



Benchmarking – German Report
Document produced by
Sport Structures Ltd

Sport Structures Ltd, Company Number 4492940 PO Box 10710, Sutton Coldfield, B75 5YG
(t): +44(0)845 241 7195 (m): +44(0)7766 768 474 (f): +44(0)845 241 7197 (e): info@sportstructures.com (w): www.sportstructures.com

| | |
|--|----|
| Introduction | 4 |
| 1 Country characteristics | 5 |
| 1.1 Demographic structure | 5 |
| 1.2 Health indicators | 5 |
| 1.3 Sports participation | 6 |
| 1.4 Sports success | 6 |
| 1.5 Sports/GDP..... | 7 |
| 2 National Sports System..... | 8 |
| 2.1 National sports system infrastructure..... | 8 |
| 2.2 National Sports Strategy | 9 |
| 2.3 Funding model..... | 10 |
| 2.4 Legal frame and other regulations | 13 |
| 3 School Sports System | 14 |
| 3.1 School Sports infrastructure | 14 |
| 3.2 National School Sports Strategy..... | 16 |
| 3.3 Funding model..... | 17 |
| 3.4 Legal frame and other regulations | 17 |
| 3.5 Activities..... | 18 |
| Physical Education | 18 |
| a. Curriculum (objectives, contents and pedagogy) | 18 |
| b. Teachers (education, selection and professional development)..... | 20 |
| c. Head teachers (role and tasks) | 22 |
| d. Inspection and supervision | 22 |

| | |
|--|----|
| Scholastic Sports..... | 25 |
| a. Extracurricular activities | 25 |
| b. Competition framework..... | 25 |
| c. Coaches (education, selection and professional development) | 27 |
| 3.6 Facilities and equipments..... | 31 |
| a. Type and characteristics of school sports facilities for Physical Education & School Sport..... | 31 |
| b. Planning, design, management and maintenance of sports facilities..... | 34 |
| c. Use of sports facilities..... | 36 |
| 3.7 Private sector..... | 37 |
| a. Service providers..... | 37 |
| b. Sponsors | 37 |
| 3.8 Special programmes..... | 37 |
| 4 Analysis and interpretation..... | 39 |
| 4.1 Compressive overall analysis | 39 |
| 4.2 SWOT Analysis..... | 41 |
| 4.3 Conclusions | 44 |
| 5 Appendix..... | 47 |
| 5.1 Report of interviews: descriptions and conclusions | 47 |
| 5.2 Collected data: cards, figures and tables | 52 |
| References..... | 58 |

International benchmarking report produced by Sport Structures Ltd © September 2011

Benchmarking document for Physical Education and School Sport in Germany

Introduction

This report has been produced by Sport Structures Ltd for Itik Consulting to support the development of a National Physical Education and School Sport Strategy for the Ministry of Education in the Kingdom of Saudi Arabia. This benchmarking report has been produced through a semi in-depth study regarding the approach taken by the Federal Republic of Germany to physical education and school sport.

The semi in-depth study has been undertaken through a comprehensive desk based review of literature and discussions with key informants from academic institutions involved in research into the system of physical education in Germany and organisations that implement the national strategies for Physical Education and school sport. Where possible we have provided illustrations alongside the text or provided case studies to give greater insight.

1 Country characteristics

1.1 Demographic structure

The Federal Republic of Germany is a country in central Europe and a member of the European Union. Germany is a large country covering 357,022 square kilometres or 137,847 square miles. Germany is made up of 16 Länder (federated states) which are partly sovereign constituent states of the Federal Republic of Germany and are the highest tier of the central Government. Germany's population's concentrations are Rhine-Ruhr Metropolitan region with a population of 11.7 million, Frankfurt Rhine with a population of 5.8 million and Berlin Brandenburg metropolitan area 4.9 million¹. Overall Germany has an estimated total population of 81.901,000 million people. Below is a demographic breakdown:

- Males account for 49% of the population and females for 51% of the population.
- 13.9% of the population are aged 0-14, 66.4% are 15-64 and 19.8% 65 years and over.
- Germany does not report demographics by ethnicity but they provide figure on foreign populations by nationality: 8.4% of the population are immigrants, comprising 2.4% Turkish, 0.7% Italian, 0.4% Greek, 0.4% Polish and 4.5% other.
- Religion: 31.4% are Roman Catholic, 30.8% are Evangelical church of Germany, 29.6% are non-religious, 5.4% are Muslim and 2.0% are Jewish.

1.2 Health indicators

According to the World Health Organisation Germany was ranked 20th when providing overall health care. This information is based on five performance indicators based on life expectancy, mortality rates, and access to health care². As a result of this the probability of dying is 80 in 1000 of the population will die between the ages of 15 to 60 years. However the healthy life expectancy (HALE) which takes into consideration disability and other factors shows that males are expected to live to be 70 years old and female are expected to live to be 74 years old. Life expectancy is extending, causing a permanent shift in the age structure towards older people. Model calculations on population development show that in just a few years there will be more people aged 65 years and over in Germany than persons aged 15 years or under¹.

In looking at life expectancy at birth (none HALE scale) it is expected that men will live to be 77 years old and women to 82 years old. Regarding maternal mortality 4 in 100,000 women die in child birth and regarding neonatal mortality rate 3 in 1000 live births lose their life. Germany has a very low mortality rate with less 5.0% of children under 5 years dying from diarrheal disease, HIV/AIDS, injuries, malaria and pneumonia, with 4 in 1000 dying before the age of 5 years³. In 209 Germany spent 11.0% of its total GDP on health services. Obesity is defined globally as when person has a body mass index of 30 or above. In 2009 14.7% of the German population were classified as obese - 15.7% of German males were obese and 13.8% of German females were obese. For children and adolescents it is currently estimated that 15.0% of German children and adolescents are overweight meaning they have a BMI greater than 25⁴.

1.3 Sports participation

It is thought that 45.0% of German people meet the EU recommended 30 minutes a day of exercise⁵. A study into the EU member states looking at levels of participation in sport by those aged 15-70+ found that 9.0% of Germans participate in sport regularly, 40.0% participate with some regularity, 20.0% participate seldom and 31.0% participate never. Regarding physical activity such as gardening cycling and walking, 28.0% participate regularly, 50.0% with some regularity, 16.0% seldom and 6.0% never⁶.

German people engage in physical activity and sport in diverse settings as 60.0 % take part in sport or physical activity through open spaces and parks, 27.0% on the way home from school or work, 12.0% in fitness centres and 19.0% in clubs. It is estimated that there are 27 million members of sport clubs and as a result 12.0% of the population volunteer in sport in some sort of capacity: this volunteer workforce is estimated as contributing 538 million working hours valued at €8.1 billion.

1.4 Sports success

Germany came 5th in the medals table at the Beijing 2008 Olympics and Paralympics Games with 16 gold medals, 10 silver medals and 15 bronze medals, a total medal haul of 41 medals. This was considered to be an adequate performance by the German team. At the Beijing

Paralympics Germany came 11th in the medals standings with 14 gold medals, 25 silver medals and 20 bronze medals which total 59 medals in all⁷.

Germany came 6th in the medal table at the Athens Olympics with a total of 13 gold medals, 16 silver medals, 20 bronze medals which totalled 49 medals in all. At the Paralympics Germany came 8th in the medals tables with 19 gold medals, 28 silver medals and 31 bronze medals which totalled 78 medals⁸.

1.5 Sports/GDP

The country's sports industry has grown at a compound annual growth rate of 5.0% since 2000⁹. Sports growth in Germany relies heavily on a strong network of local and private sponsors. As a result of this, Germany finances sport more locally than any other European country regarding public sports as this local contribution makes up 96.0% of all sport financing¹⁰.

Germany invested heavily into the preparation for the 2006 (Association Football) World Cup which had a great economic impact on their sporting growth¹¹. It was estimated that the event brought €300 million into the country and a further €2 billion in retail sales and yielded 50, 000 new jobs¹².

2 National Sports System

2.1 National sports system infrastructure

The Federal Ministry of the Interior is responsible for the promotion of sport in Germany, and particularly elite sport¹³. Responsibility for mass sports participation and the education system are devolved responsibilities through the federal structure of the state to the 16 Länder or federal states. Some responsibility for education (ie national strategy) is with the federal government, with the Länder implementing national strategy according to local conditions and needs. This does give rise to considerable variation in delivery and service between the Länder, and there can be intense debate when developing national strategies and policy. The Länder regulate and govern general education and vocational schools. The Länder are generally responsible for subsidising sport including university sport, mass participation sport ('Sport for All') and sports facility construction. In looking at the history of German sport it is apparent that there has been deep rooted political involvement in sport¹⁴. More recently, the Federal Government is seen as a channel for the distribution of funds for sport and is comfortable in a role of facilitating a framework for sport rather than having central control over sporting activities. Historically, sport policy in Germany has therefore been based on the provision of financial support (government grants, sport stamps and lottery money)¹⁵. There is a well-established tradition of Germany contributing to the Olympic Movement and the international sports movement, through the leadership of Carl Diem and his widow Liselott Diem.

The German Olympic Sports Federation (Deutscher Olympischer SportBund, DOSB) was founded in 2006 by a merger of the German Sports Federation (Deutscher SportBund DSB) and the National Olympic Committee (Nationales Olympisches Komitee für Deutschland, NOK), and is the non-governmental umbrella organisation of German sport¹⁶. The DOSB currently has 95 member organisations (see 5.2 table 1) and over 90,000 clubs, representing more than 27 million members. This suggests that a third of the population are club members however it is known that the majority of members are members of more than one club, therefore a definitive proportion of the population is difficult to calculate¹⁵. The DOSB allows sport to fulfil its role as a connecting link within society in Germany.

It has been recognised that sport can contribute to social policy in Germany. Historically the German Sports Federation (Deutscher Sportbund DSB) managed several sports development campaigns to increase mass participation under the brand *Sport for all* (Sport für alle). This started in the 1970s with *keep-fit trails in parks and woods* (Trimm-dich-Pfade). More recent campaigns have include *Sport is the most fun in a club*. Other health based campaigns have been undertaken by the DOSB and the Federal Ministry of Health. These have highlighted the connection between sport, physical activity and health, for example *Sport For Health* (Sport Pro Gesundheit) and *Properly Fit* (Richtig Fit), both of which offered courses and information on how to use sport to stay fit and healthy. The national action plan for a healthy diet and more exercise '*In Form*' intends to achieve a closer working relationship between health and sport. At present children and young people are a major target group for sports programmes incorporating health and fitness.

The measurement and evaluation of government interventions in sport participation is challenging. In Germany there is no national approach to sport participation surveys, with differing measures and approaches being undertaken in the Länder. There are disputes in academic circles on the best approach to consistent measurement and methods to gather data at a national level¹⁵.

2.2 National Sports Strategy

The DOSB National Sports Strategy "Sport Moves!"¹⁷ is divided into three key section covering, sports development, competitive sport and youth sport. A number of programmes sit within each section, some of which are highlighted in the sections below:

Sports Development - The Sports Development team at the DOSB is aiming to ensure that as many people as possible are active in a sporting community or voluntary level. Programmes prioritising women and girls, ethnic minority communities and older people have all been developed (see section 3.8)

The social significance of sport in healthcare is high, the DOSB have two charter marks that guarantee high quality. *Sport Pro Gesundheit* (Sport for Health) is a seal of approval that is a network for all who are searching for a sporting activity from home. The seal of approval

guarantees high quality and as such opens the door for the club and its members to cooperate with health insurance companies. *Sport pro fitness* (Sport for Fitness) is a seal of approval for the growing number of health clubs run by sports clubs.

Competitive sport - New DOSB Control Model for Competitive Sports incorporates the so called "triangle of top level sports" comprising athlete – coach – sports facility and this has been placed at the centre of their work with competitive or elite sport. All work is coordinated by the DOSB which works closely with each sports federation on four year Olympic cycles.

Youth sport - Youth sport is coordinated by the German Sports Youth Federation ('Deutsche Sportjugend', DSJ). The DSJ represents the interests of more than 9.5 million children, adolescents and young people up to 27 years of age, who take part in sport in more than 90,000 sports clubs. Each sports club is associated to 16 regional sports youths (federal state level) and 53 youth organisations of the national federations. In partnership with its member organisations, the German Sports Youth offers national programmes, using sports as a medium to promote social development, including the prevention of violence, anti racism and prevention of drug abuse.¹⁶

2.3 Funding model

Funding for grassroots participation

There are several different funding models for grassroots sport identified within the European Union. In 2010 Germany's funding model for grassroots sport was placed within the Northern European Model alongside Scandinavia and The Netherlands. The Federal Government provides focuses on elite sport so only provides around 16% of funding (approx. €62 per capita.). The Federal Government is not the sole source of funding for sports organisations in Germany: €668 million comes from the Federal Länder and approximately €3.1 billion in municipal funding from local authorities is spent on sport each year. They not only subsidise sports clubs, but also provide and maintain sports facilities, particularly sports fields, sports halls and swimming pools¹⁸. However, the main monetary contribution to sports' funding (excl voluntary work) comes from private funding (83%)¹⁹.

Like many other countries further funding for sport comes from other sources such as national lotteries (approx. €6 per capita), household expenditure (approx. > €200 per capita) and the financial contributions of voluntary work (approx. €51 per capita)¹⁹. One of the main sources of funding for club based sport comes from membership fees which provide around 55% of their revenue; the remaining commercial revenue is comprised of catering and trade (25%), and subsidies and grants of around 20%. An important factor is that most clubs have charitable status²⁰ which assists them with tax exemptions. Tax reductions are available for sports clubs with charitable status and other non profit organisations or activities serving the general interest. Funding for sport provided by individuals or by sponsorship support from the commercial sector is also encouraged through tax incentives on donations¹⁹.

Funding for elite participation

In the 1970s East Germany was reputed to be spending approximately 1% of its Gross Domestic Product (GDP) on elite sport. Following reunification it was identified that there had been a concentration of government resources on employment of sports professionals to support elite athletes²¹. Since unification, there has been recoil against some of the practices used by top coaches in the German Democratic Republic GDR (known as East Germany), and there have been high profile legal cases brought against some of them by former athletes.

The Federal Government is now responsible for supporting top-level sport, providing it with approximately €130 million. It also provides jobs in the Federal Border Guard and customs (Bundeswehr) for the best sportsmen and women. Thus, they can engage in top-level sport while pursuing a career with the concomitant social benefits at the same time – an ideal combination. They have been very successful in international events.

The Federal Government is interested in the success of German athletes at the summer and winter Olympic Games, and therefore helps fund training and the costs of sending teams to compete. When determining the amount of federal funding, past performance and chances of success are taken into account. The Federal Ministry of the Interior is working with the DOSB, which advises on and coordinates

measures to fund high-performance sport. The main funding priorities are the national sport federations, the Olympic training centres and national training centres and the construction of high-performance sport facilities. In particular, funding is available for:

- Training courses, training and competition programmes
- Staff employed by the national sport federations (trainers, sporting directors, etc.)
- World and European championships hosted by the Federal Republic of Germany
- Sport science and social support measures
- Sports medicine, physiotherapy, scientific training and lifestyle advice and support for elite athletes
- Central training and courses offered at the national training centres by the national sport federations for their elite athletes
- Construction and maintenance of sport facilities, including equipment

In spite of this support, sport cannot survive without business which, for example, gives the German Sports Aid Foundation more than €10 million each year to promote top-level sportsmen and women in all disciplines. The support provided by the German Sports Aid Foundation is significant with 90% of all German medals at Olympic, World and European championships won by athletes supported through the foundation. This support may take the form of;

- Assistance to develop full athletic performance
- Support for vocational education and training
- Relief against sports-related social hardship
- The administration of capital endowments²².

2.4 Legal frame and other regulations

The Basic Law (Grundgesetz) is the framework for the education system. The responsibilities are determined by the federal structure of government. Governmental powers and responsibility lie with the individual Länder, including educational legislation and administration of the education system. This particularly applies to the school system, higher education and the continuing education sector. Under the Basic Law and the constitutions of the Länder the entire school system is under the supervision of the state. Schools and higher education institutions are, as a rule, institutions of the Länder. In addition, there are church-run or privately-run schools and institutions of higher education²³.

3 School Sports System

3.1 School Sports infrastructure

The Ministries of Education and Cultural Affairs are headed by a Minister who is answerable to the Federal Government. The Standing Conference of the Ministers of Education and Cultural Affairs (Kultusministerkonferenz - KMK) of the Länder in Germany is the mechanism for the coordination of education among the Länder. The Federal Länder is responsible for internal matters including the curriculum, staff and staffing. This includes school types, subject hours, curriculum content, teaching hours and salaries. Local authorities are responsible for administrative staff, school equipment and furniture, building and grounds maintenance²⁴:

The school system in Germany is organised both horizontally and vertically for all 16 Länder. After four years of primary schooling (Grundschule), the system divides all children based on their abilities from the first four primary school years into separate schooling types: either five years of general secondary schooling; six years of intermediate schooling; nine years of grammar schooling (Hauptschule, Realschule and Gymnasium) or nine years of comprehensive schooling where all children are taught at the same school but divided by their abilities (Gesamtschulen). After 9 or 10 years of schooling, vocational training starts for those at secondary schools (Hauptschule or Realschule) or those from high schools (Gymnasium or Gesamtschulen) an examination can be taken to enter university²⁵.

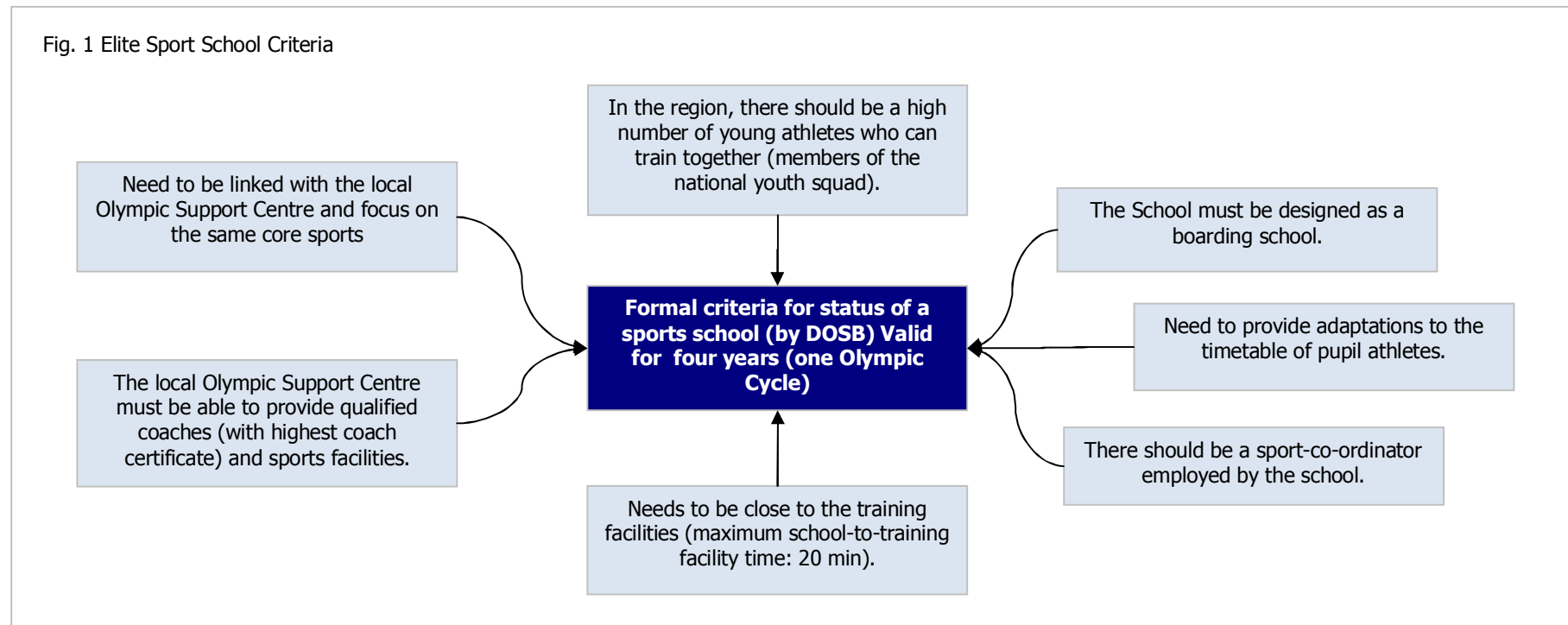
Approximately 7 million pupils attended 48,000 state schools in the school year 2006-2007. For those pupils with special needs whose development cannot be supported at ordinary schools, various types of special schools for different types of disabilities are available to provide general and vocational education.

In 1990 an initiative was started to establish secondary schools that were specialised in sports. There are different types of sport schools, which have differing relationships with high performance sport:

- Schools specialising in sport (Sportbetonte Schulen)

- Partner schools of high performance (Partnerschulen des Leistungssports)
- Elite sports schools (Eliteschulen des Sports).

Both the schools specialising in sport and partner schools of high performance are pre-stages to the school becoming an elite sports school²⁶. The elite sport schools are boarding schools that coordinate competitive sports and scholastic education through an integrated school-competitive sports system. The working group behind elite sports schools consists of business representatives, the National Olympic Committee, the Culture and Sports Ministries, the organisation Deutsche Sporthilfe and the German Sports Federation²⁷. The DOSB is the body which awards elite school status based on key criteria:



Elite school sports status is awarded for a four year period (Olympic Cycle), after which schools have to be reassessed to retain their status. There are currently 39 elite sports schools comprising of 102 primary, intermediate and comprehensive schools and high schools (some elite sports schools are actually comprised of a partnership of schools). The elite schools currently have a combined attendance of approximately 11,300 pupils²⁸. Pupils experience adjusted timetables to accommodate training, competition and compensatory lessons. The whole structure of Elite Sports Schools aims to provide the maximum amount of time for athletic development combined with the opportunity to gain high educational qualifications.

The concept of elite schools in Germany is controversial as the term can be associated with the special schools in the GDR in which high-achieving pupils were expected to contribute to the communist ideal. Prior to this, "elite schools" were also a part of the Nazi ideology²⁹. One of the challenges that face Elite Sports Schools is evidencing the balance of sporting success, academic achievement and personal development as a justification for public spending. Success is often quoted in relation to the number of pupils to attend squads, national and international competitions and those progressing to Olympic training centres. However, educational attainment, professional career prospects and the level of pupils to dropout are not as well documented.²⁷

3.2 National School Sports Strategy

Sport in schools is an ongoing topic of discussion. It's impact on children's overall personal and academic development has not been sufficiently recognised by everyone involved, including many parents. In the wake of the current debate about the German school system, attempts are being made to give this subject greater priority. Together with the State Education Ministers Conference (KMK), the DOSB has drawn up a recommended course of action to develop school sports, including the needs of young people with physical impairment. The DOSB and KMK are aiming to strengthen sport as a whole and are focusing on school development processes that have an immediate effect on club sport. These include the introduction of full time day schools across the county and a shortening of A Level course times. Both have an increasing effect on the membership of young people in club sport and on the times that communal sports facilities are available for training and competitive purposes.

Sport is a subject that can be studied at most German universities. The Federal Institute for Sport Science in Bonn coordinates academic work, and the Research and the Development Institute for Sports Equipment (FES) in Berlin develops innovations on sports equipment with a view to ensuring that German Olympic athletes continue to be successful at future events. German experience is passed on internationally too, with German experts travelling to many countries and providing support for sport as part of Germany's sports development aid programme.³⁰

3.3 Funding model

The overall costs of the school system are shared. The funding required for school buildings, equipment and also for secretarial, domestic support is shared between the maintaining bodies (Schulträger), e.g: the community, the district or the Federal Länder. The funding of teaching staff is the task of the individual Länder. This funding model is also applicable for Sports facilities and Physical Educations staff.

3.4 Legal frame and other regulations

Regulations imposed on schools have changed in 2010 they are being given greater freedom to manage the funds that they receive from the Federal Länder and the Local Authority. Schools are responsible to the public and the School Inspectorate regarding their budget and their results.

3.5 Activities

Physical Education

a. Curriculum (objectives, contents and pedagogy)

In the early 1970s as part of the Curriculum Reform Act physical education became a compulsory subject for all students, with two hours of sessions required per week. Students were allowed to choose an activity according to their interest and performance level from a variety of sports, once selected they would receive instruction in that sport for one semester. After the inclusion of physical education in the curriculum the term physical education was redefined to become Sports teaching (Sportunterricht): physical educators became sports teachers and the study of physical education was referred to as Sport Pedagogy. Germany became focussed on the physical education concept of 'sport' where as the UK and Netherlands focussed on 'movement' and Scandinavia on 'health'³¹. Germany developed the sports concept of physical education around early talent spotting, competitive sports schemes in schools and links to extracurricular sports activity. In the 1980s two student centred approaches were conceived, one relating to 'body education' and the other around 'movement abilities', which sought to invest in natural body and movement education rather than sports skill-orientated education. This was seen as a change from a focus on performance to participation. Germany's approach to Physical Education became more balanced through the 1990s as it was considered good practice to include both sports performance and movement participation as fundamental concepts. This led to changes to the physical education curriculum towards a more balanced approach in 2000³².

Modern guidelines and the curriculum of several Federal Länder succinctly illustrate the basic pedagogical idea that physical education and school sports is a so-called double mission: education **for** sports and education **through** sports³³. Although there have been curriculum reforms in Germany and recognition of the importance of physical education and sport in the development of young people, there has been a decrease in curriculum time for physical education from 2000 – 2007. Between 2000-2007 the time allocation for physical education in primary schools reduced by 30 minutes and at secondary schools by as much as 45 minutes (see 5.2 Tables 2 & 3 for comparisons with other EU countries). Some people believe that the decline relates to the devolved powers that have been given to schools; others

(including some politicians, teachers and parents) are unsure whether physical education is necessary in the school curriculum due to the level of physical activity achieved by students outside of school³⁴.

The objective of primary school physical education is to help children experience many physical, dynamic and social situations, to develop their physical and spiritual abilities, and to maintain and increase the joy of motion, play, and participation in sports. The taught content is divided into four segments (in the form of individual, couple, or group sports experience): Playing and play; Movement and motion with or without apparatus; Motion on big apparatus; Play and motion in water. The number of lessons varies between the Federal Länder but on average there are three sessions per week over the four years that students attend primary school³⁵. The emphasis in the curriculum for primary schools is movement, health and fitness.

The objective of secondary school physical education is sports instruction., Across the Federal Länder, there are about 45 recognised sports delivered as part of the curriculum. There are four consistent sports which are always present: gymnastics, athletics, swimming and aerobics/dance. There are also the big ball games which are quite popular for inclusion basketball, football, handball and volleyball³⁶. The number of lessons varies between the Federal Länder: within some types of school (grammar) there are opportunities for students to select physical education as a major subject and attend up to six sessions per week, which include practical, theoretical and scientific study. If not selected as a major subject, students take part in three sessions of practical activity per week. Other schools (vocational) offer only one lesson of physical education per week. In some Länder this minimal amount of physical education is sometimes not included in the curriculum; instead students receive vouchers for attending sports clubs within their own leisure time³². Physical education has been recognised as part of a vocational subject to provide students with professional competencies and qualifications in preparation for them taking up a career in sport; this is quite commonly termed as sport and health promotion.

Educational Attainment

According to a study undertaken in 2007 on educational attainment in Germany, young people who take part in sports activities from a childhood through adolescence increase the probability of attaining a higher school degree. This finding is different from participating in competition, which suggests that it is a challenge to combine high performance training and competition with the level of study required to achieve a high school degree. At a University degree level the chances of attaining a degree are elevated if the young people take part in sport. Interestingly, participation in competition at this level has no significant affect on male students but for women their probability of attaining qualifications may increase if they take part in competition³⁷.

b. **Teachers (education, selection and professional development)**

The process of teacher education has a strong academic emphasis. With 6-8 years of training, Germany has the longest initial education for teachers in Europe. Teaching studies are divided up into two phases - an academic study period at university which is around 4-5 years; and school-based teacher training, which generally takes a further two years. After each phase, student teachers need to take state examination. State managed teacher training institutes offer professional development courses. Recently, a shift in school legislation has taken place that makes continuous professional development compulsory. Professional development focuses on the core competences of 'teaching, educating, assessing/diagnosing and innovating'³⁸.

The German Association of PE Teachers (Deutscher Sportlehrerverband) is the largest professional association in Germany for physical education teachers and sports teachers. It was founded in 1949 and currently has a total of 12,000 members. Members of the DSLV teach at schools, colleges, sports clubs and private schools. The association seeks to:

- Represent the interests of school sport and physical education in all spheres of public life
- Provide training events, often in collaboration with other institutes of sport
- Inform, advise and assist its members
- Influence the educational and athletic training of young sports teacher and curriculum development.

There are ten main research institutes and universities which specialise in physical education and sport science, which includes pedagogy and curriculum development (Bildungswerk des LSB Hessen e.V., Christian-Albrechts-Universität Kiel, Deutsche Olympische Akademie, Deutsche Sporthochschule Köln, Freie Universität, Humboldt-Universität zu Berlin, Institut für Sportwissenschaft, Otto-von-Guericke-Universität Magdeburg, Institut für Sportwissenschaft and Universität Konstanz, Fachgruppe Sportwissenschaft)³⁹. Some universities require a Sport Aptitude Test, which comprises 20 individual disciplines in five types of sport that are tested on a single day, to identify an individual's aptitude for sport. The passed test is valid for three years and can be completed before finishing high school. The registration for the test is independent of an application for a place at the university.

Case Study - The German Sport University Cologne (Deutsche Sporthochschule Köln)⁴⁰

The German Sport University was founded in 1947 and is the only dedicated sport university in Germany. It provides bachelor's, master's and postgraduate doctoral study programmes within 19 institutes providing sport and movement education to over 5,000 students (33% female, 77% male) from 59 countries (based on the 2010 intake).

The university has a recognised international research programme and is host to a number of special research institutes and centres such as Institute of Biochemistry, Institute of Physiology and Anatomy, the Research Centre for Performance Sport and the Centre for Sport and Health Research.

The Teacher Training degree at the German Sport University is a sport science degree which links theory and practical training. The course includes various phases of on-site teaching practice. The duration of the programme depends on the level at which the student would like to teach later. Those who wish to teach at primary and secondary schools do a degree which takes 7 semesters. Those who plan to teach at grammar schools and vocational colleges and those who want to enter special needs education do a 9 semester programme. The minimum requirements for the admission to the Teacher Training

degrees are: a school leaving certificate which entitles the holder to university entrance (German Abitur, baccalaureate, A-levels, or their equivalent) and an appropriate score on the sport aptitude test.

c. **Head teachers (role and tasks)**

Head teachers are selected through a performance orientated procedure based on suitability, competence and performance. Applications are sent to the school authority or in some cases the Ministry of Education, but decisions on employment lie with the local authority and the school itself. The Federal Länder support the pre introductory qualification and in-service education of school head teachers which cover core competencies in four areas (school management, quality development, personnel management and building relationships between the school and its environment). The head teacher is responsible for educational work in the school as a whole. His/her responsibilities are outlined in the Education Act and abide by the legal and administrative regulations of the school supervisory authority.

Tasks include⁴¹:

- Staff management, workload distribution and schedules and planning of further training
- Lesson structure and inspection of standards
- Represent the school to external bodies, organisations and the public
- Coordinate the purchase of external goods such as teaching materials
- Responsibility for overall budgetary control
- Reporting to the school board
- Collaboration with other schools and in the development of partnerships.

d. **Inspection and supervision**

The development of quality control in the school system in Germany began in the 1990s with changes being made to the control of quality to be coordinated through the Federal Lander. The results of the Programme for International Student Assessment (PISA) 2000 suggested

that German pupils educational attainment was mediocre compared to other comparable states. This raised concerns about the quality of education. The KMK responded by aiming to align the education policies of the Federal Lander more closely and by setting national education standards. In all Lander there are five quality components:

- Traditional school supervisory authority eg. Regional School Authority (RSA) responsible for the supervision of schools, employing new teachers and in-service education.
- External school inspection eg. School Inspectorate responsible for external evaluation and the regular publication of a report on the development of quality.
- Internal self evaluation eg. local education committee responsible for quality in relation to the school development plan
- Assessment tests for systematic monitoring eg. pupils are assessed against consistent educational standards
- Teacher and school leadership professionalism eg. NiLS responsible for Teacher Education, Further Teacher Education and School Development.

In 2004 the KMK founded the Institute for Quality Development in the Education System (Institut zur Qualitätsentwicklung im Bildungswesen [IQB]), an independent scientific quality institute at federal level linked to the Humboldt University in Berlin. The IQB aims to work closely with the respective institutions of the Länder in order to assist them in their measures for the development of school quality, to further develop, standardise and evaluate attainment according to the national educational standards, as well as scientifically to survey their implementation process in the Länder⁴².

Case Study - Lower Saxony Inspection System

Each of the Federal Lander will have variations but follow a similar inspection process; common across all Lander is that the results of inspections are not published. As each Federal Lander has its own school system and educational goals the following case study highlights the good practice process for inspection for Lower Saxony.

In Lower Saxony in 2011 the State Institute for School Quality Development (Niedersächsischen Landesinstituts für schulische Qualitätsentwicklung-NQL) decided to merge the State Office of Teacher Education and School Development (Niedersächsisches Landesamt für Lehrerbildung und Schulentwicklung- NiLS) who are responsible for Teacher Education and Further Teacher Education with the School Inspection (Niedersächsischen Schulinspektion - NSchI).

In Lower Saxony the NSchI (now part of the State Institute for School Quality Development – NQL) is responsible for the implementation for inspections of the school system, which determine the quality of individual schools by analyzing the strengths and weaknesses and the potential for improvement based on a standardized quality profile. An inspection team undertakes the inspection (at least one of the inspectors has a teaching qualification and extensive teaching experience), which includes⁴³:

- An analysis of performance data
- Classroom observations
- Interviews with administrative staff, teaching staff, parents, students and other stakeholders
- A tour of the schools facilities
- Oral and written feedback

The results from the inspection are compiled and sent to the school and the local education authority (LSchB) in the form of a written inspection report: they are the basis for planning measures to improve school quality.

Scholastic Sports

a. Extracurricular activities

Germany has a huge sports club network which plays a central role in the delivery and implementation of sport. There are more than 91,000 sports clubs, the biggest citizens' movement in Germany. A third of all Germans are members of a sports club and those clubs are supported by many dedicated volunteers. A total of 2.7 million people contribute annually more than 500 million hours of volunteer work to enable approximately 27 million members in German sports clubs to take part in sport. They do this in various capacities, as directors, officers, marshals, coaches and helpers.

Sport in Germany has always been an essential part of education, whether at school or within a sports club. Further collaboration between schools and sports clubs provides a new opportunity particularly in light of proposed education changes which lengthen the school day. With closer working between schools and clubs there are opportunities for new target groups to become sports clubs members. Many sports associations and sports clubs have already developed and implemented this closer working concept. The concept ranges from the training of sports teachers and club staff to providing inside information to regional centres for sports clubs and schools. Direct cooperation between the institutions indicates the scope of cooperation between sports clubs and schools.

b. Competition framework

There is a National Schools Competition of performance orientated schools involving approximately 800,000 students, leading to the world's largest school sports competition. This competition is open to all schools in Germany. The focus is on the performance of teams rather than individuals and competition in 16 Olympic sports, aiming to generate fun and enjoyment in performance as well as strengthening volunteering and long term motivation to participate. The competitions rely on thousands of dedicated teachers, parents and club volunteers to make them possible⁴⁴.

In all 16 states, school teams compete first at the city or county level against each other, with the best school teams qualifying for federal state representation. At the national finals the best school team in Germany in certain classes of sports competition is determined. In addition to sponsorship, funding of the competition is, in the main, at state level. The federal government contributes to the cost of the final events with a federal grant of €500,000 per year currently.

Extracurricular sports activities competition - The two Federal sports competitions at schools *Youth Trains for the Olympics* (Jugend Trainert Fur Olympia) and *Federal Youth Games* (Bundesjugendspiele) are central to extracurricular sports activities at schools. Both youth contests are modern and are popular with boys and girls, as well as with their PE teachers.

Youth Trains for the Olympics

The Federal Ministry of the Interior funds the schools competition *Youth Trains for the Olympics*. This is a nationwide annual team competition for elite performance among schools, involving approximately 900,000 school students each year. The competition aims to promote team work and the achievement of high performance among young people. At the same time, it assists sporting talent-spotting and talent development.

School teams compete locally before going onto three federal finals. The winning regional teams go through to national competitions to find the best school teams in particular sports disciplines. The competition has been revised in recent years at the Government's request to focus more closely on talent-spotting and elite sports development. By concentrating more on performance, the competition has a bridging function with the national sports federations to find the next generation of elite athletes¹³.

Federal Youth Games

The Federal Youth Games not only provide athletic challenges to children and young people, but are also intended to motivate them to do sports in the long term. Physical exercise plays an educational role in the sense of a holistic education⁴⁵. The Federal Youth Games were established in 1951 and is one of the biggest sporting events for schools and sports clubs in Germany.

c. Coaches (education, selection and professional development)

In Germany the definition for coaching is: 'the process of preparing athletes, especially high-performance athletes, to compete, and of supervising them during competition.' (Krüger, A. 2002)

Historically in West Germany there have been demand and supply issues faced by both sports clubs and schools, which has led to coaches working in schools and physical education teachers working in sports clubs. Coaches tended to seek short term success rather than long term gain as payment was made based on successful competitive performance. In East Germany coaching was approached differently through the Leipzig Institute which was recognised as one of the world's leading academic institutions in physical education and sport. From 1960 it was established that a coach had to engage in 24 contact hours with their athletes a week, and that they would receive basic pay similar to a teacher with the same level of service with the option for performance related bonuses. This enabled coaches to consider a long term approach to athlete development. Coach education in the East allowed a greater number of coaches to be educated through a distance learning approach. By 1990 the East had 12 times as many coaches per capita than the West, some of whom found positions as coaches in the Federal Republic, others taught physical education in schools, whilst others moved abroad. The limited absorption across the Federal Republic of highly qualified coaches from the East in some instances relates to the doping system which at one time was prevalent in the East⁴⁶.

Germany has a long tradition in the education of coaches which has developed alongside the tradition for educating physical education teachers. The development of coaches has been traditionally undertaken by national sports federations for individual sports with coaches

taking up positions in sports clubs, whereas the education of physical education teachers has been undertaken by the Federal Lander with positions being taken up in schools. Although the central government encourages coordination between the two they have no jurisdiction to enforce a relationship. The coaching profession in Germany has a high number of voluntary coaches with few in paid positions: the lack of professionalization does allow coaches to progress through to elite success, with high standards of coaching and coach education available at both elite and grassroots levels.

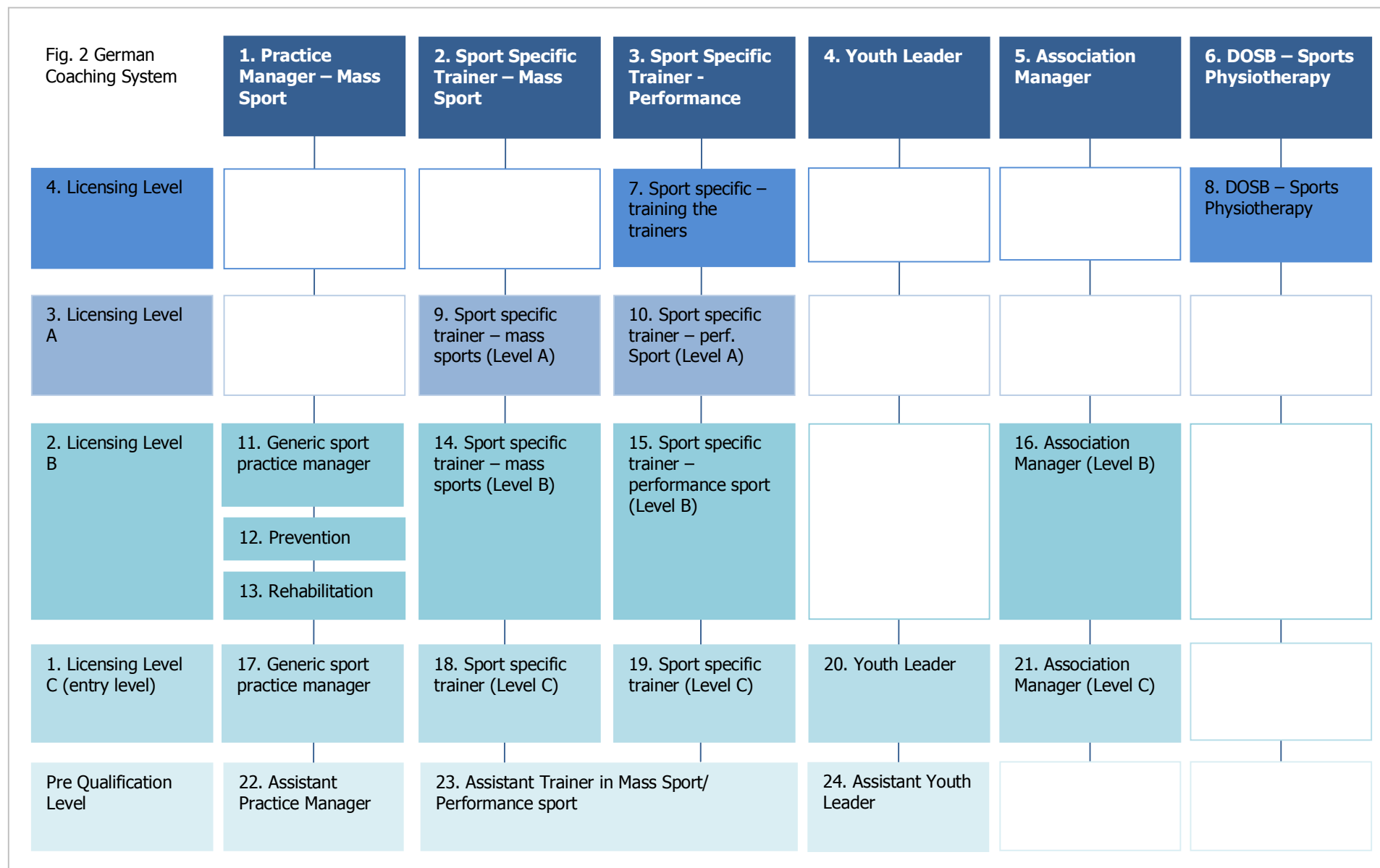
Figure 2 below illustrates the German coaching system for DOSB licenses. There are 6 different coaching qualifications:

1. Practice Manager in Mass Sport (participation and development levels), these are all round coaches who work across different sports and different age groups.
2. Sport Specific in Mass Sport (participation and development levels).
3. Sport Specific in Performance Sport.
4. Youth Sport Leaders.
5. Association Manager who work within clubs on areas including, organisation and staff/ volunteer development, membership, finance/ legal affairs, marketing and publicity.
6. Sports Physiotherapy

Within each of the six different qualifications there are five licensing levels. The first is pre-qualification; this then proceeds onto levels 1-4 which become more progressively in depth and expert in the relevant qualification. With training time at each level increasing (level 1 120 hrs, level 2 an additional 80 hrs, level 3 an additional 100 hrs, level 4 additional 6-18 months) between each certification level coaches should undertake a year of practical experience.

To get a DOSB license the candidate must take the required number of units for the licensing levels and take appropriate examinations. The practical implementation of the qualification is led through the sports federations within the DOSB. The advantages of the DOSB qualification structure and licensing system are:

- **Challenging education for qualified teachers** - Professionally and methodically trained and competent teachers ensured by the high quality of their training
- **Transparency and comparability through the licensing system** - The DOSB licensing system can be used transparently to assess and compare qualifications gained nationwide
- **Development opportunities** - The qualification system offers everyone the opportunity to develop
- **Cost-effective and comprehensive training opportunities**
- **Quality assurance through lifelong learning** - Regular training courses are mandatory to ensure up to date knowledge
- **DOSB licenses demonstrate quality** – Many state and social institutions recognize DOSB licenses within their systems.



3.6 Facilities and equipments

a. Type and characteristics of school sports facilities for Physical Education & School Sport

According to the 'SPRINT Survey' (2006) on the situation of physical education and school sports, sports facilities and their equipment – with the exception of swimming pools - are altogether acceptable across Germany, although standards differ in individual cases with specific issues or examples of good practice within certain schools or Länder. The survey included interviews with sports teachers who suggested that the effectiveness and quality of physical education and school sport provision is affected by unreasonably large student numbers in sessions and inadequate space for sessions due to the sharing of facilities or the inability to use space due to the multiple use of indoor facilities.

The survey suggests that the 'measurement of the quality of school sports currently seems to be largely unknown'. However, in general terms sports facility provision is thought to be 'satisfactory to good' overall. It is suggested that the 'aesthetic quality' of some sports facilities and the condition of the sanitary facilities in some cases are very bad. Indoor sports halls are well used but the shortages are apparent within vocational schools.

With specific reference to provision of sports facilities for swimming lessons, the survey concludes that 20% of all primary schools (Grundschulen), 23% of intermediate secondary schools (Hauptschule), 27% of all secondary schools (Realschule), 21% of all high schools (Gymnasium) and even 46% of all vocational schools do not have access to a swimming pool for physical education. This can result in some students not taking part in swimming due to lack of access to swimming pools. In the last few years, there has been an increase in the number of people drowned in Germany which is regarded as a reflection of this situation³⁶.

The characteristics of facilities within the 39 Elite Sports Schools are of higher quality than other types of school each will have access to specialist facilities for the provision of their primary sports as well as facilities for a number of secondary sports. In addition Elite Sports Schools have access to facilities at local Olympic Training Centres.

Case Study - Elite School of Sports in Hamburg (Gesamtschule Alter Teichweg)

The Elite School of Sports Hamburg is a full-day school with approximately 1100 students. The school achieved elite school sport status in 2006 and is the most recent to achieve elite status. The School is linked to the regional Olympic Training Centre so that they can effectively support high-performance athletes. The schools primary sports are beach volleyball, Hockey, rowing, swimming and sailing in addition to these sports the school engages students in basketball, badminton, handball, athletics, judo, volleyball, tennis and soccer.



The school has access to a range of facilities including regional training centres for swimming (located next to the school grounds) and basketball as well as weight rooms, climbing wall, gymnasium, floodlit tennis court. The School is within the Dulsberg sports park so has access to community use artificial turf pitches, sports fields and running track. In recent years there has been further investment in new regional training centres for badminton, volleyball and beach volleyball. Current facility plans include the construction of an outdoor swimming pool, handball and judo complex.

b. **Planning, design, management and maintenance of sports facilities**

In the mid 1950s the Institute for Sports Facility Construction was founded, through support from the German Local Government association to the Central Advisory Institute for Local Authority Sports Facility Construction, which brought together local authorities, sports associations and town planners. A study undertaken by the Federal Statistical Office based on calculations of the provision of recreational, games and sports facilities per capita revealed a significant shortfall. To combat the deficit the 'Golden Plan for recreation, games and sport' was developed in 1959 with the aim to overcome the shortfall over a fifteen year period. It was estimated that it would require DM6.315 billion (€3.228 billion) comprised of support nationally of 20%, Lander 50% and local governments 30%. Local Authorities and towns produced their own sports facility development plans and facility based conferences were held to support development. The 'Golden Plan' came to an end in 1975 with an investment of DM17.384 billion (€8.889 billion), considerably higher than anticipated. The overspend is thought to be a positive reflection on the success of the scheme and the result of an investment in multisport facilities, greater size and standards.

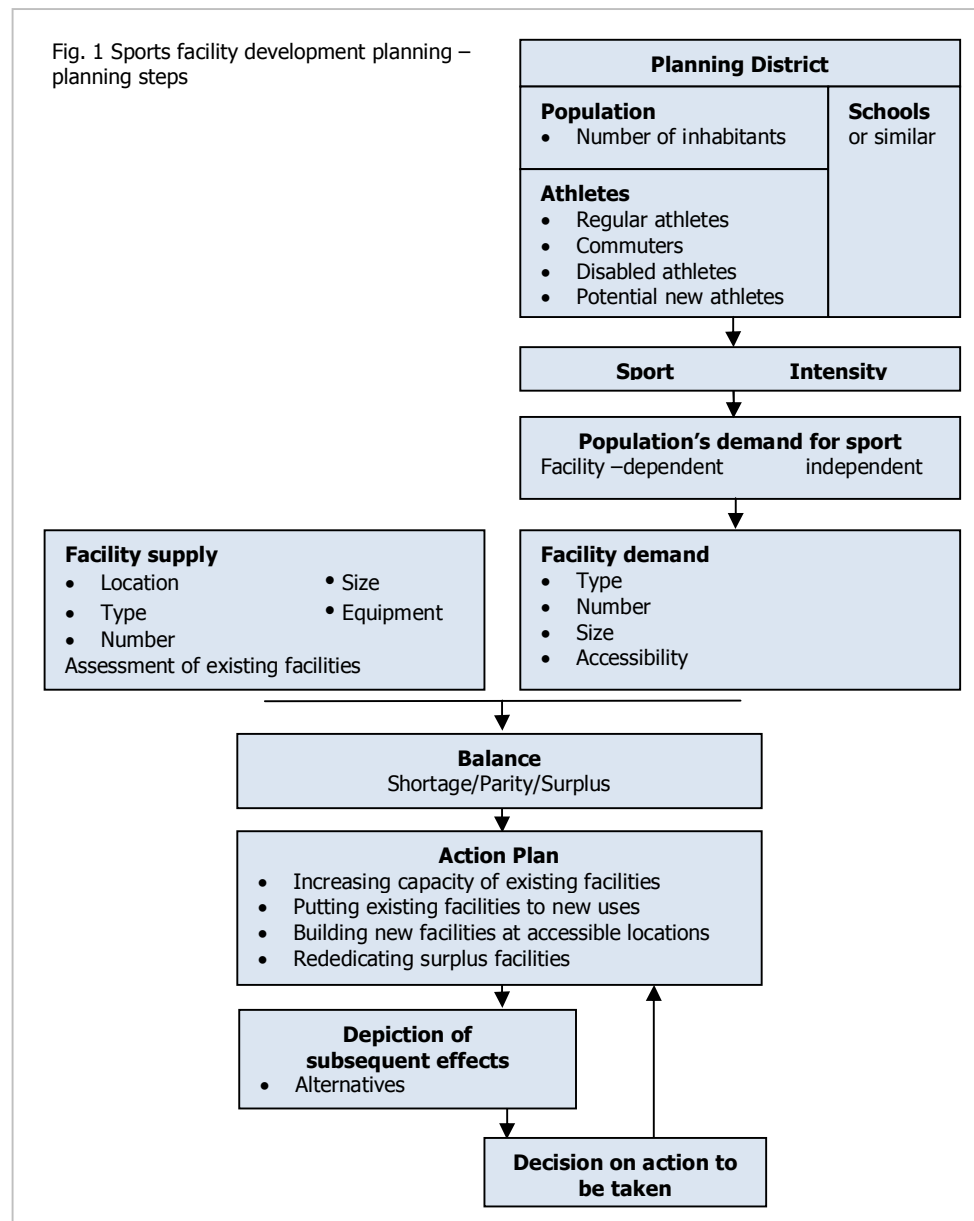
In 1990, after the re-unification of Germany, a second phase of the 'Golden Plan' was launched to bring the sports facilities in the former East Germany and the former East Berlin to the standards in the west. The establishment of the "Golden Plan East" strategy was an important political project of the Federal Government. In the period 1999 to 2007 €67 million federal funds went into the construction of sports halls, sports fields and swimming pools to bring facilities up to date and in line with those in the former West Germany.

To compete at the highest level, elite athletes require the highest standards for training and competition facilities. Therefore, special emphasis is placed on promoting construction of sports facilities for professional sport. These sports facilities are being built with major assistance from the federal states. In 2007 €22.6 million from the federal budget was made available for this purpose and in 2008, €19.6 million.

Planning for demand changes

In the 1950s and 1960s the main demand for facilities came from clubs and schools for physical education. The demand mainly focussed on traditional sports and the need for facilities to meet competition standards. This demand for competitive facilities changed in the 1970s and 1980s as facility demand shifted away from traditional competitive sports and towards participation in social, leisure, health and lifestyle pursuits. The growth of non-traditional sports and recreational activities has led to diversification in facilities and changes to the way in which the level of demand is estimated. The Federal Institute for Sports Science’s guide to sports facility development planning follows a survey method to establish the demand in relation to:

- Frequency and duration of practice per week
- Potential seasonal variations
- Demographic profile of participants
- Number of participants expected to take part at one time
- Size and capacity of the facility.



c. Use of sports facilities

Facilities within school grounds and within the local area will be used by the school for curriculum. The 'single hall' is the most-used indoor sports facility for school sports, followed by the triple halls, due the opportunity to have multiple sports activities in an indoor environment. Many schools (approximately 60% of all schools³⁶) enable the use of facilities on school grounds for extracurricular activities and the use by sports clubs outside of school use, the local authority or school will provide an outline of regulations for the use of facilities which may include:

- Charges for temporary use
- Usage conditions
- Accountability and liability.

The material costs of maintaining and operating facilities for community use has increased with some local authorities (Stuttgart) suggesting that fees for extracurricular use could increase in 2011 by 30%⁴⁷.

3.7 Private sector

a. Service providers

There are a variety of commercial institutions which provide private sector sport, many of which are small firms that provide single-activity or multi-activity centres that are open for community and school use. The most significant increase in private sector development has been the increase in fitness, health and wellbeing centres²⁰ according to a survey conducted by Deloitte in 2005 around 4.7 million people are members of approximately 5,600 gyms, 400,000 more than in 2004⁴⁸.

b. Sponsors

Sponsorship for school based sport is limited. High performance sport primarily benefits with the disciplines that receive television coverage receiving the most support. Football, which has the largest TV audience, receives the most, but another beneficiary is the sport for all mass participation initiative. The sports article industry, tourism and commercial sports providers are all playing a part in developments. Sport has become a significant economic factor, generating billions in turnover and providing more than 100,000 jobs in Germany⁴⁹.

3.8 Special programmes

Equality in sport has also been a focus for campaigns such as 'Women at the Top', 'Mutter und Kinder', 'Sport is good for women – women are good for sport', and 'Girls football in the spotlight'. Women make up 40% of the 27.5 million members of the DOSB although statistics show the proportion of women varies across organisations and federations. The nationwide campaign Opportunity through Diversity (Viefalt als Chance) focuses specifically on providing opportunities for women and girls.

In 2008 a number of projects targeted older people and families with the aim of engaging them in organised sport. Campaigns included 'Staying fit at 50+' and 'Families and Sport'. Other important areas that the Federal Government believe relate to the socio-political

importance of sport are: Sport and integration; Sport and the prevention of violence; Sport and voluntary involvement; Sport and health; and Sport and the environment¹⁴.

The DOSB also promote work with ethnic minority groups through their (Integration through sport (Integration durch Sport) programme. The programme's objective is to strengthen participation by people from migrant backgrounds into sport. As part of the programme, the integration day (A Tag der integration) is held annually in September.

4 Analysis and interpretation

4.1 Compressive overall analysis

The context for school sport and physical education in Germany should be considered in relation to the historical context of the country and the impact that unification had on the sporting landscape. Before unification, significant differences were evident in the approach taken in the West (investment in facilities) and the East (investment in high performance coaching which has since prompted ethical concerns). Aspects of both these systems allowed the Federal Republic of Germany to select and work with different tried and tested approaches post unification. School sport and physical education has been built on significant investment from a variety of funding streams and a culture of sporting successes on a global stage.

Community sports clubs are at the heart of German sport, the significant contributions made by voluntary clubs and their impact on PE and school sport should not be under estimated. Teachers play a role in physical literacy whilst experienced coaches progress the development of young people within a club environment. The engagement of community clubs in PE and school sport enables facilities and expertise to be shared, as well as promoting 'life-long participation'.

The structure of the school system as a whole has benefited the school sport and junior sport systems, with the traditionally short school day enabling young people to take an active role in participating and volunteering in community clubs. PE has been an integral part of the curriculum and has played an important role promoting sport outside of school. Educational attainment has been judged early in childhood development with the aim to provide young people with the right environment to progress to the best of their abilities in secondary schooling, whether this is a vocational route or academic pathway to university. The respect that sporting success has in Germany led to the development of elite sport schools to allow young people to achieve as an athlete and academically. The links made between the elite schools, Olympic training centres and the four year Olympic cycle ensure that talent development is high on the agenda.

It should be acknowledged that the situation of physical education and school sports in Germany can be further developed. As outlined in by the DOSB in Memorandum on physical education and school sports (2009):

'Although the general conditions and the possibilities of impact of physical education and compulsory as well as non-compulsory school sports could be better, they are not that bad, as compared with those existing in previous times or perhaps in some other countries'.

The devolved nature of the organisational structure of education and school administration has allowed schools to be developed to allow local decisions and investment to be made. This has worked to the advantage of PE and school sport in some areas but has limited its growth in others. Increased decision making at a local level may lead to a more disjointed PE and school sport system.

Physical education leaders in Germany are concerned about the introduction of all day schooling and the apparent erosion of curriculum time in schools for physical education; and there is particular concern about the impact of subsuming physical education under an "arts" umbrella in primary school curricula. However, the standards of pedagogy, school inspection and pedagogical training are high; and the quality of coaching has been well established for many years.

The structures and traditions of school sport and junior club sport remain strong across Germany, although in common with many other West European countries, there is increasing concern about the difficulties in retaining and recruiting the volunteers on which these structures depend.

4.2 SWOT Analysis

The following tables provide an analysis of the strengths, weaknesses, opportunities and threats that this review of the physical education and school sport in Germany has identified.

| Strengths | Weaknesses |
|---|---|
| <p>History and tradition</p> <ul style="list-style-type: none"> • Strong tradition of physical education and school sport • Considerable investment into physical education and sport • Strong tradition of after-school (scholastic) sport • Long tradition of affiliation to Olympic values and Olympism <p>National Sports System</p> <ul style="list-style-type: none"> • Club system 27 million members • Participation 45% meeting EU 30 minutes of exercise per day • Devolved responsibilities local provision tailored to local need • Culture of using sports coaches to enhance learning experience in both curriculum and extra-curriculum time • High numbers of voluntary coaches able to access a qualification structure and a recognised licensing framework • A national sports strategy 'Sport Moves' • Medal success 6th and 5th in 2004 and 2008 Olympics • International sporting success creating positive role models • Independent sports federations • Merged German Sports Federation and National Olympic Committee enables continuity from grassroots to elite • High number of university students undertaking sport and physical education related degrees <p>National School Sports System</p> <ul style="list-style-type: none"> • Physical education a fundamental part of the national curriculum • Secondary schools that are specialised in sports • 39 Elite sports schools providing time for training, competition and academic studies • Mature physical education teacher training system | <p>History and tradition</p> <ul style="list-style-type: none"> • No single strategy for physical education and/or school sport • Regional variation • Sedentary lifestyles and rising obesity • The Standing Conference of the Ministers of Education and Cultural Affairs (KMK) is the only mechanism for coordination. • Changes being made to the structure of the school day <p>National Sports System</p> <ul style="list-style-type: none"> • No national approach to sport participation surveys or monitoring • Reunification caused the education system for coaches in the East to cease leading to a decrease in coaches due to lack of professionalization • There is a lower proportion of women in decision making positions in sports organisations and federations • Limited quality assurance processes for sport taking place within voluntary clubs <p>National School Sports System</p> <ul style="list-style-type: none"> • Primary PE now subsumed under arts – danger of it becoming less important in the curriculum • Reduction in curriculum time for physical education • Physical education teacher can experience large student numbers and inadequate space due to multi-sport provision • Limited evidence of sporting success and academic achievement to warrant public investment in elite sports schools. • Different systems of education for physical education teachers and coaches • The quality of school sports provision is largely unmeasured |

- Length of training for the education of teachers and the quality of teacher education is good
- German Association of PE teachers enables training and allows sharing of advice
- Separate Sports Youth Federation to provide specific initiatives
- Research indicating direct correlation between physical education and academic educational achievement
- Standardised evaluation of school quality against national educational standards
- National schools competition involving large numbers of students (World's largest school sports competition)
- A number of research institutes for Physical education and sport science
- German Olympic Sports Confederation SPRINT Survey on the situation of PE and school sport

Facilities & Funding

- Level of investment in Sports facilities over an extended period
- Specialist facilities are available to elite sports schools which are linked to local Olympic Training Centres
- The 'Golden Plan' for facilities in the West and then replicated in the East has seen significant investment in facilities
- Variety of funding streams government subsidies, club membership fees, lottery, private and commercial investment.
- Federal budget has been made available for the investment in facilities for professional sport
- Healthcare is important with significant investment
- Proportion of national lottery funding allocated to sport
- Significant investment in elite sport in GDR before reunification

Economy

- Acceptance of employment in sport and physical education being a valued profession
- Hosted international events that generated economic and employment benefits.

- Schools relying on/ expecting support from community clubs so that they can lower levels of curriculum time for sport
- Sports lessons taught by teachers without a degree in physical education (specifically in primary schools)
- No documentation on the potential impact of all day schools on PE and sports teaching
- Not all young people have access to swimming lessons creating issues with water safety

Facilities & Funding

- Ageing facilities in need of overhaul further investment likely to be significantly lower than previous programmes
- Lack of swimming facilities for schools
- Not all schools have access to swimming pools so some students do not have lessons at school
- The standard of facilities for sport differs significantly
- Multi-use facilities create programming conflicts too many sports within one space.

Economy

- Limited central control of sports funding and services
- Sponsorship for school based sport is limited with the focus on high performance sport with a broader audience

| Opportunities | Threats |
|--|---|
| <p>History and tradition</p> <ul style="list-style-type: none"> • Continue to build evidence base to demonstrate value of sport • See long term funding <p>National Sports System</p> <ul style="list-style-type: none"> • Strong culture of voluntarism 12% of the population volunteer Growth in the sports industry. Locally financed. • Increase network of high quality club environments • High quality coaches developed through the national structure • Growth of the private sector coaching provision • Initiatives that target increasing participation by minority groups such as women and girls, older people and ethnic minority groups • Growing numbers of EU based physical education studies have led to a reflection on the system of physical education and sport <p>National School Sports System</p> <ul style="list-style-type: none"> • National school competition framework • Physical Education fundamental part of national curriculum • Legislation to make professional training for teachers compulsory • Increasing role for private sector • Schools given greater freedom to manage their own budget • Enhanced teacher training both at initial and in service • Further collaboration between schools and sports clubs including training opportunities for teachers within local clubs <p>Facilities & Funding</p> <ul style="list-style-type: none"> • Increase usage of the increase in school facilities • The growth of non-traditional sports has led to changes in facility planning enabling opportunities for broader health and lifestyle pursuits <p>Economy</p> <ul style="list-style-type: none"> • Further commercial investment in sport | <p>History and tradition</p> <ul style="list-style-type: none"> • Ageing population more people over 65yrs than under 15yrs • Sedentary lifestyles and increasing obesity <p>National Sports System</p> <ul style="list-style-type: none"> • Devolved responsibilities results in variation in standards of delivery • Changes to Federal Government funding for elite sport • Changes to Federal Lander and local authority spending of sport • Pressures on volunteers could threaten numbers <p>National School Sports System</p> <ul style="list-style-type: none"> • Transition issues for children moving from primary education to secondary schooling potential loss of physical education time • Removal of physical education from the national curriculum • Motivation of the physical education workforce • Reduced investment in school and physical education • Reduction in the number of elite sports schools, failure to re-qualify for status after four years • Competition for resources between schools • Changes to the structure of the school day towards full time day schools potentially reducing the time for sport outside of school • The perception that young people access sport outside of school so don't need as much curriculum time for physical education • Vocational schools opting for vouchers for sports club participation • National Schools Competitions is dependent on volunteers and the enthusiasm of teachers and Federal grant each year. <p>Facilities & Funding</p> <ul style="list-style-type: none"> • Maintenance and operational cost for opening facilities for community and extracurricular use continues to increase • Closure of public leisure facilities and increased charges <p>Economy</p> <ul style="list-style-type: none"> • Current national and international economic status • Reduction in resources |

4.3 Conclusions

Germany has a strong historical tradition of dedication to physical education and sport. The progression of community sports clubs and facility development has taken place over many years. Key aspects include;

- PE is a statutory part of the national curriculum and therefore a core subject for all young people
- There is strong tradition of valuing physical education and physical educationalists for the benefits they bring to society
- Life-long participation is promoted through a strong, established voluntary community club structure
- Major investment in capital funding to increase the quantity and quality of facilities
- The German Sports Youth (DSJ) is a dedicated organisation to engage with young people
- German Association of PE teachers is the recognised lead agency for supporting and raising standards in teacher training
- Success on the international stage in sports competition and in attracting and staging world events is inspiring young people
- There is a clear pathway between grassroots participation and elite sport – linked to the Olympic cycle
- Significant efforts are made to tackle low participation with a range of specific intervention programmes aimed at target groups
- Participation rates in sport are high in relation to other EU countries
- The country has a well developed network of sports facilities both on school sites and in local communities including Olympic training venues.

However, the current future of youth sport is an uncertain one. Germany is changing the structure of the educational system encouraging more local decision making, which is enabling the growth of all-day schooling. In order to improve the sporting outcomes for the nation, Germany should;

1. Improve basic teacher training; long term planning to increase primary school PE teacher training
2. Develop joint education plans for day nurseries and schools to ensure the importance of physical activity starts early
3. Ensure all children receive at least 3 hours of PE and Sports per week as part of the curriculum as it cannot be replaced by voluntary, after-hour programmes.
4. Continue to maintain links between schools and community based sports clubs
5. Encourage outside investment from the commercial sector to maximise sports funding
6. Support involvement by parents and partners of school sport in implementing joint-educational interventions that promote 'education for physical activity' and 'education by physical activity'
7. Institutions for schools should ensure that quality provision of equipment and facilities – specific effort should be made in regards to school swimming lessons
8. Actively promote good practice examples of schools and sports clubs working together
9. PE and School sport should be integral in the implementation of all day schools
10. PE and School Sport teachers should meet EU demands for five year university education
11. The professionalism of PE and School Sports teachers should be utilised and supported
12. Improve research and data collection approaches to capture data on sports participation, physical activity and educational attainment.

Lessons for Saudi Arabia

There are a number of lessons for the Kingdom of Saudi Arabia to learn. In particular, these are the need for;

- Streamlined national sports agencies with clear and agreed roles and responsibilities
- A long term plan for investment in facilities multi use and sport specific for school sports and community use
- A strong community club structure linked to schools that is supported by the national sports federations
- A clear school structure that allows young people to attain high levels of athletic and educational attainment - consider the elite sports school structure and its links to Olympic training facilities
- Integrating PE and Sport into the structure of the school day
- A guiding philosophy that shapes both the PE curriculum and community based youth sport programmes
- A clear and consistent coach education and qualifications system
- The need for regular national participation surveys and the use of statistics to inform decision making
- The importance of separate advisory and inspection services for PE
- The value of community sports clubs to sustain young people's sports participation.

5 Appendix

5.1 Report of interviews: descriptions and conclusions

Overview of online question and answer session with Prof Dr Roland Naul

University Professor for sport science and sport pedagogy at the University of Duisburg-Essen

1. Devolved responsibility for the Länder for PE and school sport

This responsibility was set up after the foundation of the Federal Republic of Germany with the support of the three western allies. The first German states were founded 1946, e.g, the biggest state "North-Rhine Westphalia" was established by the Brits just 65 years ago! Since 1950 all former nine German states (including West-Berlin) up to re-unification in 1990, when the former GDR territory was split into five new German states we have cultural independence of the school and sport systems in Germany, which means: 16 different non-governmental "Länder" sport councils which include alls regional sport associations of single sport associations (e.g. athletics, football etc.). In 1950 the DSB was founded like our NOC in 1950 which both merged into the "German Olympic Sport Confederation" only in 2006.

The DSB was for more than 50 years the real "federal voice" for PE and school sports, but with no political power. The Federal State has only some responsibility for elite sports since mid of the 1960s and for vocational training and degrees at schools, but excluding Physical Education for vocational schools. The so called "standing commission of the Ministers of Education" (KMK) which represent all Länder ministers of education, did common guidelines for Physical Education development in the Länder by a so called "sport commission". However, these guidelines (1956, 1972, 1985, 2009) defined a frame of development, more or less taken by the Länder. Physical Education and school sport policy was and still is the full responsibility of the Länder up to today. However, since the mid 1990s, in each Länder the local school was given some flexibility to their school curriculum in terms of building local profiles. For the three compulsory

Physical Education lessons weekly, this was in fact "a roll back", because up to 90% of the local schools reduced their Physical Education lessons down to 2, only less than 10% took their opportunity to extend it up to 4 lessons weekly.

2. Recent or proposed changes

As mentioned before, in the mid 1990s more local school flexibility was executed by the Länder Ministries of Education. This was also the turning point in many German Länder to build more partnerships with local sport clubs which existed since the mid 1950s for extra-curricular physical activities. Since 2006 the German City and German Village Association are demanding more independence for their local schools. They are responsible for conducting state regulated policies, but without any access to change items to a more local profile for school education at a local level. The local level has become stronger recently when the IZBB was introduced 2002 by the Federal State.

Since 2003 a new type of "all-day-schools" is in progress for the primary and secondary school system. For instance in my state of "North-Rhine-Westphalia" (population 18 million, biggest German state) almost 90% of our primary schools now have become "all-day-schools" since 2003 (=approx. 3,000 schools). A new contract was set up between the Ministry of Education and our Länder Sport Assoc. (LSB NRW) in 2003 to offer after-school sport courses at school by local sport clubs with the commonly shared vision of "daily Physical Education and Physical Activity courses". Our research institute is currently involved by contract of the Ministry of Education, Ministry of Sport and LSB NRW to monitor and evaluate this shift to increased Physical Education and Physical Activity in the new type of "all-day-schools" (8-16 hrs).

3. Recent developments in Physical Education teacher training

Recent changes in Physical Education teacher training are going into the direction for new qualification profiles for HEPE, motor diagnostic, for more individual support of children, and standards of "quality Physical Education " with evaluation tools for Physical Education teachers.

The major challenge are two items: the shift to EU based BA./MA profiles for Physical Education teacher training and the change of the

Physical Education teacher role model to become an "all-day- Physical Education teacher" at school in the afternoon with more involvement and responsibility for extra-curricular work as well.

Overview of online question and answer session with Prof Dr Gudrun Doll Tepper

ICSSPE International Council of Sport Science and Physical Education former President, Professor at Freie University Berlin VP National Olympic Committee

1. Responsibility for school curricula is devolved to the Länder. However is there any overarching national curriculum for PE or any framework that each Länder must work towards?

Indeed, school curricula are in the responsibility of the ministries of education of the Länder (16 states in Germany). Therefore, there is no national curriculum in Germany. However, all 16 ministers of education (sometimes the term culture is used) are working together regularly in a board which is called "Kultusministerkonferenz" (Standing Conference of Ministers of Culture) and they make recommendations concerning all issues related to schools. An important aim for this institution is to work towards comparability of degrees in teacher education and of degrees on different school levels. This is an important prerequisite for families and teachers to move and to apply for higher education (university) not only in the state where the "Abitur" has been achieved but all over Germany. This Standing Conference has also a standing commission for school physical education and university sport.

There are 16 ministers of sport as well, but they have no responsibilities for schools. Please, note, in the Federal Republic of Germany there is no Federal Minister of Sport, but the Federal Minister of the Interior has also the responsibility for sport, but only for high performance sport!

2. Funding for school sport is also devolved to the Länder, however are there any national funding streams specifically for school sport?

Funding for school sport is in the responsibility of the Länder, there is no funding from the Federal Government.

3. Is there any legal requirement to provide PE in schools, and if so up to what age?

There is a legal requirement for all schools for children and youth of all ages to provide physical education/school sport.

4. Germany has a very strong sports club structure, how does school sport and PE link into the club structure?

Schools and sport clubs cooperate very closely, there are many, many examples of cooperation of very different characteristics such as talent identification, coordination of afternoon activities etc. A lot of this is documented in publications etc. Officially, the Standing Conference of Ministers of Culture cooperates with the German Olympic Sport Confederation and the German School Sport Foundation.

In addition, it is important to mention that all states in Germany have so-called elite-sport schools for highly talented youth that cooperate with clubs and sport structures on state level.

5. Are there any fundamental changes being discussed or implemented in relation to the system for school sport in Germany?

There are some big changes in the German school system occurring:

- The reduction of school years to 12 years in those states where pupils until now had 13 years of school.

- The implementation of all-day-schooling (from morning until late afternoon). This requires more cooperation between schools and sport clubs and this is a "hot topic" because new concepts need to be developed and implemented.

5.2 Collected data: cards, figures and tables

Table 1 DOSB Member organisations

| 33 Olympic Sports | 28 Non- Olympic Sport Federations | 16 Regional Sports Confederations | 20 Federations with Special Tasks |
|---|--|--|--|
| German Bobsleigh and Luge Federation | German American Football Federation | Sports Confederation of Bavaria | German University Sport Federation |
| German Cycling Federation | German Federation of Power Lifters | Hamburg Sports Confederation | Association of German Sport and Gymnastics Schools |
| German Weightlifting Federation | German Billiard Union | Berlin Sports Confederation | German YMCA Sport |
| German Ice Skating Union | German Lifeguard Association | Brandenburg Sports Confederation | German Society for Sports Medicine and Prevention |
| German Ice Speed-Skating Association | German Aero Club | Bremen Sports Confederation | German Olympic Association |
| German Equestrian Federation | German Alpine Club | Hessian Sports Confederation | German Association of Sport Science |
| German Taekwondo Federation | National Paralympic Committee Germany | Sports Confederation of Mecklenburg-West Pomerania | German Aikido Federation |
| German Triathlon Federation | German Boccia, Boules and Pétanque Association | Sports Confederation of Lower Saxony | German Federation for Company Sports |
| German Badminton Federation | German Curling Association | Sports Confederation of North Rhine-Westphalia | Association of German Sport Teachers |
| German Baseball and Softball Federation | German Deaf Sports Federation | Sports Confederation of Rhineland-Palatinate | German Ski Instructors Association– Interski Germany |
| German Basketball Federation | German Golf Association | Sports Confederation of Saxony | German Nudist Association (registered association) |
| German Boxing Federation | German Ju-Jitsu Federation | Sports Confederation of Saxony-Anhalt | Board of Trustees of German Police Sport |
| German Triathlon Federation | German Karate Federation | Sports Confederation of Thuringia | German Catholic Youth Sport Association |
| German Ice Hockey Federation | German Bowling Association | Sports Confederation of Baden-Württemberg | Trade Union Education and Science– Sport commission |
| German Fencing Federation | German Mini Golf Sport Federation | Sports Confederation of Saarland | Kneipp Association (registered association) |
| German Football Federation | German Motor Sports Federation | Sports Confederation of Schleswig-Holstein | Makkabi in Germany |

| | | | |
|-------------------------------------|---|--|---|
| German Handball Federation | German Motorboat Federation | | RKB »Solidarity« Germany 1896 |
| German Hockey Federation | German Federation of Tug of War and Heavy Athletics | | Special Olympics Germany (registered association) |
| German Judo Federation | German Roller and Inline-Skating Sport Federation | | Foundation for Safety in Ski Sport |
| German Canoe Federation | German Rugby Federation | | Association of German Railway Employees Sports Clubs (registered association) |
| German Athletics Federation | German Chess Federation | | |
| German Wrestling Federation | German Skibob Federation | | |
| German Rowing Federation | German Acrobatic Gymnastics Federation | | |
| German Swimming Federation | German Squash Federation | | |
| German Shooting Sports Federation | German Dance Sport Federation | | |
| German Sailing Federation | German Water Ski Federation | | |
| German Skiing Federation | Association of German Sports Anglers | | |
| German Tennis Federation | German Underwater Federation | | |
| German Table Tennis Federation | | | |
| German Gymnastics Federation | | | |
| German Modern Pentathlon Federation | | | |
| German Volleyball Federation | | | |
| German Snowboard Federation | | | |

Table is sourced from the DOSB Sport Moves!

Table 2 Time allocation (minutes per week) for PE in EU primary schools: 2000-2007

| Countries | Minimum 2000 | Maximum 2000 | Minimum 2007 | Maximum 2007 |
|-----------------------|---------------------|---------------------|---------------------|---------------------|
| Austria | 100 | 200 | 100 | 200 |
| Belgium | 100 | 120 | 100 | 100 |
| Bulgaria | 120 | 120 | 100 | 150 |
| Cyprus | 90 | 90 | 80 | 80 |
| Czech Republic | 90 | 135 | 90 | 135 |
| Denmark | 90 | 100 | 90 | 90 |
| Estonia | 90 | 135 | 135 | 135 |
| Finland | 90 | 90 | 90 | 90 |
| France | 240 | 240 | 120 | 240 |
| Germany | 90 | 180 | 60 | 150 |
| Greece | 90 | 90 | 90 | 135 |
| Hungary | 90 | 90 | 112 | 225 |
| Ireland | 30 | 60 | 30 | 60 |
| Italy | 100 | 120 | 60 | 120 |
| Latvia | 120 | 120 | 80 | 80 |
| Lithuania | 90 | 90 | 35 | 45 |
| Luxembourg | 100 | 135 | 100 | 100 |
| Malta | 90 | 90 | 150 | 150 |
| Netherlands | 50 | 100 | 45 | 90 |
| Poland | 135 | 135 | 135 | 180 |
| Portugal | 150 | 180 | 90 | 135 |
| Romania | 100 | 100 | 100 | 100 |
| Slovakia | 90 | 135 | 90 | 135 |
| Slovenia | 135 | 135 | 45 | 135 |
| Spain | 60 | 60 | 100 | 180 |
| Sweden | 110 | 110 | 100 | 100 |
| United Kingdom | 30 | 120 | 30 | 130 |

Table 3 Time allocation (minutes per week) for PE in EU secondary schools: 2000-2007

| Countries | Minimum 2000 | Maximum 2000 | Minimum 2007 | Maximum 2007 |
|-----------------------|---------------------|---------------------|---------------------|---------------------|
| Austria | 100 | 200 | 50 | 200 |
| Belgium | 150 | 150 | 100 | 150 |
| Bulgaria | 120 | 120 | 135 | 135 |
| Cyprus | 90 | 90 | 45 | 135 |
| Czech Republic | 90 | 90 | 90 | 135 |
| Denmark | 90 | 100 | 60 | 60 |
| Estonia | 90 | 90 | 90 | 90 |
| Finland | 90 | 90 | 45 | 90 |
| France | 120 | 240 | 90 | 240 |
| Germany | 90 | 180 | 60 | 135 |
| Greece | 90 | 90 | 90 | 135 |
| Hungary | 90 | 135 | 90 | 225 |
| Ireland | 45 | 120 | 57 | 120 |
| Italy | 100 | 120 | 120 | 120 |
| Latvia | 120 | 120 | 80 | 80 |
| Lithuania | 90 | 90 | 45 | 45 |
| Luxembourg | 45 | 150 | 125 | 125 |
| Malta | 45 | 90 | 45 | 90 |
| Netherlands | 50 | 100 | 90 | 120 |
| Poland | 90 | 135 | 135 | 180 |
| Portugal | 150 | 180 | 180 | 180 |
| Romania | 100 | 100 | 100 | 100 |
| Slovakia | 135 | 135 | 45 | 135 |
| Slovenia | 90 | 90 | 90 | 180 |
| Spain | 60 | 60 | 110 | 120 |
| Sweden | 110 | 110 | 60 | 60 |
| United Kingdom | 60 | 120 | 60 | 120 |

Tables 2 & 3 are sourced from Hardman, K (2008) Physical Education in Schools: A Global Perspective. Kinesiology 40

Table 4 10 largest sports at German Elite Sports Schools (School population 2007 11,271)

| Sports | Number of pupil athletes |
|-----------|--------------------------|
| Athletics | 727 |
| Swimming | 525 |
| Football | 510 |
| Handball | 315 |
| Judo | 309 |
| Canoe | 249 |
| Ski | 240 |
| Rowing | 232 |
| Cycling | 203 |
| Wrestling | 196 |

Table 4 is sourced from Radtke, S & Coalter, F (2007) Elite Sports Schools: An International Review. University of Stirling.

References

- ¹ Federal Statistics Office Germany 2009
<http://www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/EN/Content/Statistics/Bevoelkerung/Aktuell,templateId=renderPrint.psm>
- ² The World Health Report 2000-Health Systems. Improving performance
- ³ The World Health organisation, Global health observatory 2009 Countries Germany
- ⁴ Organisation for economic co-operation and development (OECD). Health data 2009
- ⁵ Bottenburg M. (2009) sport participation in the EU: trends and differences, Wjh muhler
- ⁶ European commission. (2010) Sport and physical activity, TNS opinion and social. http://ec.europa.eu/public_opinion/archives/ebs/ebs_334_en.pdf
- ⁷ bbc.co.uk, Sport-Olympic medals tables Beijing 2008 http://news.bbc.co.uk/sport1/hi/olympics/medals_table/default.stm
- ⁸ bbc.co.uk Sport-Olympic medal tables Athens 2004 http://news.bbc.co.uk/sport1/hi/olympics_2004/default.stm
- ⁹ The Sports Market; Major trends and challenges in an industry full of passion. AT Kerney
- ¹⁰ Andeff. W (2007) Sports Financing in Europe- Towards a transformation in the 21st century, play the game pub.
- ¹¹ Hagn, F & Maenning W (2008) Labour market effect of the 2006 soccer world cup: International association of sport economics
- ¹² Bohlmann, H (2006). Predicting the Economic Impact of the 2010 FIFA World Cup on South Africa. Department of Economics Working Paper Series, Department of Economics, University of Pretoria.
- ¹³ Children and Youth Services in Germany. (2009). Child and Youth Policy in Germany - Structures and Institutions. http://www.kinderjugendhilfe.info/en_kjhg/wai2/showcontent.asp?ThemaID=4938
- ¹⁴ Houlihan, B & Green, M (2007). Comparative elite sport development: systems, structures and public policy. <http://v5.books.elsevier.com/bookscat/samples/9780750682817/9780750682817.pdf>
- ¹⁵ Petry K. & Schulze. B (2011) Germany. In Nicholson, Hoye and Houlihan Participation in Sport: International Policy Perspectives. PP. 42-58. Routledge. Oxon
- ¹⁶ Deutscher Olympischer SportBund (2010). DOSB corporate brochure 'Sport Moves'. http://www.dosb.de/fileadmin/fm-dosb/downloads/DOSB-Textsammlung/DOSB_Image_GB_72web.pdf

-
- ¹⁷ Deutsche Olympischer Sport Bund: Sport Moves! (2010)
- ¹⁸ Scenk, S (2011) <http://www.goethe.de/ins/us/lp/ges/mol/en13922.htm>
- ¹⁹ Montel, J & Waelbroeck-Rocha, A E (2010) The different funding models for grassroots sports in the EU. Eurostrategies
- ²⁰ Hartmann-Tews, I (2002) Sport for all - System and Policy in Sport and Physical Education in Germany. Naul, R & Hardman, K eds. Pg 153-164. Routledge: London.
- ²¹ Houlihan, B & Green, M (2007). Comparative elite sport development: systems, structures and public policy. <http://v5.books.elsevier.com/bookscat/samples/9780750682817/9780750682817.pdf>
- ²² Deutsche Sporthilfe (2011) German Sports Aid Foundation <https://www.sporthilfe.de/>
- ²³ European Agency for Development in Special Needs – General Information Germany. (2010) <http://www.european-agency.org/country-information/germany/general-information>
- ²⁴ Niedersächsisches Landesamt für Lehrerbildung und Schulentwicklung NiLS (2010) The making of Leadership in Education. A European Qualification Network for Effective School Leadership.
- ²⁵ European Agency for Development in Special Needs – General Information Germany. (2010) <http://www.european-agency.org/country-information/germany/general-information>
- ²⁶ Coalter, F & Radtke, S. (2007). Sports Schools: An international Review. Scottish Institute of Sport Foundation. Stirling. Stirling university.
- ²⁷ Emrich et al. (2009). Evaluation of the Elite Schools of Sport. International Review for the Sociology of Sport 44/1-3 151-171
- ²⁸ Deutscher Olympischer SportBund (2011). Elite School of Sports": Facts, Figures and Facts. <http://www.eliteschulen-des-sports.de/>
- ²⁹ Deutsche Welle. (2010) Germany's elite schools nurture sports stars in the making. <http://www.dw-world.de/dw/article/0,,5938501,00.html>
- ³⁰ Scenk, S (2011) <http://www.goethe.de/ins/us/lp/ges/mol/en13922.htm>
- ³¹ Naul, R (2004). Concepts of Physical Education in Europe. University of Essen, Germany . http://www.wgi.de/media/Pdf/Concepts_of_Physical_education_in_Europe_571115.pdf
- ³² Naul, R (2002) Physical Education in Schools in Sport and Physical Education in Germany. Naul, R & Hardman, K eds. Pg 153-164. Routledge: London.
- ³³ Deutscher Olympischer SportBund (2009) Memorandum on Physical Education and School Sports

- ³⁴ Naul, R & Hardman, K (2002) Sport and physical education in re-unified Germany 1990-2000 in Sport and Physical Education in Germany. Naul, R & Hardman, K eds. Pg 153-164. Routledge: London.
- ³⁵ Nedeljko Rodić, D (2006) Development Of Primary Physical Education Curricula. Teachers' Training Faculty in Sombor http://www.see-educoop.net/education_in/pdf/develop_prim_phys_educ_curr-yug-ser-enl-t06.pdf
- ³⁶ Deutscher Olympischer SportBund (2006) DSB- SPRINT study. (Meyer & Meyer Verlag, Aachen 2006). <http://www.dosb.de/de/jugendsport/qualitaetsoffensive/schulsport/was-steht-in-der-dsb-sprint-studie-teil-1/>
- ³⁷ Pfeifer, C (2007). The impact of Participation in Sports on Educational Attainment: New Evidence from Germany. Institute of Labour Economics; Hanover.
- ³⁸ Huber, SG & Gordel, B (2006) Quality Assurance in the German School System. European Educational Research Journal. Vol 5. Numbers 3& 3. Pg 196 - 209
- ³⁹ ICSSPE (2011) Research institutes and schools of higher learning in physical education and sport science. http://www.icsspe.org/index_de7e3c82.php.html
- ⁴⁰ Deutsche Sporthochschule Koln. The German Sport University Cologne At a glance. <https://www.dshs-koeln.de/wps/wcm/connect/668cb8004c22cee9b405f5620d0e1584/Atag glance.pdf?MOD=AJPERES>
- ⁴¹ Niedersächsisches Landesamt für Lehrerbildung und Schulentwicklung NiLS (2010) The making of Leadership in Education. A European Qualification Network for Effective School Leadership.
- ⁴² Huber, SG & Gordel, B (2006) Quality Assurance in the German School System. European Educational Research Journal. Vol 5. Numbers 3& 3. Pg 196 - 209
- ⁴³ Niedersächsisches Landesinstitut für schulische Qualitätsentwicklung (2011) Decree of School Inspection. http://www.nibis.de/nibis.phtml%3Fmenid%3D2974&usg=ALkJrhiYR-bRRpVdHMpoVQId4qni1G47_A
- ⁴⁴ http://www.bmi.bund.de/SharedDocs/Standardartikel/DE/Themen/PolitikGesellschaft/ohneMarginalspalte/bundeswettbewerb_der_schulen.html?nn=102984
- ⁴⁵ Children and Youth Services in Germany. (2009). Youth Works in Sport. http://www.kinder-jugendhilfe.info/en_kjhg/wai2/showcontent.asp?ThemaID=4980
- ⁴⁶ Krüger, A (2002) Coach education and training in Schools in Sport and Physical Education in Germany. Naul, R & Hardman, K eds. Pg 113-131. Routledge: London.
- ⁴⁷ School Administration Office (2011). Controlling and Reporting – School and school sports facilities. Department of Management buildings school and school sports facilities. http://www.wahlern.ch/fileadmin/media/pdf/VO_Schul-_und_Schulsportanlagen_2010.pdf
- ⁴⁸ Expatica (2005). Healthcare in Germany - Keeping the economy healthy: Why Germans are shelling out for health and fitness. http://www.expatica.com/de/health_fitness/healthcare/Keeping-the-economy-healthy_Why-Germans-are-shelling-out-for-health-and-fitness-products_10070.html

⁴⁹ Scenk, S (2011) <http://www.goethe.de/ins/us/lp/ges/mol/en13922.htm>