets-win-again/>
- [2] Poli, R., Besson, R., & Ravenel, L. (2018). Football Analytics. The CIES Football Observatory 2018 season. CIES Football Observatory, 35, 1-2.
- [3] Green, C. (2005). Building sport programs to optimize athlete recruitment, retention, and transition: Toward a normative theory of sport development, *Journal of Sport Management*, 19, 233-253.
- [4] Omo-Osagie, P. (2014, November 22). Developing a Coaching Policy for Nigerian Football. Goal. Available at: <http://www.goal.com/en-gb/news/4082/comment/2014/11/22/6325401/developing-a-coaching-policy-for-nigerian-football>.
- [5] Ogunleye-Bello, A. (2015, June 19). Failure: The attribute of Nigerian Coaches. Post Nigeria. Available at: <http://www.post-nigeria.com/failure-the-attribute-of-nigerian-coaches-by-aderonke-ogunleye-bello/>.
- [6] Ajom, J. (2017, 23rd August.). Nigeria sport: Falling standards, result of leadership vacuum. Vanguard. Available at: <https://www.vanguardngr.com/2017/08/nigeria-sportfalling-standards-result-leadership-vacuum/>.
- [7] Yazid, L.I. (2014). Sport development; The Nigerian way: A review. *International Journal of Physical Education, Sports and Health*. 1(4): 20-24
- [8] Odegbami, S. (2017, 8th April). The 'death' of grassroots sports in Nigeria. The Guardian. Available at: <https://guardian.ng/sport/the-death-of-grassroots-sports-in-nigeria/>.
- [9] Alimi, T. (2017, February 19th). NIS: National Institute for Scandal (Sports). The nation. Available at: <http://thenationonline.net/nisnational-institute-scandal-sports/>.
- [10] BBC (2018, April 9). Finidi George say education dey important for football. Available at: <https://www.bbc.com/pidgin/sport-43690707P>. Smolianov & D. H. Zakus, "Integrated development of mass and high-performance sport: A global model. Olympic reform" In Proc. A ten-year review conference, Toronto Canada, 2009a.
- [11] Yazid, L.I. (2014). Sport development; The Nigerian way: A review. *International Journal of Physical Education, Sports and Health*. 1(4): 20-24
- [12] John-Mensah, O. (2017, December 6). Dalung indicts officials of aiding doping among athletes. Daily trust. Available at: <https://www.dailytrust.com.ng/dalung-indicts-officials-of-aiding-doping-among-athletes.html>.
- [13] Smolianov, P., & Zakus, D. H. (2008). Exploring high performance management in Olympic sport with reference to practices in the former USSR and Russia. *The international journal of sport management*, 9(2), 206-232.

- [14] Smolianov, P., & Zakus, D. H. (2009a), Integrated development of mass and high-performance sport: A global model. Olympic reform, A ten-year review conference, Toronto, May 19th, Canada.
- [15] Smolianov, P., & Zakus, D. H. (2009b). Olympic training centers as part of sport development and mass participation—a case of Moscow, USSR, 17th conference of the European association for sport management, Amsterdam. September 5th, Netherlands.
- [16] Sparvero, E., Chalip, L., & Green, B. C. (2008). United States. In B. Houlihan & M. Green (Eds.), *Comparative elite sport development: Systems, structures and public policy*, Burlington, MA: Butterworth-Heinemann, pp. 242–270.
- [17] Green, M., & Houlihan, B. (2005). *Elite sport development: Policy learning and political priorities*. London: Routledge.
- [18] De Bosscher, V., De Knop, P., Van Bottenburg, M., & Shibli, S. (2006). A conceptual framework for analyzing sports policy factors leading to international sporting success. *European sport management quarterly*, 6(2), 185–215.
- [19] De Bosscher, V., Shibli, S., Van Bottenburg, M., De Knop, P., & Truyens, J. (2010). Developing a method for comparing the elite sport systems and policies of nations: A mixed research methods approach. *Journal of sport management*, 24, 567–600.
- [20] Williams, A.M. & Reilly, T. (2000). Talent identification and development in soccer. *Journal of Sports Sciences*, 18, 657-667.
- [21] DIT elite sport initiatives. (n.d.). Retrieved from: <https://www.dit.ie/media/admissions/documents/FOR%20WEB%20DIT%20Athlete%20Support%20Programme.pdf>.
- [22] Riordan, J. (1980). *Sport in soviet society: Development of sport and physical education in Russia and the USSR*. Cambridge university press, Cambridge.
- [23] Shneidman, N. N. (1978). *The Soviet Road to Olympus: Theory and Practice of Soviet Physical Culture and Sport*. Toronto, Canada: The Ontario Institute for Studies in Education.
- [24] Smolianov, P., D. Zakus, and J. Gallo. (2014). *Sport development in the United States: High performance and mass participation*. London: Routledge.
- [25] Baumann, A. (2002). Developing sustained high-performance services and systems that have quality outcomes. In 12th commonwealth AQ3 international sport conference. Association of commonwealth universities. Manchester, pp. 62–71.
- [26] Digel, H. (2002). Resources for world class performances in sport: A comparison of different systems of top level sport policy. *Institute national du sport expertise in elite sport 2nd international days of sport sciences*. Paris, 12th November. France. pp. 46–49. 21.
- [27] Green, M., & Oakley, B. (2001). Elite sport development systems and planning to win: Uniformity and diversity in international approaches. *Leisure studies*, 20, 247–267.
- [28] Smolianov, P., Sheehan, J., Fritz, E., Cruz, D., Dion, S., Benton, R., Carl, P., McMahon, S. (2016). Comparing the practices of US swimming against a global model for integrated development of mass and high-performance sport. *Journal of Sports Management and Commercialization*, 7(3-4), 1-23.
- [29] Schoen, C., MarcAurele, C., & Smolianov, P. (2016, July). Comparing practices of US ice hockey against a global model for integrated development of mass and high-performance sport. Poster presented at 21st annual congress of the European college of sport science in Vienna, center for sport science and university sports, University of Vienna, Austria. J. Riordan, *Sport, Politics and Communism*, Manchester: Manchester University Press, 1991.
- [30] Hopkinson, M., Smolianov, P., Dion, S., Schoen, C., Norberg, J., & Boucher, C. (2018). Comparing Practices of US Volleyball Systems against a Global Model for Integrated Development of Mass and High-Performance Sport. *ICHPER-SD Journal of Research*, 9(2), 9-19.
- [31] Smolianov, P., Murphy, J., McMahon, S., & Naylor, A. (2014). Comparing practices of US soccer against a global model for integrated development of mass and high-performance sport. *Managing Sport and Leisure: An International Journal*, 20(1), 1-21. Retrieved on February 10, 2017, from: <http://www.tandfonline.com/doi/full/10.1080/13606719.2014.929402>
- [32] Carney, M., Smolianov, P., & Zakus, D. H., (2012). Comparing the practices of USA rugby against a global model for integrated development of mass and high-performance sport. *Managing Leisure: An International Journal*, 17, 181–205.
- [33] Smolianov, P., Gallo, J., & Naylor, A. (2014). Comparing the practices of USA tennis against a global model for integrated development of mass and high-performance sport. *Managing leisure: An international journal*, 19(4), 283–304.
- [34] Zeeuw, M., Smolianov, P., Dion, S., & Schoen, C. (2017). Comparing the practices of Dutch swimming against a global model for integrated development of mass and high-performance sport. *Managing sport and leisure: An international journal*, 22(2), 91-112.
- [35] Farrey, T. (2018). How Norway Won the Winter Olympics. *The Aspen Institute*, 1-12. Retrieved from <https://www.aspeninstitute.org/blog-posts/norway-won-winter-olympics/>.
- [36] Fetisov, V. A. (2005). About criteria and indicators of development of physical culture and sport internationally. *Moscow. Soviet sport*.
- [37] Matveev, L. P. (2008). *Theory and methods of physical culture. Physical culture and sport*. Sport
- [38] Platonov, V. N. (2010). *High performance sport and preparation of national teams*. Soviet sport, Moscow.
- [39] Bravo, G., Orejan, J., Ve'lez, L., & Lo'pez de D'Amico, R. (2012). Sport in Latin America. In M. Li, E. Macintosh, & G. Bravo (Eds.), *International sport management*, Champaign, Illinois, pp. 99–133. 16.
- [40] Oakley B., & Green, M. (2001). The production of Olympic champions: international perspectives on elite sport development system. *European journal for sport management*, 8, 83 – 105.
- [41] Riordan, J. (1991). *Sport, Politics and Communism*. Manchester: Manchester University Press. Reid, M., M. Crespo, F. Atienza, and J. Dimmock. (2007). Tournament structure and nations' success in women's professional tennis. *Journal of sports sciences*, 25 (11): 1221–8.
- [42] De Bosscher, V., P. De Knop, and B. Heyndels. (2003). Comparing tennis success among countries. *International sports studies* 25 (1): 49–68.
- [43] Government of Netherlands (n.d). Subjects and attainment targets in primary education. Retrieved from <https://www.government.nl/topics/primary-education/subjects-and-attainment-targets-in-primary-education>.
- [44] Spain at the FIFA World Cup. (2023). Retrieved from https://en.wikipedia.org/wiki/Spain_at_the_FIFA_World_Cup
- [45] Balyi, I and Way, R (1995). *Long-Term Planning of Athlete Development: The Training to Train Phase*. B.C. Coach. pp. 2 – 10
- [46] Canadian Sport for Life (n.d). *Long-Term Athlete Development Stages: A clear path to better sport, greater health, and higher achievement*. Retrieved from <http://sportforlife.ca/qualitysport/long-term-athlete-development/>.
- [47] Hatum, A. Silvestri, L (2015, June 16). What makes FC Barcelona such a successful business. *Harvard business review*. Available at: <https://hbr.org/2015/06/what-makes-fc-barcelona-such-a-successful-business/>.
- [48] Pettigrove, J (2015, August 4). Explaining the structure at Barcelona - How the club functions on and off the pitch. *Sportskeeda*. Available at: <https://www.sportskeeda.com/football/explaining-structure-barcelona-club-working-youth-la-masia-board/>.
- [49] Wilson, J. (2018, July 1). Why the FA must strike now and deliver grassroots revolution. *The Telegraph*. Available at: <https://www.telegraph.co.uk/world-cup/2018/07/01/fa-must-strike-now-deliver-grassroots-revolution/>.
- [50] BBC (2004a, January 29). Specialist schools now a majority. Retrieved, from http://news.bbc.co.uk/2/hi/uk_news/education/3438825.stm.
- [51] BBC (2004b, June 14). Sport 'improves boys' behavior. Retrieved from http://news.bbc.co.uk/2/hi/uk_news/education/3804793.stm.
- [52] Davies, G. (2008). Specialist sports colleges make the grade. *Telegraph*. Retrieved from <http://www.telegraph.co.uk/sport/2290634/Specialist-Sports-Colleges-make-the-grade.html>.
- [53] Way,R., Repp,C., & Brennan, T. (2010). Sport schools in canada: The future is here. *Victoria, BC: Canadian sport centre, pacific*. Retrieved from <http://www.vancouver.sun.com/pdf/nationalpaper2.pdf>
- [54] Wynhausen, E. (2007). *Crossing the greatest of divides, The Australian*. Available at: <http://www.theaustralian.news.com.au/story/0,25197,22850153-2722,00.Html>.
- [55] Ames, N. (2017, October 29th) England's roaring success: Young lions' incredible year at youth level. *Kwese ESPN*. Available at: <http://kwese.espn.com/football/club/england/448/blog/post/3249789/eng-lands-roaring-success-young-lions-incredible-year-at-youth-level>.
- [56] PFA. (n.d). *The PFA provides advice and guidance for the provision of educational and vocational courses*. Retrieved from <https://www.thepfa.com/education/about>
- [57] Kalén, A., Rey, E., de Rellán-Guerra, A. S., & Lago-Peñas, C. (2019). Are soccer players older now than before? aging trends and market value in the last three decades of the UEFA champions league. *Frontiers in psychology*, 10, 432505.

- [58] Bailey, M. (2014, August 15) What do footballers do when they retire? The telegraph. Available at <https://www.telegraph.co.uk/men/active/11028666/What-do-footballers-do-when-they-retire.html>
- [59] Active.com (n.d.) What You Need to Know About ODP. Retrieved from <https://www.active.com/soccer/articles/what-you-need-to-know-about-odp-881316>
- [60] Basu. R. (2015, October 14). Why the Ajax Academy is one of the best in the world. Available at: <https://www.sportskeeda.com/football/why-ajax-academy-best-world>.
- [61] James, S. (2013, May 23). How Germany went from bust to boom on the talent production line. The guardian. Available at: <https://www.theguardian.com/football/2013/may/23/germany-bust-boom-talent>.
- [62] Schmitt, M. (2015, February 5). Youth development in German football, part one: investing. Bayern Central. Available at: <https://www.bayerncentral.com/2015/02/youth-development-german-football-investing/>.