The IAAF World High Jump Centre

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Introduction

The IAAF World High Jump Centre (WHJC) in Cologne, Germany, was established in November 2007 with the aim of supporting talented athletes whose home countries lack the top-quality facilities, coaching and other services necessary for them to develop into world-class performers in the high jump. In just two years of operation, the WHJC has confirmed its potential by assisting athletes from Africa and other parts of the world to improve their performance and competitive results in national, area and world level events.

The purpose of this report is to provide a resource for athletes, the media and others interested in the WHJC by documenting its resources and providing insight on the approach and thinking of its director.

Organisational overview

The WHJC is located in the German Sport University Cologne (Deutsche Sporthochschule Köln – DSHS) and managed by the university's Institute for Motor Control and Movement Technique. These are closely linked to the local athletics club, LT DSHS Köln.

German Sport University Cologne

The DSHS is Germany's largest and most prestigious center of teaching and research in physical education and sport science. Originally founded in Berlin in 1920 as a national College of Physical Education, it was re-located to Cologne in 1947 and in 1970 it was formally recognised as a state university.

As a specific subject area university with 20 scientific institutes (departments) the DSHS covers a wide range of sport science teaching and research. More than 30 sports are taught in theory and practice with modern facilities. Currently there are about 6,000 students, including 500 foreign students from 63 countries, preparing for professional careers in sport, physical education sport science, and other related fields. The DSHS offers academic Bachelor and Master degrees, teacher certificates for various school levels, and a doctoral degree.

The DSHS campus, situated close to the city centre and just 20 minutes from the Cologne-Bonn International Airport, is excellently suited to meet athlete's demands for training, recreation and education. The student residences are attractively located within green, leafy areas on the campus and all the facilities are in close proximity. The distance from a laboratory to a lecture room equals that from the canteen to the sports halls.

The DSHS's modern sport training facilities, including a fully equipped synthetic track, have been constructed to the highest technical standards. There is a special indoor athletics centre with a short sprint track as well as facilities for the jumping and throwing events. To round off the picture, there are spacious halls for games, a hall for artistic gymnastics, a swimming centre and various outdoor facilities for tennis, football, hockey and other sports.

Many of the sports facilities have equipment for scientific research. Thus, the floor of the athletics centre includes force platforms, light barrier devices and vibration platforms for strength training. In addition, the scientific departments of the university are furnished with modern apparatus for medical and natu-

ral sciences, which are intended to help maximise sport performance.

Institute for Movement and Neurosciences

The Institute for Movement and Neurosciences comprises more than 20 co-workers. Its main scientific focuses are Sports Medicine, Biomechanics and Training and Competition Monitoring.

The institute's co-workers are in close daily contact with the practice of performance sport. This extends from practical coaching roles to advisory and support functions for different national teams to international teaching assignments within the framework of the IAAF Coaches Education and Certification System (CECS). This multitude of roles provides opportunities to profit from the experience and knowledge of different disciplines and contribute to the current discussion of training and competition control.

Six of the institute's co-workers are responsible for education, research and training in athletics. Three of the current athletics lecturers have been involved in the elaboration and development of the CECS since its very beginning in 1990 and over the years a large amount of the CECS educational material has been produced by members of the institute.

Athletics Club

The Athletics Team of the German Sport University Cologne (LT DSHS Köln) was founded in June 1995. Within ten years it had become Cologne's strongest athletics club with more than 400 athletes of all age groups and several committed and highly qualified trainers. The club's high standard is documented by the results achieved by several members, which includes participation at the Olympic Games, IAAF World Championships in Athletics, European Athletics Championships, Universiade, World and European Junior Championships and national championships.

The club's continuous increase in membership and improving performances are, no doubt, at least partly due to the excellent training facilities and links to the DSHS, which provides training expertise and enables the systematic use of performance diagnostic equipment for training and competition control.

Prof. Dr. Walter Tokarski
Rector, German Sport University Cologne

The German Sport University is proud to host the IAAF World High Jump Centre. Our university has always been committed to competitive sports. Teaching staff from our institution have been serving as coaching instructors in various sports worldwide for decades now. Our scientific labs are consultants to numerous national and international federations. Our students can focus on competitive sports during their studies and/or join the university's sports club, which has been the national champion club on multiple occasions.

To be named as the World High Jump Centre by one of the most powerful international sport organisations is another big step in this direction. With its excellent facilities, its highly recognised scientific support and the international campus atmosphere, I strongly believe that the German Sport University Cologne is an ideal location.

I have personally followed the progression of our centre athletes in the last two years and I am deeply convinced that we will see further success in the near future. We will make all efforts to contribute to this development.

Good luck!

Creation of the WHJC

In 2005 the DSHS was added to the IAAF's list of Accredited Training Centres (ATC). Responsibility for the ATC functions and relations with the IAAF was assigned to the Institute for Movement and Neurosciences.

The ATC system currently includes 13 centres, all but two of which are located in Europe. Its aim is to assist national federations, athletes and coaches with decisions regarding the suitability of a centre to meet their specific needs and requirements. Athletes, often with their coaches, will use an ATC for certain periods within their annual training programme. This service is designed mainly to meet the needs of athletes from the more developed countries.

The IAAF also has a system of High Performance Training Centres (HPTCs), which are located in all the continents but Europe. Athletes normally relocate to an HPTC in a neighbouring country for a year or more to take advantage of the facilities and the coaching expertise offered by the centre staff. The system comprises nine centres in regions where athletics is less developed and it has served more than 80 top athletes from at least 57 countries since it was launched in 1997[1].

Because of the technical demands of the high jump it was decided that a specialist centre was required and that the best combination of location, facilities, coaching and services existed in Cologne. On 13 November 2007, the WHJC was formally opened at the DSHS to serve athletes from all countries. The opening ceremony was attended by the Rector of the DSHS, Prof. Dr. Walter Tokarski, and the Director of the IAAF's Member Services Department, Elio Locatelli.

The creation of the WHJC followed the establishment a World Pole Vault Centre in Formia, Italy. These two are now considered to be a part of both the HPTC and the ATC systems.

WHJC Athletes

Selection of athletes to train at the WHJC is made by the IAAF following requests from national federations. Funding is normally provided through the athlete's national Olympic committee by the Olympic Solidarity programme.

Elio Locatelli
Director, IAAF Member Services Department

The German Sport University in Cologne was already an IAAF Accredited Training Centre when we decided to create the World High Jump Centre, our second event specific centre following our World Pole Vault Centre in Formia, Italy. The achievements of the athletes who have already come to Cologne is proof of the possibility for a successful tripartite cooperation between athletes and their federations, the IAAF and the centre coaches. And with our close cooperation with Olympic Solidarity, we have sustainable funding for the work that will take place here.

Our decision to come to Cologne was largely based on the extraordinary environment of facilities and coaching expertise. But the IAAF's expectations for this centre are more than just being an excellent training facility. It would be ideal if it could become a reference point for the high jump, both in practical as well as in theoretical areas, for athletes and coaches around the world and thus live up to the title World High Jump Centre.

In addition to the pure sporting aspects of a centre like this, we must also be aware of the long-term personal development of the athletes. The university environment here in Cologne offers the centre athletes a special chance and I hope they will take the opportunity to further their education and ensure a career after retiring from sport.

(l-r) DSHS Rector Walter Tokarski, IAAF Member Services Director Elio Locatelli and WHJC Director Wolfgang Ritzdorf at the opening of the WHJC in 2005

Seiffulah Nagmodin Shaheen
President, Egyptian Athletic Federation

Following the advice of Elio Locatelli from the IAAF, the Egyptian Athletic Federation sent our young high jumper Karim Lotfy to Cologne to train under the supervision of Dr Ritzdorf of the German Sport University. In three years Karim improved from 2.16m to 2.25m. Karim also acquired a better understanding of his event and the training techniques and discipline required to reach higher levels of performance; he became stronger emotionally and mentally through three full seasons of competitions at a high level, and as a bonus he improved his language skills in English and German.

It is known that youngsters who leave home at such a young age need time to adapt. Through the help of Dr Ritzdorf and his family, the transition went very smoothly and Karim very quickly adapted to and enjoyed his new environment. As a national federation we feel that our partnership with Dr Ritzdorf has been very successful. His constant communication with us and his reports about Karim made it easy to monitor the athlete and his progress.

As a result of Karim's success we decided to send another young athlete this November, Mohamed Talaat, who is 19 years old and currently has a best of 2.20m. We look forward to getting a small place on the map of success in the vertical jumps thanks to this partnership.

To date six athletes have been full-time residents at the WHJC and there have been a number of guest athletes who have trained for short periods at the centre. The most successful full-time resident has been Kabelo Kgosiemang of Botswana, who actually came to train in Cologne in 2005, before the ATC became the WHJC. The athletes currently living full-time and training at the WHJC are:

Kabelo Kgosiemang (BOT)

Born:	1986
Arrival in Cologne:	2005
PB on arrival:	2.16m
Current PB:	2.34m

Accomplishments:
- African Champion in both 2006 and 2008
- Finalist in the IAAF World Championships in Athletics in both 2007 and 2009.

Karim Lotfy (EGY)

Born:	1989
Arrival in Cologne:	2007
PB on arrival:	2.16m
Current PB:	2.25m

Accomplishments:
- African Junior Champion 2007
- Finalist at the IAAF World Junior Championships 2008
- 2nd World Junior top list 2008
- Egyptian national record holder (set three national records in 2008)

Eike Onnen (GER)

Born:	1982
Arrival in Cologne:	2009
PB on arrival:	2.34m
Current PB:	2.34m

Accomplishments:
- Several times German national champion
- Finalist at the IAAF World Championships in Athletics 2007
- Winner at the European Cup 2007

Notes:
After an outstanding year in 2007 Onnen suffered from injuries in 2008 and 2009. He is now training at the WHJC and preparing for a comeback in 2010.

Mohamed Abou Talib (EGY)

Born:	1990
Arrival in Cologne:	2009
PB on arrival:	2.20m
Current PB:	2.20m

Accomplishments:
- African Junior Champion 2009

Notes:
Talib arrived in Cologne after the 2009 season and will begin preparing for 2010.

The two athletes who have trained at the WHJC but have now moved on are:

William Woodcock (SEY)

Born:	1987
Arrival in Cologne:	2006
PB on arrival:	2.10m
Current PB:	2.18m

Accomplishments:
- Indian Ocean Island Games Champion 2007
- Inter. German Student Champion 2007
- Participant at the IAAF World Championships in Athletics 2007

Boubakar Sere (BUR)

Born:	1986
Arrival in Cologne:	2008
PB on arrival:	2.22m
Current PB:	2.22m

Accomplishments:
- 2nd place at the African Championships 2006
- 3rd place at the African Championships 2008
- Burkina Faso national record holder

The WHJC also welcomes top-level athletes who wish to spend some time training at the centre. Among the international athletes who have done so are Martyn Bernhard (GBR, 2.30m), Nicole Forrester (CAN, 1.97m), Tora Harris (USA, 2.33m), Jesse de Lima (BRA, 2.32m) and Jesse Williams (USA, 2.34m).

Interview with the WHJC Director Wolfgang Ritzdorf

The WHJC is led by Wolfgang Ritzdorf, PhD. Ritzdorf is former German national women's coach for the high jump who has worked with two Olympic champions – Ulrike Meyfarth and Heike Henkle – and he actively coaches all the jumpers at the centre. He is also a Senior Lecturer at the DSHS and in the IAAF CECS.

NSA Has coaching athletes from different countries been an interesting experience for you?

Ritzdorf: Definitely yes. It's both informative and exciting. It's informative because you get a much wider understanding of coaching. You have to understand very practically that coaching is much more than just designing training plans and making technique corrections. It's about guiding, mentoring, life balance, personal interactions, etc. Leading a world centre like we have here in Cologne is exciting as you are confronted with different cultural backgrounds, mentalities, motivations and communication structures.

NSA How has the cooperation with the national federations been?

Ritzdorf: Sometimes difficult. The federations do not interfere in the daily work but planning and implementation of what the athletes and I need to do at a major championship or the Olympic Games can be hard, at least with some federations. Fortunately the IAAF can give me support in all competitions under its control.

NSA How is the cooperation with the IAAF Member Services Department?

Ritzdorf: Together with the university, the MSD is our most reliable partner. We have a very close contact. And as MSD Director Elio Locatelli was a former national head coach so he understands the needs of coaches and athletes. Sometimes we need special solutions (e.g. accreditations) and he always finds one. And every year we discuss the situation and the implementation of new athletes.

NSA Have you noticed any difficulties for the athletes training at the centre to integrate into the local society?

Ritzdorf: Not really. The campus here is a university campus in the best sense: an open-minded place with an international atmosphere.

NSA What are the advantages of Cologne and the DSHS as a venue for the WHJC?

Ritzdorf: First there is the already mentioned international atmosphere on the campus. Second, we have all necessary training facilities including physiotherapy and regeneration. Third, there is all the scientific and medical support that is located on the campus. Fourth, there are excellent flight connections to all European destinations, which is important during the competition period.

NSA Do the athletes use the opportunity for further education while they stay in Germany?

Ritzdorf: Some less, some more. Unfortunately there is no pressure on the athletes to learn German as almost everyone around them speaks some English. But some are very serious in preparing for a life after their career.

NSA How would an athlete go about getting accepted to train at the WHJC?

Ritzdorf: For a short-term stay of some weeks, the federations should just contact me. For a scholarship programme they have to apply via their NOC to Olympic Solidarity. But in the end it's for IAAF to decide who will be sent where. And as I am not a full time coach but a university lecturer, the number of athletes I can monitor at a time is limited.

NSA What are the athletes like when they arrive in the WHJC?

(l-r) Karim Lotfy, Kabelo Kgosiemang, Wolfgang Ritzdorf and William Woodcock in 2008

Ritzdorf: There is a wide range. But in general the athletes are healthy and highly motivated. They need to be so that we can start a well-planned training that takes care of the individual deficiencies of the athlete.

NSA What is your assessment of the quality of the conditioning and technical training the athletes you see get in their home countries?

Ritzdorf: It's a wide range again. Some of my athletes did nothing but jumping. Twenty jumps every day but nothing else. Others didn't jump at all because there was no mat. Typically they were not taught proper running. And strength training was for the legs only. Core stabilisation was totally missing. This is an aspect that makes our training a challenge: the problems are extremely individual. And you have to work on the real basics on the one hand but produce some good results and improvements on the other hand. Fortunately the IAAF and most of the federations understand that this can take more than one year.

NSA Which of the qualities you just mentioned are especially pronounced and which require additional training?

Ritzdorf: Number one missing is definitely proper running mechanics. And number two is reactive strength training. One example: In many parts of the world the smallest boxes for jumping drills you find are at least 80cm high. Those who survive these drills have a totally wrong movement pattern and time programme for the take-off.

NSA Do you find that the athletes' technical model is well developed when they arrive?

Ritzdorf: Not too much. But things are getting better as the IAAF CECS is working with time and improving the quality of local coaches. More and better-educated coaches worldwide will lead to a better technical model.

NSA Which technical details require frequently corrections?

Ritzdorf: There is one specific in the high jump: As approach speed is not that important, coaches tend to underestimate the

importance of a proper run-up. All my athletes had a natural, powerful take-off but no structure in the approach at all.

NSA Which training arias for technical and conditioning training are frequently new to the athletes?

Ritzdorf: Technically it is the drill-based training. We do a lot of technical drills (running, hurdle jumps) away from the mat. Relevant parameters such as, for example, hip acceleration in the penultimate support are developed in drills and then transferred to the approach and the whole jump. This allows for more repetitions and better learning. In terms of conditioning it is general body strength, especially trunk stabilisation. But the most important aspect is that athletes have to learn that it's not volume that counts. Just doing something and repeating it a hundred times means nothing. In the end it's quality that counts. In the beginning athletes are sometimes scared whether training is "enough". Often their idea is that doubling the training they did at home will give them the progression they are looking for. But as we had some good success with the first athletes at the centre, all the others now believe in our training regime.

NSA Do you use scientific diagnostics in training? If yes, which type?

Ritzdorf: We regularly use both medical and scientific support. In particular, reactive strength diagnostics is part of our training process. And thanks to the national German high jump coach, we are included in the biomechanical analysis projects conducted at selected competitions.

NSA In your opinion, do the countries of the athletes coming to the WHJC have the necessary prerequisites to develop top-level performers?

Ritzdorf: There is a long way to go. But things are getting better year by year. The CECS helps a lot and equipment is getting better. The IAAF is making a lot of effort and investment to educate coaches. In my understanding that's the only way it can work. We must ensure that young and motivated coaches attend these courses. And for the future, I hope that we can find a more structured and continuous way for talent identification. I am convinced that there are many great talents for the jumping events out there. But right now we find them only by chance.

NSA Do you see the WHJC contributing to the development of athletics as a sport within the respective countries?

Ritzdorf: It definitely happens and it works on different pathways. First, due to our results the WHJC is highly recognized in Africa, Asia and the Caribbean. Invitations to coaches' conferences and meetings with their coaches in international events initiate an information exchange and have led to an international network with lots of discussions. And having some of the best international high jumpers as guests in Cologne stimulates our own work. Second, some of our athletes became really famous at home. Kabelo was elected "Sportsman of the Year" in Botswana ahead of athletes from other sports. Karim has gone on talk shows on Egyptian television and William was on big posters in his homeland Seychelles when he attended the World Champs. This helps to bring athletics back to the public focus and hopefully encourages young talents to choose athletics as their sport. Finally, these athletes will go back home and hopefully they will take their experience and knowledge and present it to the next generation.

Reported by Bill Glad

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