QUALITY IN SYSTEMS OF TALENT IDENTIFICATION AND DEVELOPMENT

THE CASE OF SWIMMING

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Abstract

Despite the importance, and the remarkable number of researches focusing on talent identification and development in sport, very few researches are directed to handle issues connected to the administrational side of this field. This research addresses the topic „quality in systems of talent identification and development in swimming" from an administrational point of view. In the first part of the research, the systems of talent identification and development in Germany and Australia are compared, particularly in respect to the swimming discipline. The comparison is made through a literature review and the scrutiny of the official documents, aiming to reveal and discuss the differences and the similarities of the systems in the two mentioned countries. The second part of the research has an exploratory theme. It is done through a survey of swimming clubs or swimming departments in sport clubs in the Wuerttemberg area in Germany. The questionnaire is designed to be filled in by an official, a coach or a board chairman of a swimming club or department. The aim is to collect information about the methods used to identify and develop talented swimmers within the swimming clubs. Furthermore, characteristics that are associated with successful talent identification and development were analysed in order to assess the critical aspects of success in systems of talent identification and development.

Zusammenfassung

Trotz der Wichtigkeit und der bemerkenswerten Anzahl an Forschungen, die sich auf die Identifizierung und Entwicklung von Talenten im Sport konzentrieren, sind nur wenige Forschungen darauf gerichtet, mit Problemen umzugehen, die mit der administrativen Seite dieses Bereichs verbunden sind. Diese Forschung befasst sich mit dem Thema „Qualität in Systemen zur Identifizierung und Entwicklung von Talenten im Schwimmen" aus einer administrativen Perspektive. Im ersten Teil der Forschung werden die Systeme zur Identifizierung und Entwicklung von Talenten in Deutschland und Australien verglichen, insbesondere in Bezug auf die Schwimmdisziplin. Der Vergleich erfolgt durch eine Literaturrecherche und die Überprüfung der offiziellen Dokumente, um die Unterschiede und Ähnlichkeiten der Systeme in den beiden genannten Ländern aufzuzeigen und zu diskutieren. Der zweite Teil der Forschung hat ein exploratives Thema zum Gegenstand. Er wird durch eine Umfrage von Schwimmvereinen oder Schwimmabteilungen der Sportvereine im Württemberg in Deutschland durchgeführt. Der Fragebogen ist so entworfen, dass er von einem Trainer oder einem Vorsitzenden eines Schwimmvereins oder einer Schwimmabteilung ausgefüllt wird. Ziel ist es, Informationen über die Methoden zur Identifizierung und Entwicklung talentierter Schwimmer in Schwimmvereinen zu sammeln. Darüber hinaus wurden Merkmale analysiert, die mit einer erfolgreichen Identifizierung und Entwicklung von Talenten verbunden sind, um die kritischen Aspekte des Erfolgs in Systemen zur Identifizierung und Entwicklung von Talenten zu beurteilen.

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Chapter I - Introduction

1.1. Overview

International sport events have become more important and more popular than in earlier years (Caiazza & Audretsch, 2015). Mega sporting events, such as the Olympics, are followed by millions of people from different parts of the world. Adding to that, many studies talk about the positive economic impact such sporting events carry to the hosting countries (Gratton, Shibli & Coleman, 2006; Liu, Grove & Champagne, 2013). Additionally, those sporting events turned to be become a platform for a competition, with a political theme, among the different countries, and placed sports as a mean of competition, so that each country tried to demonstrate the ideological superiority over the other participating countries (Green & Houlihan, 2005, p. 1). Accordingly, governments work hard to increase their investments in sports, and spend more money on sport in general, and on elite sport in particular as an attempt to be represented by best athletes in those sporting events (Grix & Carmichael, 2012). As a part of elite sport development, governments had to give more attention to talent identification and development (TID) as a vital sub-division of elite sports as described by De Bosscher, et al. (2009). Consequently, that helps guarantee effective financial investment by focusing available resources on the development of a smaller number of athletes (Vaeyens et al., 2008). However, to achieve this point, governments had to provide sufficient support for the talented athletes by enhancing the performance of the sport organisations regarding this point. This could happen by establishing or developing the sport organisations or systems responsible for identifying or developing talents in the country in order to manage the processes and procedures of talent

identification and development and make sure that they will achieve their goals and help improving the results of the country in the international sporting event.

1.2. Purpose

The overarching aim of the study is to determine the critical aspects of quality in the systems of talent identification and development in swimming. To achieve that, two main studies take place. The first one is a comparison study between Germany and Australia regarding the management and administration of the processes of talent identification and development. The second study is an exploratory study aiming to analyse the systems and methods used to identify and develop talented German swimmers on swimming club level.

The purpose of the first study is to compare the systems and administrations of talent identification and development (TID) for swimming in Germany and Australia, and reveal similarities and differences between the two systems on macro level. That might help to define the critical characteristics of talent identification and development systems, which in turn, provides the opportunity to develop and evaluate the TID systems in general. Accordingly, the study might be able to help improving the performance of TID systems, which will reflect the improvement of the final achievement of elite sport systems at an international level.

The study was decided after noticing that the achievements of the German swimming athletes in the Olympics decreased in the past decades (Olympic Games, 2017). On the other hand, Australia was chosen because of the good results it achieved in the Olympic swimming (Olympic Games, 2017) and because those good achievements are a result of an administrational change in the Australian sport system. This change is due to the establishment of the Australian Institute of Sport (AIS), which was created after the Australian poor performance at the 1976 Olympics, and it achieved good results including swimming. That made it a good example for many other nations to follow (Cobley, Schorer, & Baker, 2012). A small comparative study regarding the medals won by Germany and Australia swimmers in the

Olympics was made on the bases of the medals summary (Olympic Games, 2017) in order to compare the results of swimming for Germany and Australia. The research is based on the quantity and the quality of the medals won by each of the compared countries. It is done by giving a number of points for each type of medal; with three points for gold medals, two for silver, and one point for bronze, with the consideration for the Olympic games, when Germany participated with two teams, the number of points for both teams was added and then divided by two (Figure 1).

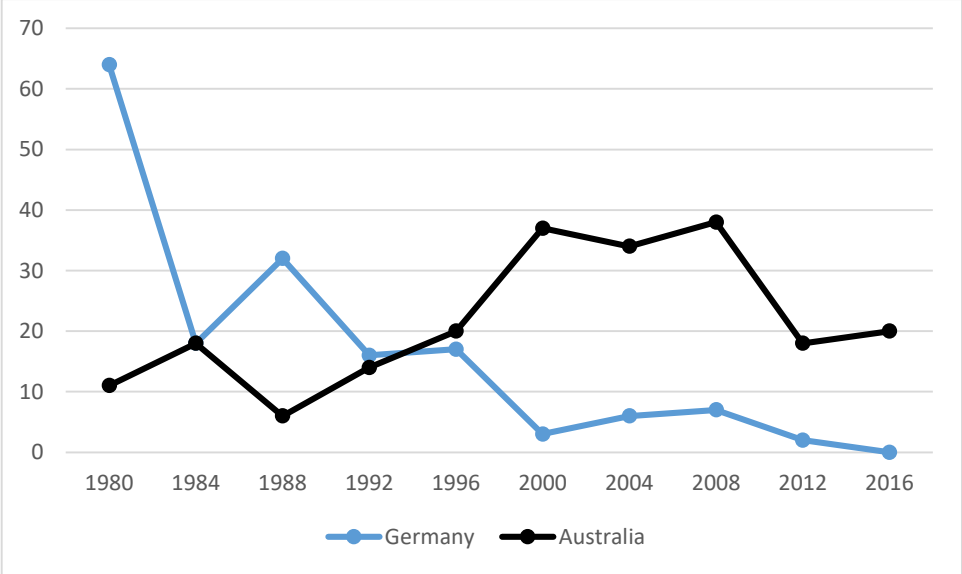

Figure 1 German and Australian achievements in the Olympics

According to Figure 1, it is clear that Germany had good results in the Olympics when compared to Australia's results. It continued with good results in the Olympic swimming until the 1996 Olympics, later, there was a general dearth in the results compared to previous times. A big change in the German sport system took place in 1990 after the reunification of Germany. However, this change included the termination of the talent identification and development system, which had been used in East Germany (Rütten & Ziemaiz, 2003). Nevertheless, when looking at Figure 1, it would be noticeable that a tremendous drop happened in 2000 instead of

1996, which might be another indicator that the dearth of the German results in the Olympics is because of the changes that took place within their TID system. This is due to the fact that the results of TID processes and procedures were presented 4-6 years after the application. What confirms this fact is what was mentioned by Martindale, Collins and Daubney (2005), when they stated that Australia started the national TID programme in 1994 as a part of the preparation for the Sydney Olympics 2000. So when looking at the Australian achievements in the chart it is observable that they had an immense positive development in the year 2000 Olympics and this success was due to the talent search programme as Ziemainz and Gulbin noted (2002). The mentioned points were the reason for choosing Australia for such a comparison. Adding to that, as Stewart, Nicholson, Smith and Westerbeek (2004) stated, sport for the Australians is considered the primary vehicle for expressing national pride and independence, and their sporting success is highly visible for an isolated country with a low population.

The second part of the study aims at exploring the level of talent identification and development system used on swimming club level in the Wuerttemberg area in Germany (mezzo level). In particular, it explores the different methods and cooperation they use in order to identify and develop their talents. Additionally, this study tries to examine the correlations among the different administrational variables on one side, and the outcome variables on the other side. Accordingly, it might be helpful to find out the success factors of talent identification and development systems used within the swimming clubs of the sample.

1.3. Research context

The research measures the quality of talent identification and development from an organisational and administrational perspective, without focusing on the quality of the technical procedures of the different processes regarding identifying and developing talents. Accordingly, the research could be placed in the middle of three research areas, which are

"talent identification and development", "sport management and sport organisations", and "quality and standards". Additionally, the study concentrates on swimming as a case to apply the study on.

1.4. Research questions

The aim of the research is to answer the overarching research question:

> Q1. What are the critical aspects of quality in systems of talent identification and development in swimming?

In order to answer the question, another two questions should be answered through the study:

> Q2. What are the main differences and similarities between talent identification and development systems in Germany and Australia, and what are the important factors for success in TID systems at a macro level?
>
> Q3. What is the level of quality of TID systems in German swimming clubs, and what are the important factors for success in TID at a mezzo level?

1.5. Significance

This study examines the quality characteristics of the systems responsible for identifying and developing talented athletes, particularly in swimming. It is designed to investigate the TID from an organisational and administrational point of view, where there is a lack of meso-level studies from an organisational perspective, which analyse factors that can be influenced by sports policies and strategies (Sotiriadou & Shilbury, 2009). Additionally, as the research aims at finding the critical aspects of a successful talent identification and development system, that would improve the effectiveness of the overall sport system of the country, since the talent identification and development system is one of the main components of the national sport system (De Bosscher, De Knop et al., 2009), and because the success

achieved by athletes depends on the performance of the national elite system and its effectiveness in using all available resources for the benefit of elite sport (Sotiriadou & Shilbury, 2009). De Bosscher, De Knop, Van Bottenburg, Shibli and Bingham (2006) focused on this relationship as well when they stated that the success of an athlete or a team depends increasingly on the performance capacity of the national system and its effectiveness in using all relevant resources for the benefit of elite sport.

Despite the importance of the TID topic in sport, this field suffers from a notable lack of scientific researches when compared to other fields of sport researches, especially concerning the organisational and administrational perspective. Supporting this point, Vaeyns, Güllich, Warr & Philippaerts (2009) stated that the academic literatures carry a limited detailed information on the features of national governing bodies regarding talent identification and development systems. Additionally, Vaeynes, Lenoir, Williams and Philippaerts (2008) noted as well that when talking about talent identification and development programmes there is a lack of scientific grounding for those programmes. Accordingly, doing this research helps to increase the scientific work regarding this topic.

1.6. Limitation

The analysis of the official published documents, scientific articles and books (primary literature) regarding sport organisations of both countries provided incomplete information for a complete comparison. That impelled to search secondary literature, such as internet sites, to fill the information gap and to optimise the results.

1.7. Consequences of the study

This study aims at determining the critical aspects of successful talent identification and development systems in swimming. Thereby it helps enhancing the performance and the effectiveness of those organisations, which might improve the performance of the elite sport

organisations. Consequently, that should have a positive effect on the final results of the elite swimmers who belong to those organisations in the international sport events.

Chapter II - Literature review and theoretical background

2.1. Talent identification and development in sport

2.1.1. Talent and sport talent

Historically, the ancient meaning of the term “talent” refers to a unit of mass, value, weights, or money. The word is derived from the Latin word “talentum” which means scale or measuring balance. Usually talent was used to describe a talent's worth of gold or silver, which was about that of an average person's weight in one of these precious metals. Nonetheless, this term later became associated with human performance (Sayler, 2009). However, nowadays “talent” is defined as a natural ability to do something well (Longman English Dictionary, 2009, p. 1798). Howe, Davidson, and Sloboda (1998) defined the term “talent” by providing its general characteristics. They stated that it is genetically originated, it provides a good basis for a later advanced indication, and its full effect might not be obvious at early ages. They noted as well that the aims of talent identification is finding the minor number of talents who mostly excel only in a specific domain. Richard (1999) described in more detail the dimensions of the term “talent” when he defined the term with the degree to which each athlete possesses certain physical, psychological, or mental attributes that may contribute to performance. However, the term “sport talent” was defined by Güllich (2013) with the person who is considered in the development phase in his career toward the high performance level in his sport, and who is expected to achieve best results in his sport in the future.

2.1.2. Talent and giftedness

Though there are different definitions for each of the two terms, they are so similar to each other. Some scientists differentiated between the two terms according to their different point of views. Gagne (1985) is one of the scientists who differentiated between the two terms. To his mind, the term “giftedness” is associated with domains of abilities. These abilities allow

their owners to foster and show exceptional performance in varied fields of activities. The resulting performance is referred to with the term “talent”. Accordingly, one can be gifted without necessarily being talented. Zettel (1979) presented another differentiation by stating that the contrast between the two terms is according to intellectual and non-intellectual perspectives. He noted that “giftedness” indicates intellectual abilities, and “talents” points to other kinds of abilities that a person might possess. Another contrast was based on the marginal distinctions suggested by Robeck (1968, cited in Gagne, 1985). He differentiated the two terms according to marginal distinctions, but those distinctions were only on intellectual abilities. The IQ test was used by the researcher to show the differences between the two terms. Robeck meant that talented individuals have an IQ score raging between 130 and 145, while gifted individuals score from 145 to 160. Nonetheless, other scientists had even another idea regarding the two terms. Cohn (1981) noted that giftedness is the final results of many talents a person possesses. This means that talents of an individual work all together to form the final giftedness exposed by the individual. Another difference was introduced by Williams (2000, P.67;35). He defined the term giftedness with the superior mastery of systematically developed abilities or skills. However, he noted that the term talent refers to people who regularly demonstrate exceptional ability and achievement either over a range of activities and situations, or within a specialised and narrow field of expertise. There were some differences with the term's definition from a country to another as well. Güllich (2013) noted a difference in the definition of the term “talent” between the German and the Anglo-American countries. The main difference is that in Anglo-American literatures, the term “talent” is used with children, as well with adult athletes. However, the term “talent” in German literature refers only to children and youth.

2.1.3. Talent identification and development definitions and processes

Historically, talent identification and development in sport started in Greece since the beginning of sport competitions, even prior to the ancient Olympics (776 BC). Based on the

archaeological evidences, the Greek youth at that time attended a kind of Gymnasia, which is a state-dictated school. Those schools provided the youth with many opportunities to develop themselves in different fields, such as music, philosophy, sport and others. As one of their tasks, those schools had to choose the best athletes in a sport and prepare them to participate in some sport events at local, national or religious festivals (e.g. Panathenaia, Olympia), which embodies the first form of TID in history (Cobley, Schorer & Baker, 2012). Nowadays, the term talent identification was defined by Mevaloo and Shahpar (2008) with the screening of children and adolescents using selected tests of physical, physiological and skill attributes in order to identify those with potential for success in designated sport without a pre-requisite of previous involvement in sport. However, the term "talent identification and development" refers to the process through which talented athletes move to reach their highest performance level. This process consists of three basic sub-processes and each of them might contain different stations and levels of evaluation or development. Talents go through to the next stage or station when coaches and experts decide that the screened kids have the potential to be successful in a specific sport even before they start practicing this sport (Krasilshchikov, 2013; Mevaloo et al., 2008). Different scientists and researchers had their own vision and explanation regarding the detailed processes forming the overall process. Kluka (2005) mentioned "talent detection", "talent identification", and "talent selection" only as parts of a long-term process called "talent development". However, William & Reilly (2000) gave more independency for each of the components without minimising the importance of any of them. Basically, they divided the main process into three sub-processes and defined each of them as following. First process is "talent detection" and they defined it as the process of discovering potential performers even before they are involved in the sport. Then comes the "talent identification" process, which takes place after participants got involved in sport in order to sort the potential future elite athletes. Finally, comes the "talent development" process, where selected athletes get involved

in a systematic training course to develop their skills and improve their level in the sport. Another process was added to the past mentioned processes and defined by Krasilchkov (2013). The process is “talent selection” and it refers to the process that takes place during the talent development. Accordingly, best athletes would be picked to continue their training in the next developmental level until they reach the elite squads. Nonetheless, Durand-Bush and Salmela (2007) provided totally another definition for the term “talent selection”. To their minds, the process of talent selection is done in a short period of time between 14-60 days which makes it a short-term talent detection, aiming at the end to focus on individuals who can best carry out the tasks within a specific sport context. An example about Durand-Bush and Salmela’ selection concept is choosing athletes who will participate in the Olympic Games. That makes a big difference between Krasilchshikov's concept and Durand-Busch & Salmela's concept regarding talent selection. The first one takes place at the beginning of and during the talent development stage but the second takes place at the end of the talent development stage.

Güllich (2013) provided another description for the TID processes. He named the first stage with “talent search - talentsuche” through which, active children with higher abilities of physical activities are identified without being involved in any physical training. Then comes the “talent sighting - Talentsichtung” to identify young athletes through diagnostic tests. After that comes the stage of “talent identification - Talenterkennung” through which children with the potential to succeed in future championships are identified using talent identification tests. Those talented children will move to the “talent selection stage - Talentauswahl”. In this stage, talents will be chosen to join training groups organised for the talents to start from there their career toward high- performance sport. Later, best athletes will be chosen through the stage of “talent recruitment- Talentrekrutierung” to join higher development programmes. After this stage comes the “talent development- Talentförderung” stage. In this stage, best talents will receive the best training and support levels and they will be objects of structured training

programmes. Sebera and Sedlacek (2012) had their contribution regarding the concept of TID by adding a new concept named "pre-detection talent development". This stage is arranged and delivered to the kids through physical education classes at schools. Kids at this level keep getting their multilateral development at schools until they are exposed to talent identification tests, then they will be tested. Furthermore, Güllich (2013) divided the processes of TID into another three main phases: The “entrance phase - Einsteigphase” which starts at the age of six till 12-14. Kids at this period gain experiences regarding different types of sports and competitions. The second stage is the “development phase - Entwicklungsphase”, which follows the past stage immediately and lasts till the age of 19. In this phase, talented athletes master one type of sport to reach the highest performance level. Then comes the “high performance phase - Hochleistungsphase” which lasts around 15 years and starts at the age of 17-19 years. Athletes at this stage receive the highest levels of training and the best support at all levels. Moreover, Platonov (2002, cited in Sebera & Sedlacek, 2012) divided only the process “talent identification” as a stage of the TID into three main levels through which talents are identified and selected. Those stages are the initial talent identification, intermediate, and final selection.

Based on the mentioned information and definition, it is clear that there is a missed consensus for the main TID definitions. That is because there are different definitions for the talent identification and development main elements, mainly between Krasilshchikov (2013) and Mevaloo et al. (2008). Krasilshchikov's (2013) definition of “talent detection” is the same definition Mevaloo et al. (2008) provided for “talent identification”. Additionally, different researchers provided different components of the main processes of TID, which refers to a shortage of a consensus regarding the mentioned concepts connected to talent identification and development.

2.1.4. TID, sport and age

Talent identification and development has an uncertain relationship to age, which depends on the sport discipline. Even for the same sport discipline, the considered optimal age for TID might differ from one country to another or even among different scientists. Helsen, Hodges, Winckel & Starkes (2000) suggested that much of what coaches see as early talent may be explained by physical precocity associated with a relative age advantage. Additionally, Musch & Grondin (2001) stated that younger children are more likely to drop out than to continue training. Still, Abbott, Button, Gepping & Collins (2005) noted that the job of TI is to identify talented young athletes at as early an age as possible in order to have enough time to use the rule of 10 (10 years or 10000 hours of deliberate practice to reach the highest performance level, which will be discussed later in more detail). This theory was originally created by Ericsson, Krampe, & Tesch Römer (1993), and it means that an athlete needs to train for 10 years or for 10000 hours of deliberate practice to excel in their sport. However, other researchers have another opinion regarding the early identification and the early start in a specific sport, because that would miss identifying many talents, who might not show their skills and abilities until they reach their maturation, or because it might need an even longer time if an athlete matures late. Confirming that, Vaeyens, Lenoir, William & Philippaerts (2008) suggested that many of the characteristics that affect the performance in adults may not appear until late adolescence. Another factor which plays a role in the process of talent identification and development, and practicing sport is the "*relative age effect"* This factor is related to the participants' date of birth, particularly, in which half of the year their birthday is. Musch & Gondin (2001) described the effect of this factor and reviewed many studies confirming this idea. Usually, participants are categorised by chronological age, which makes groups for each age contain participants who were born at the beginning of a year and other participants who were born at the end of the year. Finally, there are differences in age and

growth level among the participants belonging to those two groups, that effects the performance of the younger participants negatively, which, in its turn, affects the process of talent identification and development.

2.1.5. TID and talent pool

The talent pool concept is based on the theory saying that talent is an innate ability, which makes the talent pool a limited resource, and can be refined through training (Meyers, Van Woerkom & Dries, 2013). There is a strong relationship between the methods used to detect or to identify talents on one side and the size of the human resources pool from which talents are selected, on the other side. The success of a TID system can be evaluated with the consideration of the talent pools' size. As an example, a comparison can be made between talented swimmers identification system in the United States and in Australia. By noticing the results we find that both countries are able to find potential talented swimmers to train them till they reach the highest levels of performance. However, when considering the population of each of the compared countries, we notice that there is a huge difference between the populations of the two countries. The US population is about 317, 107,500 (United States Census Bureau, 2014). On the other hand, the Australian population is only 23,288,540 (Australian Bureau of Statistics, 2013). When comparing the numbers of elite swimmers who are achieving good results in the Olympics we find that the talent identification system in Australia is more productive and more efficient than the one used in the United States, though it might have worse results. Krasilshchkov (2011) noted the main characteristics of the talent identification system based on different available sizes of human resources, as shown in (Table 1).

Table 1 Options of TID systems, depending on the available human resources.

Countries with considerable human resources	Countries with limited human resources
"bulk and numbers" - few specific tests	Tailor-mode TID- comprehensive testing
Natural selection at the early stage	Scientific selection from the start
Coaches - selectors	Scientists - selectors
Scientists - assistants/ observers	Coaches - advisors
Specific testing and assessment	General testing and assessment
TID for one sport/ event	TID for group of sports
Decentralised, easy initial training	Centralised training, boarding schools

Source: Sebera & Sedlacek, 2012; Krasilshchkov, 2011.

2.1.6. Talents transfer

It means transferring talented athletes from a sport discipline to participate in another sport discipline, which has similar physical and psychological prerequisites (Meyers et al., 2013). In this case, transferred athletes will need less time to master in the new sport discipline when compared to other athletes, who have just started practicing the sport discipline. Abbott et al. (2005) stated that sport transfer gives athletes the chance to spend less time involved in the high level training of a sport discipline, which, in its turn, reduces the probability of dropout due to training boringness or burn-out. In addition to that, talent transfer gives the children the chance to be exposed and practice a wide range of different motor skills, which prevents them from capitalizing on individual strength and help them transferring these skills when capitalising at later stages. Reilly and Williams (2000, cited in Burgess & Naughton, 2010) considered talent transfer as a way of talent development, when they mentioned that talent transfer is demonstrated by a report which showed that 28 % of Australian senior national athletes had reached their elite status within four years of beginning their sport. Abernethy, Baker, & Cote (2005) also noted the importance of exposing athletes to another sport in order to practice a wide range of motoric skills, which reduces the amount of sport-specific training needed to become an expert.

2.1.7. TID's importance and elite sport systems

The term elite athletes is defined by (Rankinen, Wolfarth, Simoneau, Maier-Lenz, Rauramaa, Rivera, Boulay, Chagnon, Perusse, Keul, & Bouchard, 2000) as academy or university competitors, national or international level competitors, medal winners, Olympians, professional or semi-professional, world-class, performing within some percentage of world records, experienced, training frequently or exceeding some measured physiological variables such as VO2max. Historically, and until today, nations and countries have always been in a race toward the superiority over their peers. This competition took many and different shapes over time. It could be noticed through arms and wars, science and literature, culture, and others. Sport is among the manners nations used to exhibit their excellence and perfection. This increasing competition encouraged countries to adopt better elite sport strategies in order to differentiate themselves from other nations (Houlihan & Green, 2008). The USA, USSR, and the European communist countries have been, and partly still are, a good example of the countries used sport as a tool to demonstrate ideological superiority (Green & Houlihan, 2005). This role of sport demanded states and governments to create certain sport divisions to focus on the elite athletes and the process of developing them to create a good image of the country in the international sport events. This is due to the fact that there is a positive correlation between the efficiency of the sport organisation in a country and the number of medals the country wins in the international sport events (De Bosscher, 2013). Accordingly, that leads to the contest of elite athlete development. Countries of best achievements in the international sport events are those who can efficiently prepare their elite athlete. This required the governments to follow different methods in preparing their elite athletes.

Talent identification and development is an important element of education, music, and art, but sport is the field that embraces the concept at most as Baker and Schoerer (2010) stated. Furthermore, TID is one of the most important divisions of elite sport systems due to the role it

plays by finding the appropriate roots for the squads and developing them to reach their elite level as De Bosscher, De Knop, Van Bottenburg , Shibli, & Bingham (2009) said, and to its role in achieving success against the limited financial resources (Abbott, Collins, 2004; Abbott, Button, Pepping, & Collins, 2005). Bompa (1985) reported the importance of the TI by giving an example about Bulgarian sports and their achievements in the Olympics. He stated that more than 80% of the Bulgarian athletes who won medals in the Olympics in 1976 were identified through special talent selection schools. De Bosscher et al. (2009) defined the basic components of elite sport systems in general, mentioning TID division as one of the basic nine pillars of elite sport system, which are the following: financial support, sport policies, participation, TID system, post-career support, training facilities, coach's development, competitions, and scientific research. Moreover, they showed the relationships between the different components as they are depicted in the following model (Figure 2):

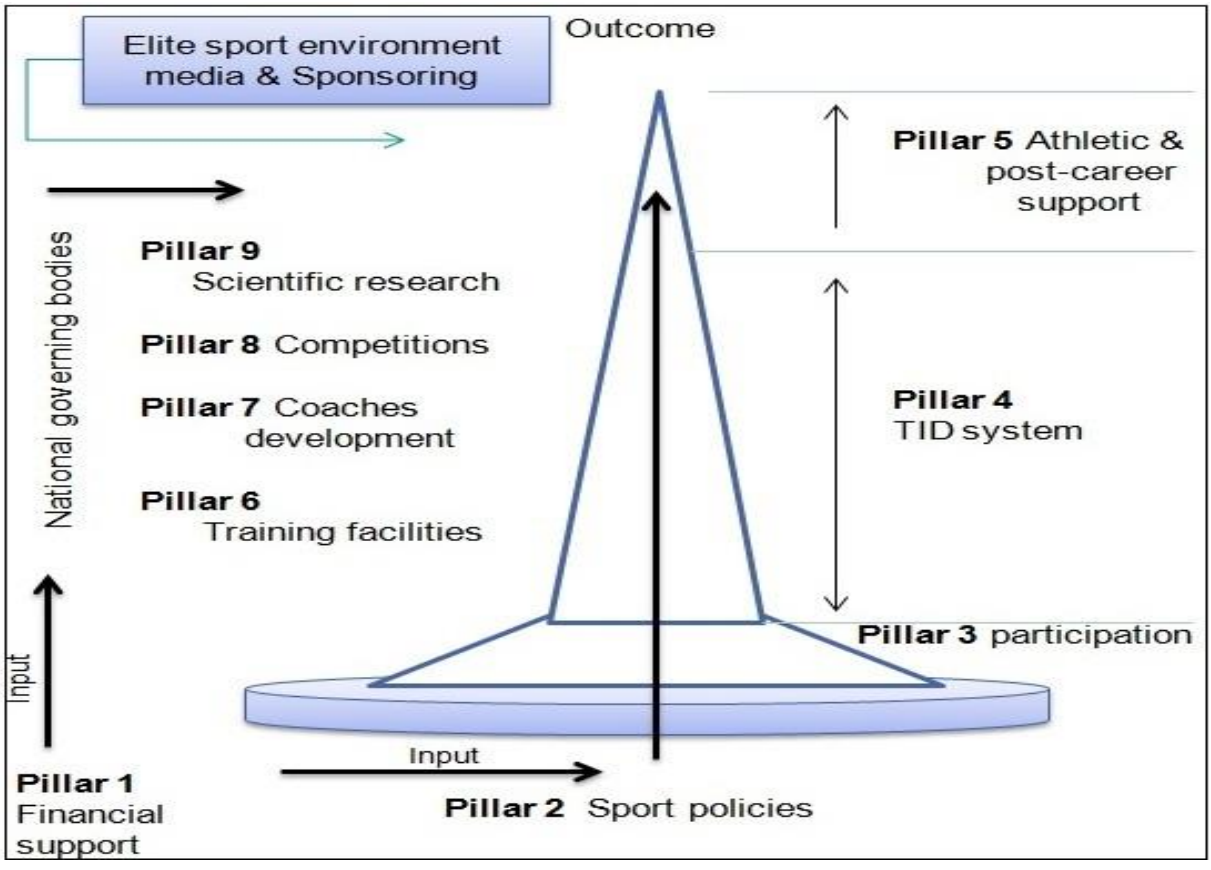

Figure 2 The basic components of elite sport systems (source: De Bosscher et al., 2009)

Accordingly, sport systems develop talented athletes through special programmes that are designed by the elite sport system. Balogh (2011) mentioned the main elements which are important for a successful talent development programme. Accordingly, a successful TD programme should have selective access criteria, so that only the best talents can join it. It should have challenging excellence goals, which should be met through applying an enriched systematic regular training programme. The talented trainees should be exposed to a regular and objective assessment of their progress, and their development plans should be personalised and should be appropriate for each individual.

2.1.8. Main theories and models for talents and giftedness

Because of the lack of information about the giftedness and talent identification procedures and strategies before the 70s of the last century, many researchers tried to conceptualise the basic framework of this process (MacRae & Lupart, 1991) in order for them to be applicable to different fields of abilities and different majors. Some of the following models and theories are general and basic models for the topic of talents and giftedness, but they are important for sport as well, because they form a base for other models and theories that are used within the sport field.

01. Revolving Door Identification Model (Renzulli's Model): This model was created by Renzulli and it is referred to with the abbreviation "RDIM". Through this model, Renzulli defined the gifted behaviours as an interaction among three basic clusters. Those clusters are: high level of creativity; high level of task commitment (motivation); and above average general and/or specific abilities. As a result, according to Renzulli's definition, gifted and talented children are those who possess this composite set of traits and are able to apply them to any potential valuable area of human performance (Renzulli, 1984). Renzulli's assumption is that researchers should not rely on standardised tests to determine talented kids. However, he said that gifted behaviours could be developed in persons who do not necessarily earn the highest

scores on standardised tests. That prompted him to create his own model in which gifted behaviours are seen to be developed in certain persons at certain times and under certain circumstances (MacRae & Lupart, 1991). According to Derevensky (2009), this model defines gifted behaviours rather than gifted individuals, which is described in (Figure 3) presented by Gagne (1985).

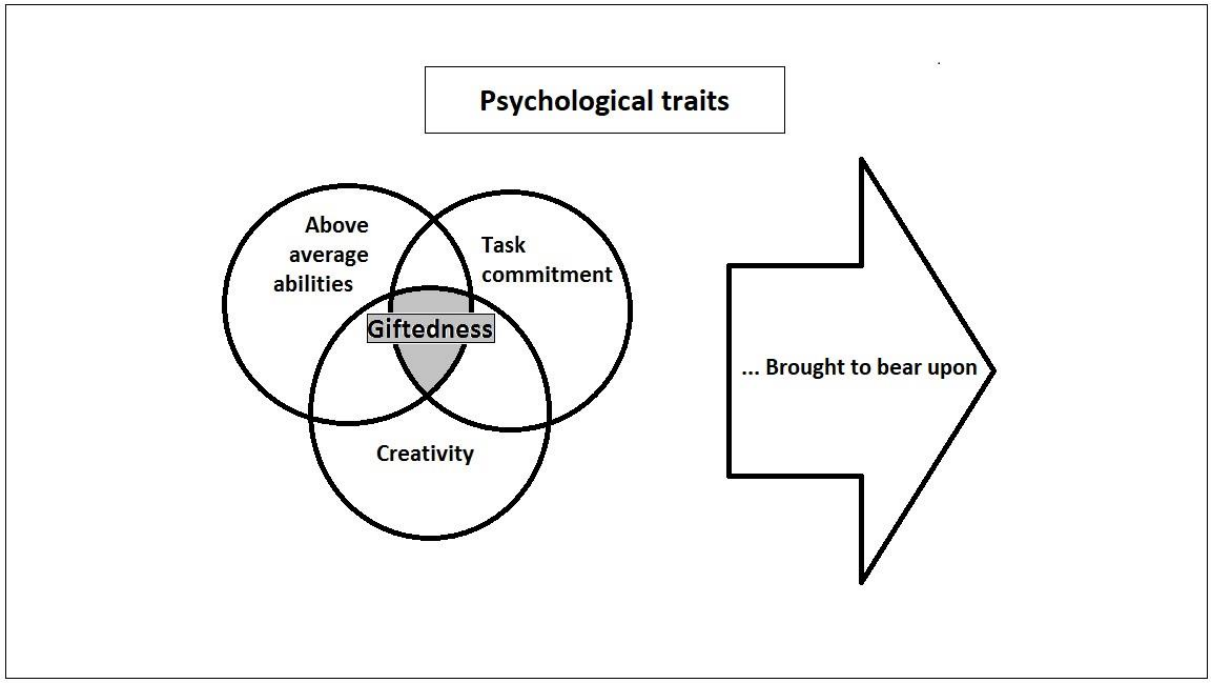

Figure 3 Definition of giftedness according to Renzulli's note (Gagne, 1985)

02. Cohn's Model: This model breaks down giftedness into three major categories of abilities. Those categories are: intellectual, artistic, and social. Each of those categories is further divided into more subcategories of talents (Gagne, 1985). The problem of this model according to Gagne (1985) is that success within one domain of talent can take diverse forms reflected by distinct profiles of abilities.

03. Schoolwide Enrichment Model (SEM): The model was created by the two scientists Joseph Renzulli and Sally Reis in an attempt to develop creative productivity in young people. The model is based on Renzulli's RDIM model and it is effective at serving high-ability students and providing enrichment in a variety of educational settings (Derevensky, 2009). The SEM

model is prepared for schools and students' achievements in different subjects to eliminate their best achievements in one or more studying fields, according to the student's interest. As a result, schools will have to change the curriculum for each student according to the students' interests, which makes the schools more interesting for students and makes the learning processes more enjoyable. Accordingly, students' results will be improved (Renzulli & Purcell, 1995).

04. The role of deliberate practice in the acquisition of expertise (Ericsson's Model): This model is known as the Ericsson's model. In this model, Ericsson and colleagues support the effect of nurture over nature in the nature vs nurture debate. Ericsson, Chase, and Falcoon (1980) created this model through a study they made on long-term working memory. The study revealed that individuals could increase their memory performance by orders of magnitude through training without any changes in their DNA (Ericsson, roring, & Nandagopal, 2007).

05. Genetic superiority model (Simonton's Model): This theory grounds the reason of success in sport field or in any other field to the genetic superiority. This theory is an old theory that was first mentioned by John Dryden in 1693 who noticed the effect of genes on performance (cited in Simonton, 1999). In his paper, Simonton (1999) criticised the deliberate practice theory of Ericsson by giving an example showing that the effect of heredity can affect deliberate practice negatively or at least weaken the positive effect of deliberate practice.

06. The differentiated model of giftedness and talent (Gagne's Model): This model was created by Gagne after the criticism of Renzulli's and Cohn's models. It gives a space for the dichotomy between abilities or aptitudes and performance by giving new different definitions for "giftedness" and for "talent". In this model, "giftedness" refers to competence which is distinctly above average in one or more domains of abilities, whereas "talent" refers to performance that is above average in one or more fields of human performance. This model was criticised through the general role of creativity in giftedness and talent, claiming that

creativity can be essential in some fields such as artistic field talents but does not play a major role in talents with abilities of technical nature (Gagne, 1985).

07. Bio-ecological model (Bronfenbrenner's Model): This model was proposed by Bronfenbrenner and Stephan in 1998. Through it, the authors redefined the key assumptions underlying the classical paradigm of behavior genetics to reach their final formulation. The model is based on different propositions. The first one is that human development is a result of progressively more complex reciprocal interaction between an active, evolving bio-psychological human organism, the person, objects, and symbols in its immediate external environment. This interaction must take place over an extended period of time to give positive results. This enduring relationship between the interacting elements is known as "proximal processes". The second proposition this model referred to is that the form, power, content, and direction of the proximal processes affecting development vary systematically according to the characteristics of the developing individual; of the environment; the nature of the developmental outcomes; and the social continuities and changes occurring over time through the life course and the historical period during which the person has lived. The last proposition the model emphasised on the idea that the proximal processes serve as a mechanism for actualising and utilising genetic potential for effective psychological development, but level of the results is also connected and related to the proposition mentioned in the past. (Bronfenbrenner & Stephen, 1998).

08. Bloom's Model (1985): The model of Bloom divides the process of talent identification and development chronologically into three main stages, on the basis of chronological order. The first stage is the early years or the stage of initiation. In this stage children are excited about the physical activity they are doing. Teachers and trainers for these stages assume the role of a leader and a guide for the kids which make a kind of friendship relationship between the kids and their teachers or trainers. The second stage is the stage of development. In this stage, kids

start doing sport and training seriously as athletes. Through this stage, they develop higher skill levels under the supervision of experienced coaches. The relationship between kids and their coaches in this stage changes to be more of respect nature than a friendship, because coaches need such a relationship in order to teach kids to compete and to achieve. Finally, comes the last stage, which is the perfection stage. Athletes of this stage master their sport skill to reach the highest levels and to compete on international level. Coaches of this stage play a supervisory role because athletes already have the experiences and the knowledge of training, which allow them to participate and choose their training methods and plans (Bloom, 1985).

09. Cote's Model (1999): Cote divided the main stages of TID in his model on the basis of the characteristics of the training level. Participants go through four basic stages during their identification and development in a sport. In each of those stages, participants have the choice to move to the next level, to drop out, or enter the creational years. The first stage is the sampling years' stage. In this stage children are exposed to different types of sport to learn and develop the basic motor skills, and to choose the suitable sport. Then kids move to the second stage, which is known as specialisation years, with an age around 13 years, they practice one or two sport disciplines to master their performance. Later, comes the third stage, which is the investment stage. In this level, athletes reach the elite level and start training professionally to participate in the mega-sport events and achieve the best possible results. Finally, comes the fourth and the last stage, which is the recreational stage or the drop-out stage. In this stage, athletes choose to leave the professional training and competitions, and start doing sport and physical activities only for joy and health. To this stage, kids or athletes can move from any previous stage (Durand-Bush & Salmela, 2007).

10. Nature vs. nurture debate in sport: The main two theories in sport are the theory of innate talent, and the theory of deliberate practice. The theory of innate talent is based on Simonton's Model, and is also known as "talent account". The theory claims that talent is a natural ability

and something innate. That refers to the notion that the attainment of outstanding performance depends on a special genetic potential that can be identified in the talented individual. Buckingham and Vosburgh (2001, cited in Gallardo-Gallardo et al., 2013) supported this idea by saying that talent is nearly impossible to be learned or taught.

The second theory describes sport expertise is known with "the deliberate practice" and it opposes the theory of innate talent by emphasising on the idea says that outstanding performance is a natural result of the deliberate training. This theory looks at talent as a mastery, and is based on the deliberate practice and learning from experience and that talent is a result of practice and training. The well-known researchers support this theory are Ericsson and colleagues who found the name for the theory (Ericsson et al., 1993). The opinions of Howe and colleagues (1998) also opposed the "talent account theory". Their perspective is that performers become highly successful because of environmental factors such as intense training rather than innate abilities.

A continuous debate is still taking place between the two theories. This debate has different names, such as "Nature vs. Nurture", "Gift vs. Graft", or "Antinat vs. Pronat". Some researchers support the idea that perfect performance is a result of innate ability based on the genes the individual carries. However, another opinion supports the idea says the excellent performance is a result of the hard work and the training hours. As an example, Ericsson, Prietula, and Cokely (2007) stated that no innate factors except for height and body size influence performance. With a similar perspective, Howe et al. (1998) noted a misconception regarding the connection between the two theories and the success by noting that many athletes who are not believed to have the innate talent, will automatically be excluded from attending regular systematic training, which leads to a lack in their performance when compared to the trained peers, who were believed to be talented by genes. That was what Ericsson and colleagues revealed as well when they said that it is impossible for individual with less

accumulated practice at a given age to catch up with the best individuals who started deliberate practice earlier and maintained optimal level of practice that did not lead to either exhaustion or burnout (Durand-Bush & Salmela, 2007). But a third opinion regarding this debate supports the nature-nurture interaction. Many theories and arguments talked about this interaction but none of them could specify the exact amount to which each of them contributes (Meyers et al. 2013). George Carlin (2013) in his interview about his success also talked about this point and he spotted a light on a forth opinion when he noted that hard work "deliberate practice" itself is genetic and that individuals who do not carry this specific gene are not able to practice on something for long to reach a specific level.

11. Other categories of TID models and theories: Kluka (2005) wrote in his study about different models to identify talents. His differentiation between the different methods was based on the dimensions each model measures. The first model he mentioned is "TIPS", which stands for Technique, intelligence, balance, and speed. "SUPS" is also a model that measures speed, understanding, personality, and skills. The third model is "TABS", which stands for technique, attitude, balance, and speed.

2.1.9. Selection methods of TID in sport

01. Natural selection: This method is the traditional talent identification method, and it is the main method of identifying talents. Despite the presence of other and more precise methods, most of the countries are still basing their talent identification and search on this method. The selection of the talented athletes is based on their performance and the skilled eye of the coach or the personnel who performs the selection process (Wolstencroft, 2002). Abbott et al. (2005) had a noticeable criticism to the talent identification programmes based on the natural selection. They described those programmes with a "complex problem" and that most of those programmes in different countries are underpinned by an inappropriate conception of talent, which makes them less effective than they could be. They based their argument on the concept

says that the long-term predictions cannot be made solely on the basis of a few physical characteristics due to their unstable and nonlinear development process over time. Another criticism was provided by Wolstencroft (2002) regarding the appropriate method and the appropriate age of children to be identified as talents, when she noted that the successful performance at junior level is not always an indicator for success at senior level.

02. Systematic method (anthropometrical and physical model): This model is also known as anthropometrical and physical talent detection and identification model (Wolstencroft, 2002). The idea of this model is measuring children and young athletes based on a certain anthropometrical, physiological and performance tasks in order to determine if they are talents in a sport or not, and its processes are led by scientists with the help of coaches (Krasilshchov, 2011). This model was created as a result of the developed competitions between the different countries on the level of elite sport. This system was first created by East Germany as a part of their competition with West Germany (Dennis & Grix, 2012). However, Bompa (1994) did not specify the exact origin of this model, he just mentioned that it was created in East and Central European countries. The systematic model was not being used after the Soviet Union had collapsed, until it was revived later by the Australians who created their own talent identification and development system on the basis of the TID system used in East Germany (GDR), as a part of their preparation for the Sydney Olympics in 2000. Accordingly, they could achieve good results in the Olympics compared to other nations (Rütten & Ziemainz, 2003). The problem of this model was noted by Wolstencroft (2002) when she said that this method should not be used alone due to the fact that the physically matured athletes will tend to be identified for strength sport and the less matured athletes will tend to be identified for coordination sport. As a result, individuals born in the second half of the year are more likely to be identified into strength sports. However, Wolstencroft (2002) also noted the good thing

about this model when she said that it helps identifying children as talents in sports that they have never been involved in before.

03. Visual assessment (photoscopic somatotyping) method: This method could be considered an advanced level of the anthropometrical and physiological method, because it has the same concept but with further measurements. It was mentioned first by Mevaloo & Shahpar (2008). The method is applied by scientists and its basic technique is based on the pictorial documentation of human morphologic characteristics. When implementing the method, scientists use three view photos, and measure the values of body weight and height. Then they calculate numbers for fat tissue, muscular build, and thinness of the subject. After getting those numbers, scientists can compare any subject and the mean values of the best group of athletes in order to select talented children.

04. Generic model: This model is based on the need of different physical movements to achieve sport and is also based on the talented athlete's abilities to do common movements known as *fundamental motor abilities*, such as jumping, kicking, throwing ... etc. In this model, kids and children aged 7-9 years got the chance to attend a generic activities club where they train on fundamental movement abilities (kicking, catching, leaping, etc.) for ten weeks. After this training phase, talented children will be selected according to their performance level doing the mentioned generic movements. The concept of this model is that talented athletes have high level of performing generic motor skills, which allows trainers and scientists to identify the talented athletes according to their performance level after they finish the training phase (Wolstencroft, 2002).

05. Performance and genetic model: Wolstencroft (2002) stated that the "performance model" is used mostly for talent selection in order to move them to the next development level. The selection method is based on the results of the young athletes in the different competitions and

contests. This model points to the idea that athletes continue only if they can produce good results (Wolstencroft, 2002). However, Abbott & Collins (2004) and Abbott et al. (2005) had another perspective regarding this model by associating it to the genetic factors, as they defined it with selecting young athletes on the bases of genetically driven performance determinants. Furthermore, the researcher provided the main difficulties of using this method when they said that it is difficult to predict the mature value of genetically driven variable due to non-linear process of development. What adds to this fact is that the selection might be based upon unstable characteristics during important transitional periods in athletes' life. Peltola (1992) talked about an argument regarding this method when he stated that competition itself might be the best form of talent identification, because competitions allow seeing the best. However, he stated later that many athletes do not succeed in a sport they have chosen, but they might succeed in another sport. Accordingly, Peltola (1992) stated the importance of competitions and performance for TI, but he also referred to the need for another TI methods in parallel.

06. Digit ration method: This method has been used in soccer and in track and field. It is based on the idea that a larger ring finger length than index finger length is a valid sign of athletic potential. Mevaloo et al. in their unpublished study noted a good correlation between this index and the muscular component of elite national level male adolescent swimmers (Mevaloo & Shahpar, 2008).

2.2. Organisations and sport organisation

2.2.1. Definitions

Baligh (2006) defined organisation with the set of people who are put into some order on the basis of a specific logical relation that exists between one person and at least another one in the set. Similarly, Old (2004) defined "organisation" as a deliberate arrangement of people to achieve a particular end. In this definition, Old emphasised that the organisation comprises

three basic elements, which are members, rules, and purposes. Covel, Walker, Siciliano, and Hess (2007, p. 4) also reflected the same basic elements in their definition when they defined the organisation as "a group of people working together to achieve a common purpose. They exist to achieve goals that individuals cannot achieve on their own". In a similar way, Daft (2010, p. 11) defined organisations as "social entities that are goal-directed, that is designed as deliberately structured and coordinated activity systems, and are lined to the external environment". He emphasised that organisation is based on people working within it and the relationships among those people to achieve the basic operations and goals of the organisation rather than a set of policies and procedures. Regarding sport organisation, Slack and Parent (2006) defined it as "social entity involved in the sport industry, that is goal directed, with a consciously structured activity system and a relatively identifiable boundary".

2.2.2. Types of sport organisations

Gomez, Opazo, and Marti (2007) in their work on sport organisations with a mission of sport development and promotion in society, classified sport organisation into three main types. The first type is “sport governing bodies” whose main job is regulating and administrating sport within a specified area and on different developmental levels. Secondly, “sport event organisations” which work with the elite sport levels, with their main job being covering the needs of the professional athletes and organising competitions and events for them. The final type is “sport providing entities” which work on producing and running recreational or competitive sport programmes in a specified community. Bourke (2011, 154) divided sport organisations according to their economic orientation. He mentioned two main types of sport organisations, which are not-for-profit sport organisations, which provide sport services without the aim of gaining profit in return such as sport clubs and sport federation; and for-profit sport organisations, which provide sport services and programmes for profit such as private sport companies. Hoye, Smith, Westerbeek, Stewart, and Nicholson (2006) classified

sport organisations into three basic types based on their sector: public, non-profit, and professional sport organisations, with a remarkable connection between those different types of sport organisations. Thibault and Quarterman (2010, p. 74) classified sport organisation as Hoye et al. (2006) with a little difference. They assigned the term *commercial organisations* instead of *professional organisations* noting that the main goal of such organisations is to make a profit.

Parent, O'Brien and Slack (2012) divided sport organisations into three basic types. The first type is products organisations, which process material input into tangible output such sport products. Then service organisations such as local sport clubs or swimming schools, which provide services by processing people to make them more skilled as an output of the organisation. The third kind is sport organisations which provide strategic advice to clients, which have even less tangible output, such as sport sponsorship brokerage.

2.2.3. Structure of sport organisation: (internal characteristics)

Gomez et al. (2007) and Slack (1997, p. 6) defined the structure of sport organisation with the manners, through which the tasks of a sport organisation are broken down and allocated to employees and volunteers, the reporting relationship among these role holders, and the coordination and controlling mechanisms used within the sport organisation. Pugh and Hickson (1997, cited in Parent, et al., 2012) stated their three most fundamental structural dimensions of an organisational structure, which are complexity, formalisation, and centralisation. Those three dimensions are known as well with the internal characteristics of an organisation. "Complexity" refers to the number of different divisions an organisation has, as an example, a professional sport club has much more sub-divisions when compared to a local sport club, in order to run the different tasks and jobs that might not exist in a smaller local sport club. The term "formalisation" refers to the regulation, policies, procedures, etc. that are used at an organization in order to accomplish the different tasks of the organisation. Finally, the last

dimension is the “centralisation”, and it refers to the organisation’s hierarchy and the decision-making centres and powers at the different sections and levels of the organisation.

2.2.4. Contextual dimensions of sport organisation (external characteristics)

The basic dimensions of contextual characteristics of sport organisations according to Parent et al. (2012) are the following four: (1) Strategy*:* which is the way an organisation acts to respond to the constant changes in its environment. Such changes might affect the organisation negatively, which prompts the organisation to change its strategies in order to adapt to the new changes. Choosing a strategy for an organisation could be affected by the nature of the organisation and its environment on the one hand, and by the internal characteristics of the organisation on the other hand. (2) Size*:* The size of an organisation is determined according to four main aspects. The first one is the “physical capacity*”* of the organisation, which refers to the assets and the amount of floor spaces occupied by the organisation. The second aspect is the “personnel” available to the organisation. Then, it is the “volume” of the organisation’s inputs or outputs. Finally, the “discretionary resources” available to the organisation (Kimbely, 1976, cited in parent et al., 2012). (3) Environment: The organisation’s environment has two basic dimensions: the “task environment” which is composed of aspects that are external to the organisation but has a direct impact on the organisation, such as supplier, regulatory agencies, etc. The second dimension is “general environment” which has an indirect influence on the sport organisation's operations, such as political, demographic, economic, socio-cultural, ecological aspects (Slack and Parent, 2006). (4) Technology*:* refers to the work performed by an organisation. Sport organisation is a unit where input is transformed into output after going through the application of technology and energy.

2.2.5. The developmental level of sport organisations

Sport organisations of different countries might differ in their development class and level. Beech and Chadwick (2004) noted that there are different developmental levels of sport organisations, which are determined according to their tasks and their business activities level. More precisely, they mentioned the seven developmental levels of sport organisations as follow: The first level is the “foundation” which refers to doing sports without any organisational framework. Second comes the “codification” level through which practice is formalised as an outcome of an organisational process. An example of this level is when a newly invented sport game is defined. The third level is the “stratification” level. Organisations of this level are bigger, and they manage the sport through more sub-governing regional organisations. After that, organisations develop to reach “professionalisation” level and that happens as the game turns to be more popular and important for the community and for the spectators, who in turn, tend to be more willing to pay money to watch the sport. That motivates investors to support sport clubs, which allow the payment of the players. The fifth level is “post-professionalisation”. During this level, a senior game which is professionalised typically sits alongside an amateur junior game. Then comes the “commercialization” phase, where external organisations use sport as part of their commercial activities through sponsorship and marketing. Finally, the organisation’s development reaches the “post-commercialization” level which is a character of the biggest sport events in the world of sport such as the Olympics, the European soccer league. This phase is a period of stability and growth following the commercialised phase. The (Figure 4) describes the above-mentioned levels of sport organisation development.

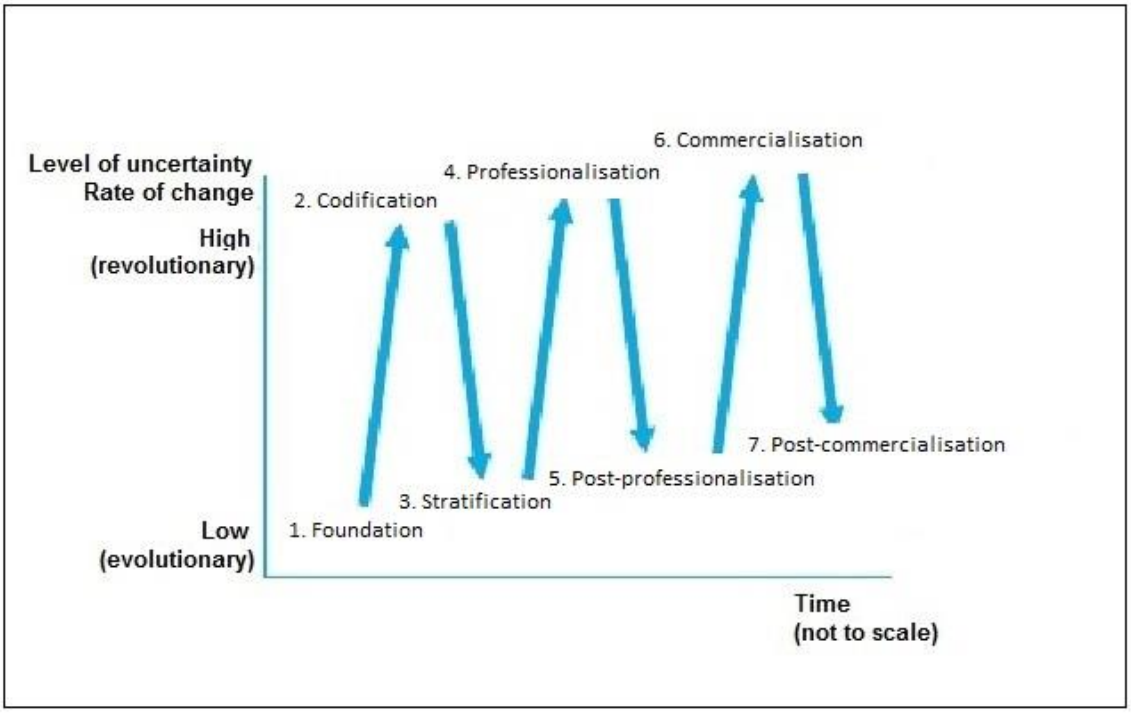

Figure 4 Sport development as business (Beech & Chadwick, 2004).

2.3. Quality and quality of organisations

2.3.1. Definitions

Quality could be considered as a complicated term and hard to be shortly defined. Different researchers have different definitions for this term because of the different dimensions this term encloses. Ghobadian, Speller and Jones (1993) noted the complexity of quality definition because it has different meanings to different people. Consequently, they created a set of five basic dimensions for quality definition, which are as follows: the first dimension is "transcendent", here quality refers to innate excellence. Then the "product led" definition, where quality refers to the number of units of goodness packed into a product or service. According to the dimension "process or supply led", quality is considered as conformance to requirements. This definition spots a light on the role of management and control of supply-side quality. The fourth definition is a "customer led" definition, where quality refers to the

satisfaction level of customers when using or buying the product. Finally, the "value led" definition, where quality is defined either as the "cost to the producer and the price to the customer, or as meeting the customer requirements in terms of quality price and availability".

Seawright and Young (1996) noted as well that there is no one clear definition for quality, and they provided different definitions of quality, partly similar to the ones provided by Ghobadian et al. (1993). In their work they sorted quality definitions according to seven major dimensions of management and business fields. The categories are transcendent, manufacturing-based, product-based, user-based, value-based, multidimensional, and strategic. In the "transcendent*"* definition, quality is described as a condition of overall excellence. In "product-based quality", the definition here is concerned with the level of acceptance the costumers express regarding the product. In "manufacturing-based quality*",* it is defined on the perspective of producing processes and procedures, which ends finally with the overall product. In "user-based quality*"*, quality is related to the fulfilment of the customers' needs and expectations. Quality as "value-based" is considered as a part of the user-based quality because here quality is defined as excellence and fitness with a good price for the customer. In "multidimensional quality", the definition combines various aspects of product and service quality to put all together in a multidimensional description. Finally, "strategic quality" is defined with the strategic benefits that result from the product and the service quality. However, Donabedian (1983) noted that despite the many and different definitions of quality, there is a framework that encompasses all definitions and concepts; a formulation that defines quality as an approved or preferred relationship between means and ends. The means are essentially the strategies of care; the ends are the changes in the results after applying the strategies. Fisher & Nair (2009) had another general definition of quality. They stated that it refers to the way an enterprise goes about its business, inspired by a theory that acts as a guiding principle for behaviours and informed by the knowledge and know how needed to make it occur. Another

definition was provided by EN ISO 8402 (1995) which said that quality is a totality of characteristics of an entity that bear on its ability to satisfy stated or implied needs.

2.3.2. The importance of quality

Quality is an important factor for the performance of systems and organisations. Ghobadian et al. (1993) noted the importance and the effect of services quality and goods quality on the performance of the overall organisation. In addition to that, the level of quality in an organisation determines to which class an organisation belongs. Mostly, the level of an organisation or of a system is classified according to its quality.

2.3.3. Types of quality in sport organisations

Quality has two main types according to the activities of sport organisation, and that is according to the main job an organisation offers. The first type is organisations offer services, such as sport clubs or sport federations, sport associations, etc. The other type is organisations produce sport goods and equipments, such as Adidas, Nike, Speedo, etc. Each type of these organisations has its own set of quality standards which makes it hard to compare between two organisations belonging to two different categories (Chelladurai & Chang, 2000). Chelladurai (1992, 1994, as cited in Chelladurai and Chang, 2000) classified sport services into two broader sets. The first set is participant service, which is germane to consumers' health refreshment, body improvement, and learning of new skills. Those targets differ according to the service offered. The second set of services concerns spectators by providing them with the pleasure and excitement that they aim at. The second set of services is usually linked to the high performance level, which, in turn, is partly linked to talent identification and development in sport.

2.3.4. Quality model used in sport organisations

01. Donabedian Model for quality: Avedis Donabedian introduced this model of quality regarding health care, which was his field of work and research. However, the model is well-

known because it was widely accepted, and it is applicable in different fields of research. This model has three basic components, which are structure, process, and outcome. “Structure” refers to static characteristics of the personnel who provide the service; “process” refers to activities taking place in order to deliver the service; and “outcome” is the final service, which is a result of the structure and processes (El Haj, Lamrini & Rais 2012). Röger, Rütten, Ziemainz & Hill (2010) have a description of Donabedian model as applied in the field of sport management and sport organisations. They described structure more specifically, noting its main items in the sport management field. Those items are goals, resources, obligations and opportunities. In a similar way, they divided “structure” into its main items, which are planning, implementation, and control. Finally, they described the outcome with the success in sport events. The following figure (Figure 5) describes the Donabedian Model according to the concept of Röger et al. (2010).

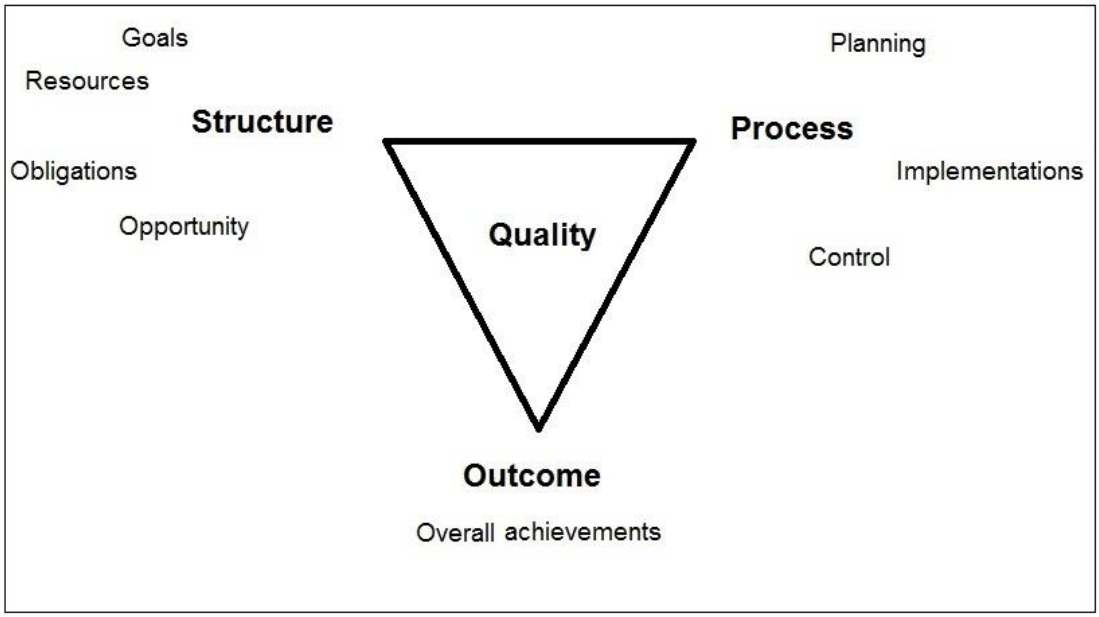

Figure 5 Donabedian Model (Based on Röger et al., 2012).

02. Target, standard, evaluation model for quality: Chelladurai and Chang (2000) proposed in their research a framework for analysing quality in sport services on the bases of three

perspectives which are: targets of quality, standards of quality, and evaluators of quality. They noted in their research the possibility of applying this model to the two main types of sport organisation (service and products), as described in (Figure 6).

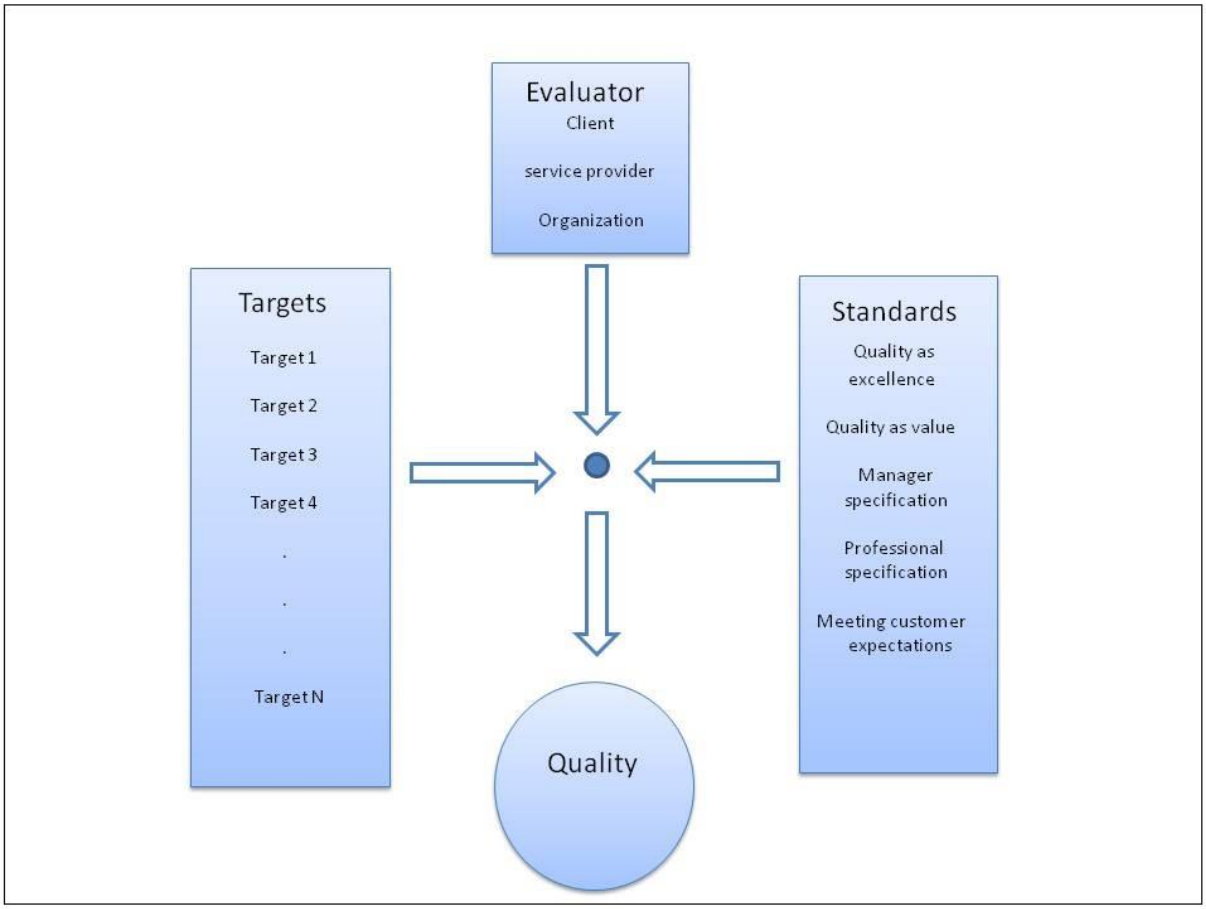

Figure 6 Target, standard, and evaluation model of quality (Challendura & Chang, 2000).

03. 3P model for quality: The 3P model was first presented by Biggs in 1993. The model was created in order to evaluate the quality of the education system in the United Kingdom. The model is appropriately applicable to evaluate quality of service in sport organisations as well. It examines quality on three main perspectives: presage, process, and product. The term "presage" refers to the context of people before they start dealing with the organisation to get the service. The variables of this dimension are the clients and staff ratio, athletic level of the clients belonging to the organisation, the quality of the staff, etc. The second term "process"

refers to what happens in the sport organisation in order to serve the client, which is represented mainly with the training in a sport club. This item is affected by many other variables such the organisation's size, the availability of the important equipment, the level of the personnel who provide the service. The last dimension of the theory is the "product", which refers to the level of the main service an organisation offers. In swimming clubs as an example, the main product is swimming. Therefore, quality refers to the level of swimmers at the club, the classification of the club in the area or the region, etc. As Gibbs (2010) noted, the most important dimension in the theory is the "process" dimension when compared to presage and product dimension owing that to the fairer comparative picture of quality than other two dimensions.

Chapter III - Methodology

Introduction

This chapter informs the reader about the scientific methods used in the research in order to answer the research questions. The research uses a mix of qualitative and quantitative methods. It is divided into two main parts. The first part is a comparative study on Germany and Australia, which aims at comparing talent identification and development systems and organisations in the two mentioned countries in reference to swimming sport. This part is done by primary document analysis (scientific articles, books, official reports) in addition to secondary document scrutiny (newsletters, web sites). Another aim of the first part of the study is to illuminate quality dimensions of talent identification and development (TID) systems in swimming which have an effect on the systems' efficiency and effectiveness. That allows making an appropriate questionnaire that compasses the needed items of TID's quality for the next part of the study.

3.1. First part - Comparative study between Germany and Australia

The countries included in the research were chosen from the similar developmental level. They both have high participation and achievements in international sport events in general. Both countries belong to western industrialized countries, hence they have a similar socio-economic nature. Additionally, they have a comparable cultural nature such as social and ethnographical development.

Regarding the comparative study, a systematic literature review was made to cover three main areas of knowledge connected to the research, which are "talent identification and development", "sport organisations and systems", and "quality and standards", with the aim of discovering, identifying and discussing the quality standards of talent identification systems in the two studied countries. Mainly searched literature included journal articles, books, websites,

additionally documents and official reports published by umbrella sport organisations, swimming federations, swimming confederations, and swimming clubs for both countries. Basically, documents were searched in two main providers “Scopus” and “Web of Science Core Cellection”. All the research processes were made online.

3.2. Second part - TID systems at swimming clubs of Wuerttemberg

The questionnaire aims at analysing the quality level of systems responsible for talent identification and development within the swimming clubs of the Wuerttemberg area in Germany. It focuses mainly on the administrational and organisational aspects that are related to the processes of talent identification and development. Additionally, it focuses on the connections and the cooperation built by swimming clubs with other organisations, institutions, or sport clubs in order to improve the processes and results of talent identification and development within their swimming club.

Based on the result of the comparative study between the two studied countries, a questionnaire was developed in order to assess the quality and the level of talent identification and development systems in the swimming clubs. The questionnaire is designed to question the personnel of swimming clubs, who hold positions with responsibilities on administrational level and have access to the club’s archive and the information regarding different processes that take place within it.

The questionnaire is designed to assess the level of TID systems and their methods used for swimming sport on club level. Its structure is mainly based on another two reliable questionnaires. The first one was made and used by Röger et al. (2010) in order to compare the level of talent identification and development systems of different sport disciplines on an international level. The second questionnaire is known as “Das Grüne Band,” and it has been drawn up and used by the German Olympic Sport Confideration (DOSB), aiming at evaluating the level of talent identification and development in German sport clubs. The newly created

questionnaire of the study was compiled after having done a systematic literature review and document analysis to make sure that the newly structured questionnaire embraces all the important elements that might have an effect on the quality of the system regarding TID. Later, and after the questionnaire had been finally prepared, it was distributed to a group of researchers and experts, additionally to the Swimming Federation of Wuerttemberg in order to be evaluated and revised. According to the received feedback, some changes were made to the questionnaire in order to get the highest benefit out of it.

The questionnaire was created online through the "Questback survey" internet site, which is a specialised internet site designed for universities and academic usage. Therefore, the questionnaires could be easily filled out online by the participants and the data was imported directly to the computer programme "SPSS", in order to be processed and evaluated without the need of recording the variables or entering the data manually into the programme.

3.2.1. Procedures and application

In cooperation with the Swimming Federation of Wuerttemberg (Schwimmverband Wuerttemberg), the questionnaire was distributed online to the administrations of the swimming clubs in the Wuerttemberg area in October 2015. Each swimming clubs was asked to have only one copy of the questionnaire filled in by someone who occupies an organisational or administrational position in the swimming club. After one month, another reminder email was sent to the swimming clubs to get as high a number of responses as possible.

The questionnaire was distributed to swimming clubs in the area of Wuerttemberg, which is a part of the federal state of Baden-Wuerttemberg in Germany. In the Wuerttemberg area, there are 183 swimming clubs or swimming departments in sport clubs. However, only 68 swimming clubs (37.1 % of the

sample) responded to the questionnaire. Moreover, due to the problem that 28 respondents did not complete most of the questions in the survey, the filled in questionnaires of many sport clubs were incomplete and useless for the study. That compelled to get rid of those incomplete questionnaires. At the end, 40 responses (21.9 % of the sample) remained usable for the study. Among those responses, one respondent (2.5 % out of the 40 respondents) left part of the answers incomplete. This missed data was replaced later with “the mean of the series”, since the missed data is less than 5 % of the sample, the researcher is allowed to replace the missed data with the mean of the series (IBM, 2011).

3.2.2. Restrictions and limitation

There were some problems related to the questionnaire, which might have had an adverse effect on the results. The first problem is that it might take longer for the questionnaire to be answered, since some of its questions investigate the numbers of trainers and coaches, the cooperation, and the outcome of the club. Those questions might compel the respondent to reviewing the archive before answering them. That could be a limiting factor, since many respondents might delay, and later forget, answering the questionnaire when facing such questions. Apart from that, another problem is related to the personnel, who filled in the questionnaire. In three cases (7.5 % of the 40 respondents), the questionnaires were filled in by coaches and trainers, who might have limited knowledge about the administrational processes taking place within the club, or about the detailed information of the cooperation of the club with other organisations. Adding to that, there was a problem related to the final number of responses that should be mentioned as well. The final number of responses of the swimming clubs is 40 responses, and it is problematic for applying some statistical analysis. As an example, it was not possible to apply the factor analysis for the sample, since applying this

analysis requires a sample of 100 cases at least, and over 1000 for an optimum analysis (MacCallum, Widaman, Zhang & Hong, 1999).

3.2.3. Statistical analyses

Data was analysed and processed using four main statistical parameters, which are frequencies, descriptive analysis, T-test, and correlation coefficient, using the computer software (SPSS). Later, the results of the analysis were exported to MS Excel 2016 in order to have a better presentation of the results. The first three statistics methods used “frequencies”, “descriptive analysis” and “T-test” aimed at revealing the categorical variables in order to describe the state and the main characteristics of the swimming clubs of the sample, and to explore the levels and the techniques of the TID methods and procedures used within the swimming clubs. Furthermore, they try to explore the main cooperation through which swimming clubs benefits receive support.

The fourth method used is the “correlation coefficient” which aimed at finding the relationship between the different “administrational variables” and the “outcome variables”. Using the correlation coefficient allows the organisational variables to be revealed, which have a high positive correlation to the outcome variables. Accordingly, that helps revealing the critical factors of a successful talent identification and development system. Consequently, that helps evaluating and enhancing the systems of talent identification and development used in swimming clubs.

Chapter IV- Systems of talent identification and development in Germany and Australia

4.1. Sport administration structure

4.1.1. Germany

The structure of the German organisations is based on three main principles. which are the autonomy of sport, subsidiarity, and cooperation. Through this system, the smaller organisational units have a high level of freedom regarding decision-making and organizing themselves. At the same time, bigger organisations provide support to those smaller units while those smaller units do what they are able to do in supporting the bigger organisations (Petry & Schulze, 2011, p. 52). The organisational structure of the sport system is shaped by the federal structure and has two main divisions, which are the "public sport administration" and the "self-administration of sport" (Petry & Hallmann, 2013, p. 75).

From another point of view, German sport organisations can be divided into governmental and non-governmental organisations. The *governmental organisations (public administration)* are run through the Federal Ministry of the Interior and the 16 federal states through their Ministries of Culture and Interior. The Federal Ministry of Interior is the main responsible body for elite sport, which includes the elite athletes of the country from different sport disciplines, in addition to coordinating the efforts of other Federal Ministries in their support for elite sports (Petry & Hollmann, 2013, p. 77). At local level, there are specialist sport offices that are responsible for coordinating sport in their state. Due to the federal structure of the country, the sport administration system does not have a hierarchically integrated system. The individual ministries operate largely independently with regard to their cooperation on local level through the "Conference of Ministries of Sport of the regions" (Petry & Schulz, 2011, p. 43). However, the non-governmental organisations are represented mainly by the DOSB (German Olympic Sport Confederation), which is the umbrella organisation of competitive sport. Additionally, it supports the public sport through different projects such as

the second path (Zweiter Weg), and keep fit with sport (Trimm dich durch Sport) (Krüger, 2012). The DOSB itself is a non-governmental organisation, but it has its connection to the government through five high-level politicians in the government, who are usually representatives in the parliament. The main task of those politicians is to discuss and support the cases and issues of the DOSB in the government, as noted in the annual report of the presidium (DOSB, 2013 a). The following figure (Figure 7) illustrates the sport administration in Germany.

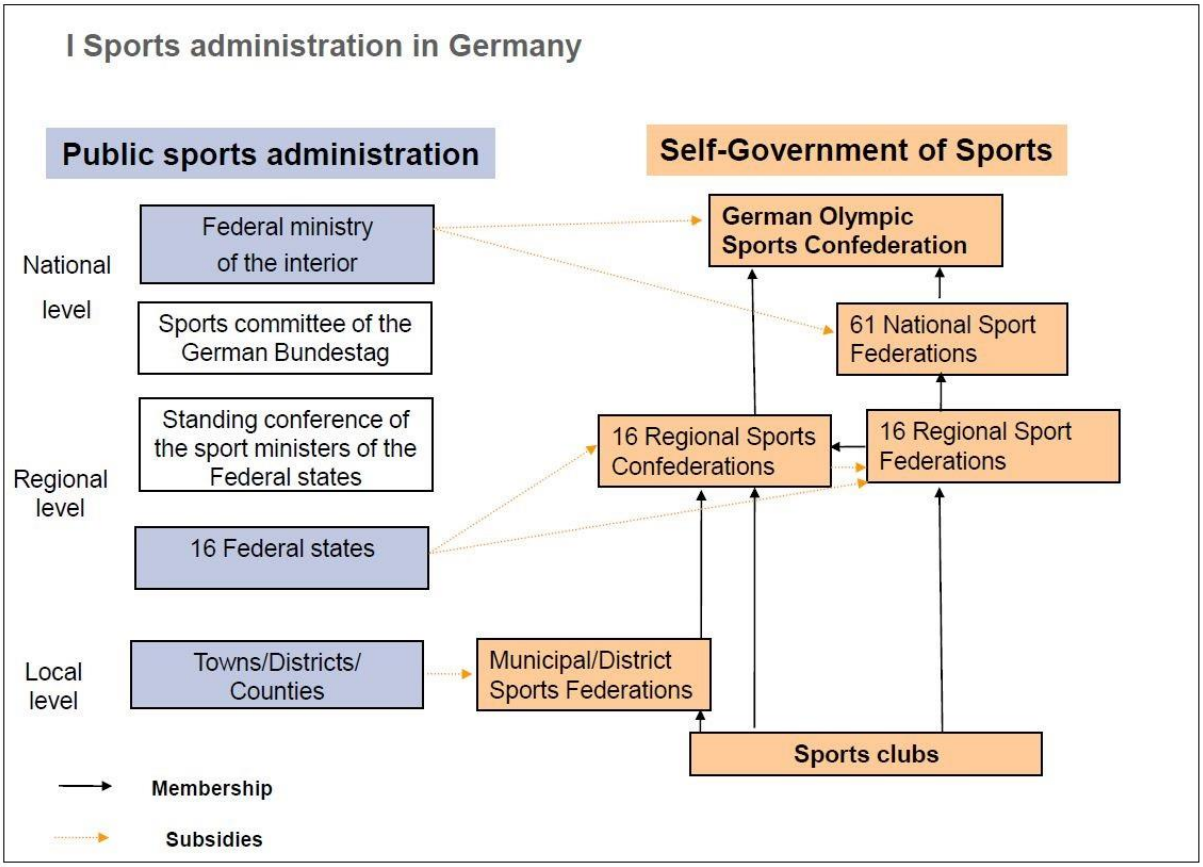

Figure 7 Sport Administration in Germany (Hoffmann & Wulff, 2015).

4.1.2. Australia:

Sport organisations in Australia can be divided into two types, governmental and non-governmental. The non-governmental organisations are represented by the national sport organisations. Whereas, the governmental organisations are the ones run and administrated by

the government on its different organisational levels. The sport system in Australia reflects the federal system of the government, which include the commonwealth (the federal), and the local government. In Australia, there are three main organisations and institutions which participate in planning, organizing, and running sport in the country. Those organisations are *The Departments of Regional Australia*, *Local Government for Arts and Sport*, and the *Commonwealth Minister for Sport*. The Commonwealth Minister for Sport is represented by the "*Australian Sport Commission-ASC"* which is considered the arm of the Commonwealth government that deliver the government's sport policies (Cuskelly, Wicker & O'brien, 2013).

At regional level, there are six states and two territory governments that have their own sport and recreation departments. Those departments are known as "*States and Territories Institutes and Academies of Sport- SIS/SAS"*. They are located within the State and Territory department of Sport and led by the State or Territory Minister. Their main jobs are to improve and develop sport at the state or the territory by setting sport policies, investing in sport participation, and by creating development programmes. They coordinate their efforts with the Commonwealth government regarding the best international participation. (Cuskelly, et al., 2013).

At local level, the local governments are directly involved in the delivery of sport in Australia, specifically, regarding public sport. Their main work is administering and leasing the sport facilities for the sport clubs, providing advice and support for the sport clubs, in addition to financing some sport projects and facilities in their areas. (Cuskelly, et al., 2013).

Non-governmental sport organisations in Australia are represented by the *National Sport Organisations* (NSOs). These organisations provide their support through "*State Sport Organisations- SSOs*". The main job of the NOSs is funding the national sport teams, as well as organizing national championships and selecting players of the national sport teams who will represent the country in the international championships. They identify and develop talents in

their sports and deliver different programmes to improve the Australian community. Those NSOs and other sport services and industries are all led by the "*Confederation of Australian Sport - CAS*", which coordinates the effort of the different sub-organisations (Cuskelly, et al., 2013). They are also a key driver of the national elite sports performance and they are financially supported by public funds (Commonwealth of Australia, 2009).

4.1.3. Results

The sport administration structure of Germany and Australia is relatively similar. However, there are some differences regarding the governmental administrational levels. Both in Germany and Australia, two main administrations run sport in the country in parallel, which are the Federal government (or the Commonwealth in Australia) and the regional government. However, in Australia, the local government participates in planning sport in the country through the "Local Government for Arts and Sport" in addition to the regional government and the Commonwealth government (Cuskelly, et al., 2013). On the other side, the role of the local government regarding sport administration in Germany was not mentioned by Petry and Hollmann (2013) or by Petry and Schulze, (2011), when they described the main institutions administrate sport in Germany. Accordingly, that might refer to a higher level of freedom that the local governments in Australia have to plan and implement sport development strategies within their areas, compared to the local sport organisations in Germany. This indicates that the decision-making process regarding planning and implementing sport in Australia is more decentralised compared to Germany.

In Australia, the umbrella organisation that is responsible for elite sports is the Australian Sport Commission (ASC) through its Australia Institute of Sport (AIS) department and other state institutes and academies of sport. This organisation is operating under the Commonwealth government. However, Germany has more than one umbrella organisations for elite sport, and they are represented by the Federal Ministry of Interior (governmental

organisation) and by the division of elite sport of the DOSB (non-governmental organisation). Accordingly, the elite sport administration in Australia is more centralised than that in Germany. Thus, running elite sport in Germany requires more coordination between the main umbrella organisations.

4.2. The main sport organisation

4.2.1. Germany

The German Olympic Sport Confederation DOSB

The DOSB is one of the umbrella organisations that are responsible for competitive sport, in addition to its particular role in supporting public sport. It has 98 member organisations which comprise 27.8 million members. Those member sport organisations are 16 federal state sport confederations/federations (Landessportbünde), 63 national federations (Spitzenverbände) (38 Olympic and 25 non-Olympic), 20 special federations with special tasks (Verbände mit besondere Aufgaben) such as the German Olympic Society, the German Association for Sport Science, etc., and finally 15 personal member organisations (DOSB, 2017). The organisational flowchart of the DOSB is illustrated in (Figure 8).

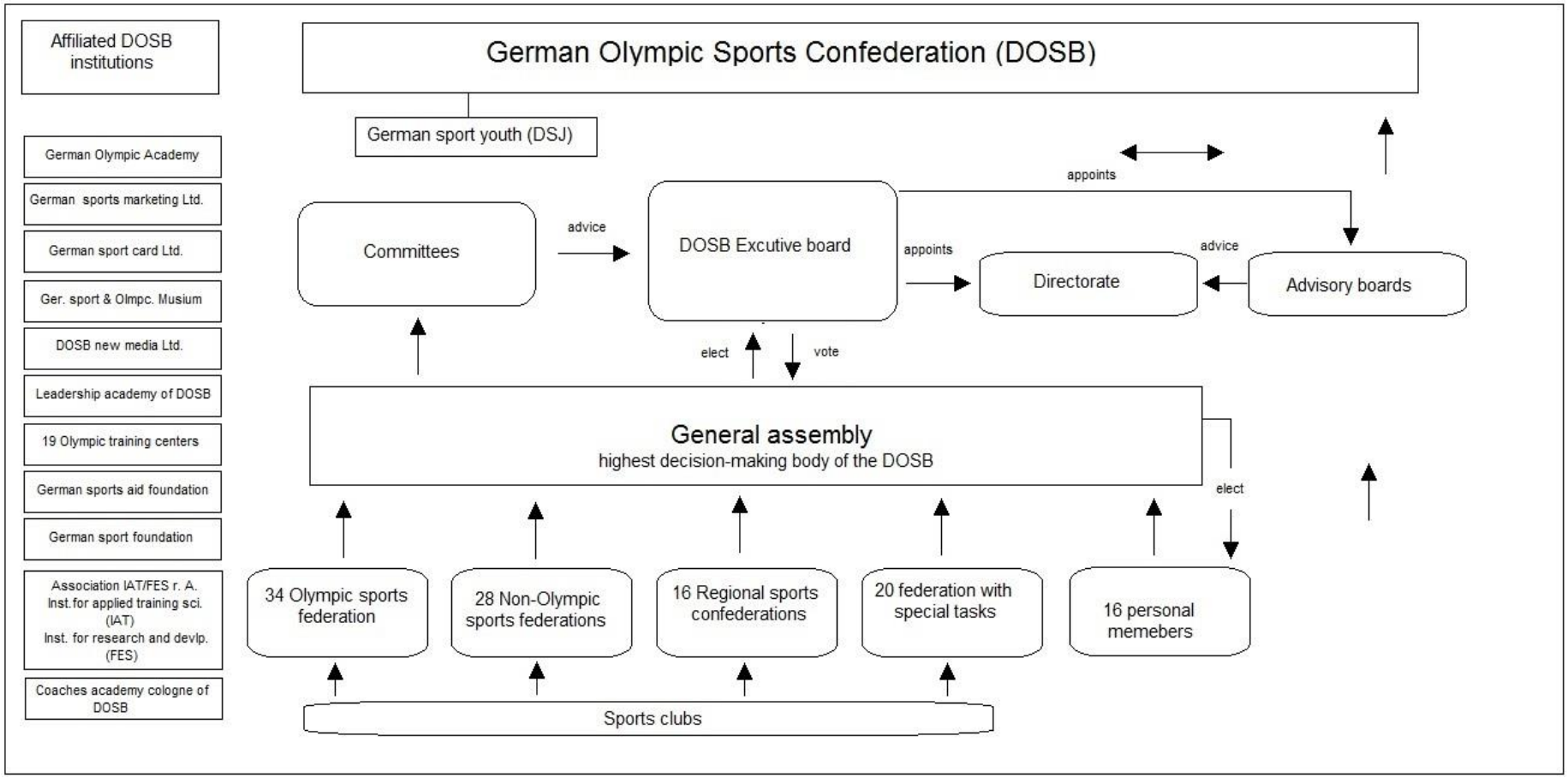

Figure 8 The organisational flowchart of the DOSB (DOSB, 2013 c)

The DOSB's activities are divided into society-oriented activities and performance-oriented activities. The society-oriented activities aim at using sport to improve the society by enhancing the high social standards, and weakening the unwanted habits and attitudes in the community. Some examples of these activities are the projects run by the DOSB for integrating refugees and immigrants in the German society, aiming at reaching a more stabilised and homogeneous community. Other activities the DOSB provides are supporting and developing the cities and the residential places by initiating and supporting sport projects aiming at developing the cities and providing them with facilities required for sports and physical activities in order to improve public health in the country or to provide better facilities for high-performance sport. Another topic attracts the DOSB's attention, which is the nature conservation. The DOSB supports projects and ideas that aim at improving the nature or heighten the environmental level of the surrounding circle. Adding to that, the DOSB supports new ideas and new inventions by financing and promoting such projects. This programme is a new product of the DOSB, and it started in September 2016. Youth, particularly the athletes, benefit from one of the DOSB's programmes that allow the youth to do their civil service in Germany in the field of sport. Moreover, the DOSB shows interest in developing the community internationally through sport. Through the cooperation with "Foreign Office - Auswärtiges Amt" and the "Federal Ministry of Economy - Bundesministerium für Wirtschaftlische Zusammenarbeit und Entwicklung", the DOSB initiated projects aiming at international developments regarding sports. Through the different projects mentioned and policies related to the DOSB, the organisation always tries to strengthen the good values and to get rid of the unwanted ones in the society, which could be noticed through the different principles the DOSB reinforces, such as the prevention of sexual harassment in sport, supporting women's rights and gender equality (DOSB, 2016).

The other part of the DOSB's activities focuses on high-performance sport. Its support is not restricted to elite athletes only, much rather it encloses all extraordinary athletes who have potential and who belong to different ages and levels. This support can be clearly noticed through the participation of the DOSB in the Youth Olympic Games in Norway 2016, where the DOSB participated with 44 teams and won 22 medals. Furthermore, the DOSB offers young athletes a dual career to work and learn at the same time. This dual career is based on the coordination between high-performance sport and schools. Moreover, the DOSB supports elite sport by supporting science and research that endeavour to improve the level of elite sport in the country. Accordingly, the *Federal institute of Sport Science –Bundesinstitut für Sportwissenschaft BISp* could run 48 additional researches in 2016. The DOSB's medical commission supports the elite athletes with the important medical supervision, in addition to providing the needed support for the medical centres that work directly with the elite athletes. Doping prevention is a striking topic, the DOSB was fully active in, whether by supporting the researches associated with this topic, or by supporting or suggesting regulations helping to prevent it (DOSB, 2016). The DOSB runs elite sport through its DOSB's Performance Division and the other similar organisations known as *Regional Performance Committee/LA-L*, which supervise elite sport at regional levels. (Petry & Hallmann, 2013, p. 76).

4.2.2. Australia

The Australian Sport Commission ASC

The organisation was established in September 1984 (ASC, 2015) and it is the umbrella organisation of sport in Australia. Its headquarters are located in Canberra, the capital city of Australia, at the "Australian Institute of Sport - AIS", which is, organisationally, one of the ASC's subdivisions. The main reason for establishing this organisation is to oversee the development of sport in the country (Duffy, 1999). This organisation is defined as the Australian government agency which supports sport in the country at all levels. The ASC

functions through 16 different staff and program locations, one of them being located in Italy and the rest in Australia (ASC, 2015). It is governed by a board of commissioners appointed by the Australian Government Minister of Sport (Cuskelly et al., 2013, p. 226) and it achieves its national leadership role through three areas: The Australian Institute of Sport (AIS), Participation and Sustainable Sport, and Corporated and Facilities Operations (ASC, 2015). The main goals of the ASC according to Duffy (1999) and ASC (2015) are increasing the participation in public sports and activities for all the Australians in addition to developing the performance sport in international sport events. From another point of view, Cuskelly et al. (2013, p. 226) noted the goals of the ASC with providing sources and leadership, coordination of the funding of sport at Commonwealth government level in order to achieve its goals that are aligned with the national sports policy of the Australian Government and with the National Sport and Active Recreation Policy Framework. However, Hogan and Norton (2000) mentioned that the main goals of the ASC is the elite sport development when they stated that the main goals are reaching excellence in sports performance, and then continued mentioning other goals such as increasing the public participation in sports activities. The two researchers confirmed that the main interest of the ASC is elite development, because of the idea that the high level of elite athletes in the country plays a positive role in increasing the public participation of the nation in sport. Nonetheless, when it comes to achieving the goals connected to public sport, the ASC cooperate with Commonwealth governments, national sport organisations, sporting bodies, states and territory departments of sport and recreation, etc. in order to deliver appropriate sport programmes that increase sport participation within the Australian community (Cuskelly et al., 2013, p. 233). For a better understanding of the sport system in Australia, Figure 9 illustrates the results in more detail.

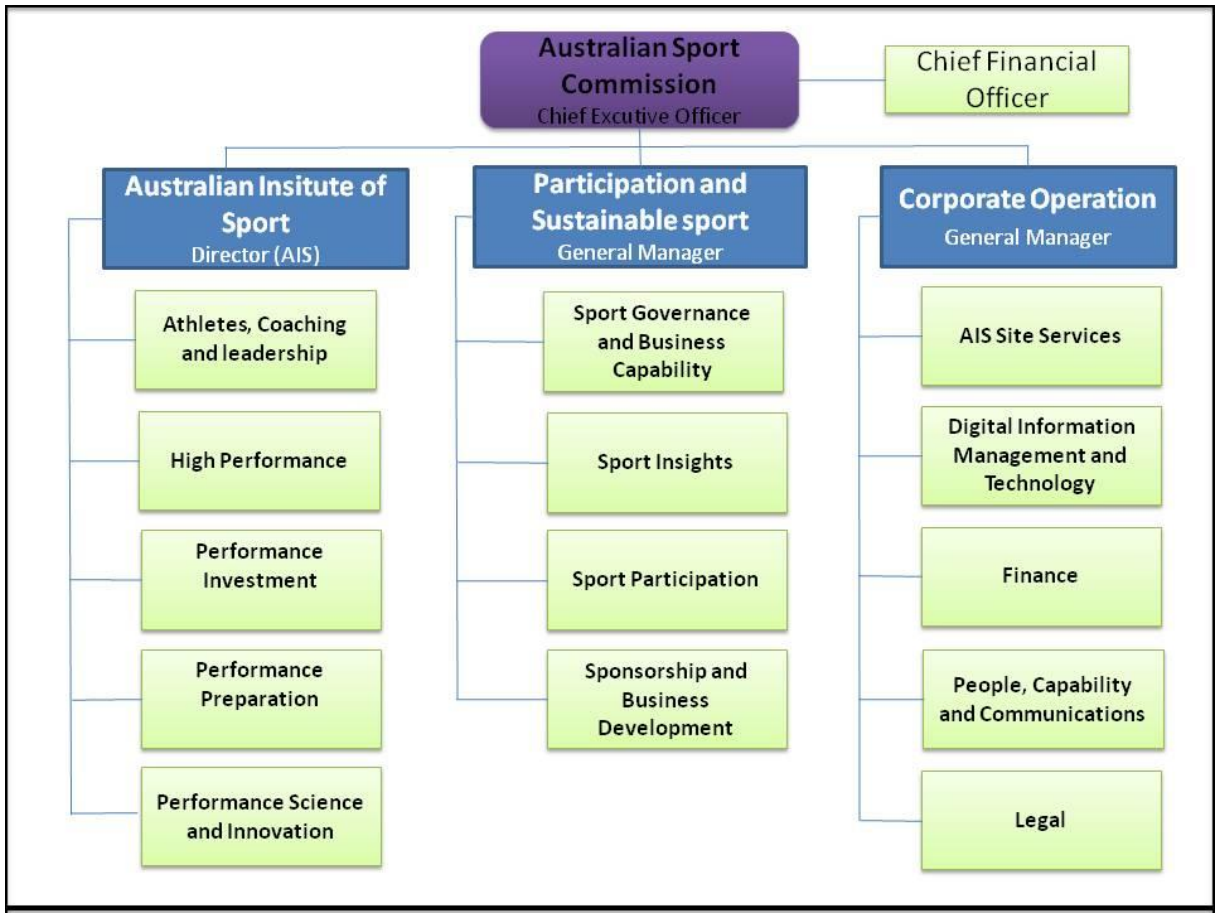

Figure 9 The ASC organisational flow chart (ASC, 2016).

4.2.3. Results

The basic umbrella organisations for sport in Germany and Australia are similar in their structure. The two main organisations are the DOSB in Germany and the ASC in Australia, and both of them support elite sports in their country, and guide its development. The only difference between the two organisation is that the DOSB is a non-governmental (or a semi-governmental) organisation with a good connection to the government through some politicians in the parliament, but the ASC is a governmental organisation and it operates under the Commonwealth government.

The DOSB runs the elite sports through its sub-division *Performance Division*, which performs in the whole country through other regional committees called *Regional Performance Committees/LA-L*, which operate on regional level. However, the Australians have a similar

structure for their elite sport management, but as mentioned before, the headquarters of the Australian Sport Commission-ASC are located within the "Australian Institute of Sport-AIS" which is the sub-division of the ASC. That gives an impression idea of how big this sub-division is, which refers to a more complicated and extensive task (Lunenburg, 2012). Moreover, another difference between the organisations in the two countries enclose the international dimension. In Australia, the ASC has a centre that is located in Italy, which gives this organisation an international dimension. However, the DOSB headquarters are all located in Germany.

Regarding the main strategy of the umbrella sport organisations in the country, the Australian Sport Committee's main interest is elite sport development in the first place, and then public participation in sport (Green & Collins, 2008; ASC, 2014; ASC, 15). However, Germany provides more support to developing the public participation in sport as a priority over the elite sport development for most sport disciplines (DOSB, 2016; DOSB, 2013 a). Additionally, Australia pays more attention to individual sport disciplines than on team sport in general, because it gives a better chance for the country to win medals in the international competitions (Hill, 2007, p. 43), which is another clue that the main interest of the Australian sport organisations is international sport success. On the other hand, Germany pays more attention to some team sports such as soccer, where Germany has a very good reputation worldwide, and handball, since the German Handball Federation (GHF) is the largest handball organisation in the world, with over 800,000 members participating in sport clubs all around the country (Schorer, et al., 2012).

4.3. The administration of high performance sports

4.3.1. Germany

The *Federal Ministry of the Interior* holds responsibility for supporting top-level sports in the country as a governmental organisation. It plays the leading role in the area of state support for

top-level sport. It also coordinates the activities of the other Federal Ministries that have specific responsibilities in the area of top-level sport development. An example of this is the elite sport development in the Federal Armed Forces (Petry & Hollmann, 2013, p. 77). The DOSB comes second in supporting top-level sport in the country through the *DOSB's High Performance Division,* and through its equivalent structures at regional level, called *Regional Performance Committee LA-L*. The divisions mentioned guide and coordinate the elite sport development by launching initiatives for the development of strategic plans and illustrating the principles regarding performance sport for athletes and top-level sport. Accordingly, it seems that the DOSB is fully responsible for the development of elite-sport in Germany. However, the main organisational tasks lie with the individual sport federations (Anderson, et al., 2015).

Some other institutes and organisations were mentioned as supporters for elite sport in Germany as Blood (2015) said. Those organisations are the *German Sport Aid Foundation* (Stiftung Deutsche Sporthilfe), which takes responsibility in supporting elite sport by providing financial support for the athletes who have the potential to achieve good results in international sport events. In addition to that there are some other different types of support provided for elite sport by different organisations, such as *The Federal Institute of Sport Science* (Bundesinstitut für Sportwissenschaft- BISp), *German Institute for Applied Training Sciences* (Institut für angewandte Trainingswissenschaft - IAT), *Institute for Research and Development of Sport Equipment* (Institut für Forschung und Entwicklung von Sportgeräten), and finally *the German National Anti-Doping Agency* (Nationale Anti Doping Agentur Deutschland). Blood (2015) also mentioned the support for the elite athletes with special needs. In Germany there are different organisations that provide support for athletes with special needs. The strongest support is provided by *The National Paralympic Committee Germany*, which is known in Germany as DSB - Deutsche Behindertensportverband. In addition to it, some other organisations provide additional support such as the *German Deaf Sport* (Der Deutsche

Gehörlosensport verband) and *the German organized deaf sports* (Organisierten Gehörlosensports Deutschlands).

4.3.2. Australia

The Australians have been giving special attention to this part of their sport system since the beginning of the preparation for Sydney 2000. The high-performance system of Australia consists of the *Australian Institute of Sport - AIS* and another 8 additional institutes in the 6 states of Australia and the two territories (Duffy, 1999). The AIS gained a very good reputation in the 1984 Olympics in Los Angeles after its swimmers achieved seven medals of the twelve medals Australia achieved at those Olympics (Stewart, et al., 2004, p. 98). The following figure (Figure 10) describes the elite sport system of Australia.

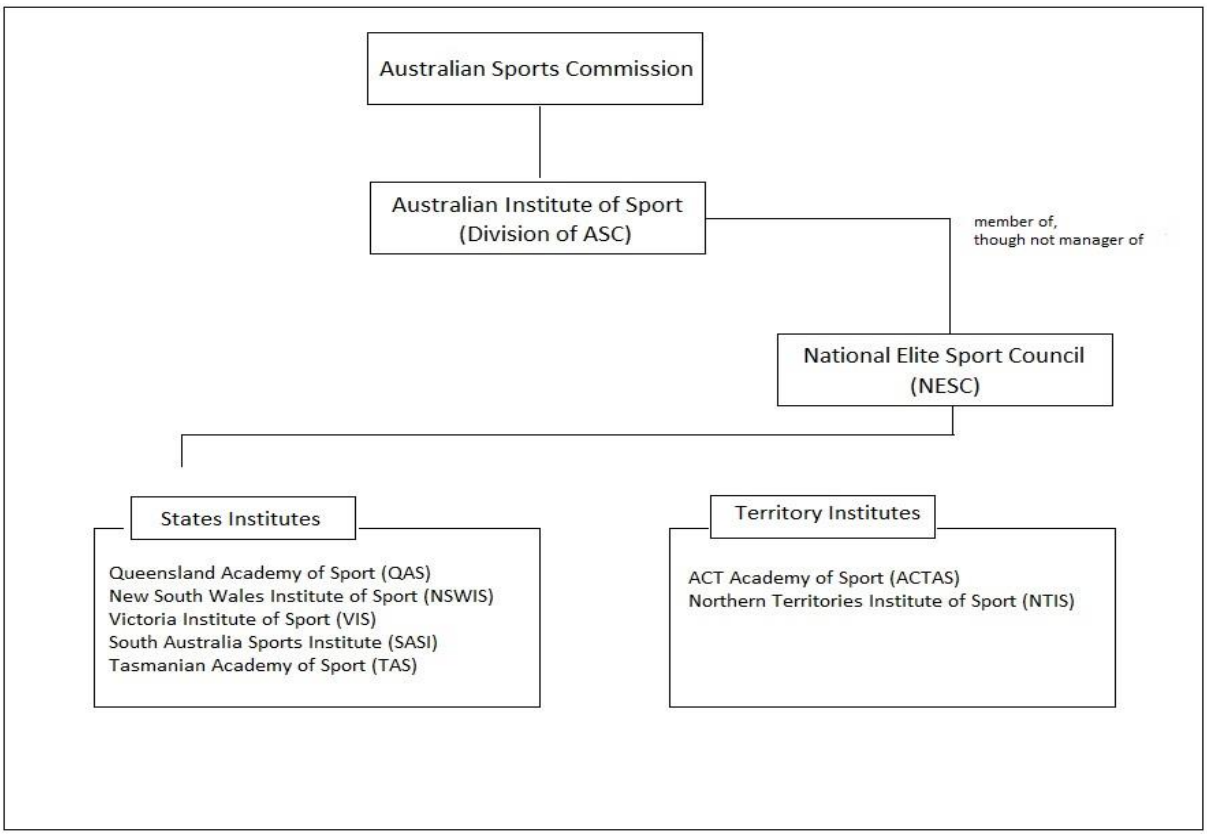

Figure 10 Australian sport administration system (Duffy, 1999).

The Australian Institute of Sport (AIS) has led the elite sports development in Australia for decades and it delivered a widely acknowledged international success for Australia. That

made it as a role model for other countries when developing and improving their elite sport system, such as the UK (Hill, 2007, p. 41). The reputation of the AIS was enhanced after the Los Angeles Olympics in 1984, when its athletes won seven of the 12 medals for Australia (Stewart et al., 2004, p. 98). Additionally, all the NSOs agreed that the AIS is the backbone of elite athlete development and success (Sotiriadou & Shilbury, 2009).

AIS supports athletes by offering scholarships to almost 600 athletes from 25 different sports each year. Those scholarships are delivered through 32 separate programmes. In addition to that, the AIS employs around 75 full-time coaches in different sports, mostly in Olympic sports. Adding to that the role, the AIS leads the processes and plans of talent identification and development, which reduce the cost of preparing elite athletes (Hill, 2007, p. 43). Accordingly, elite development programmes are usually offered through the AIS and other institutes and academics of sport. (Sotiriadou & Shilbury, 2009).

4.3.3. Results

In Germany, the federal government followed by the DOSB are the main responsible bodies for elite sport development in the country. However, in Australia, the main responsible body for developing elite sport are the Commonwealth government through the AIS (Australian Institute of Sport) Division, which is a part of the ASC (Australian Sport Commisstion). That means elite sport in Australia and in Germany are administrated by governmental organisations. In spite of the fact that in Germany a non-governmental organisation (DOSB) has the reputation for leading the elite sport in the country (Anderson, et al., 2015).

The department responsible for running elite sport in Australia (AIS) might be considered the most important part of the Australia Sport Commission (ASC). Because the AIS's headquarters include the ASC's headquarters, although the AIS organisationally belongs organisation to the ASC. That might also point to the fact that elite sport development is the most important department of sport for the Australians.

4.4. Swimming organisations

4.4.1. Germany

The main organisation responsible for swimming in Germany is the *German Swimming Federation - DSV*. Its headquarters are located in the city of Kassel, and it runs swimming sport in Germany in cooperation with another 20 confederations. Based on the reports of the different confederations (e.g. Schwimmverband OWL, 2011), the swimming administration system has a decentralised nature, and the different confederations of the states have big margins of freedom regarding decision-making within their state, an example of this being the decisions regarding talent identification and development processes and procedures.

The DSV is affiliated by two main sport organisations in Germany, which are the *DOSB* (German National Olympic Confederation) and the *German Government's Secretary of State for Sport* (German Swimming Federation, 2017). As noted in the annual report of the DSV (2013a), the DSV is not only responsible for administrating swimming in Germany, but its responsibilities extend to include Waterpolo, diving and synchronised swimming as well. However, the main organisational structure for German swimming is illustrated in (Figure 11).

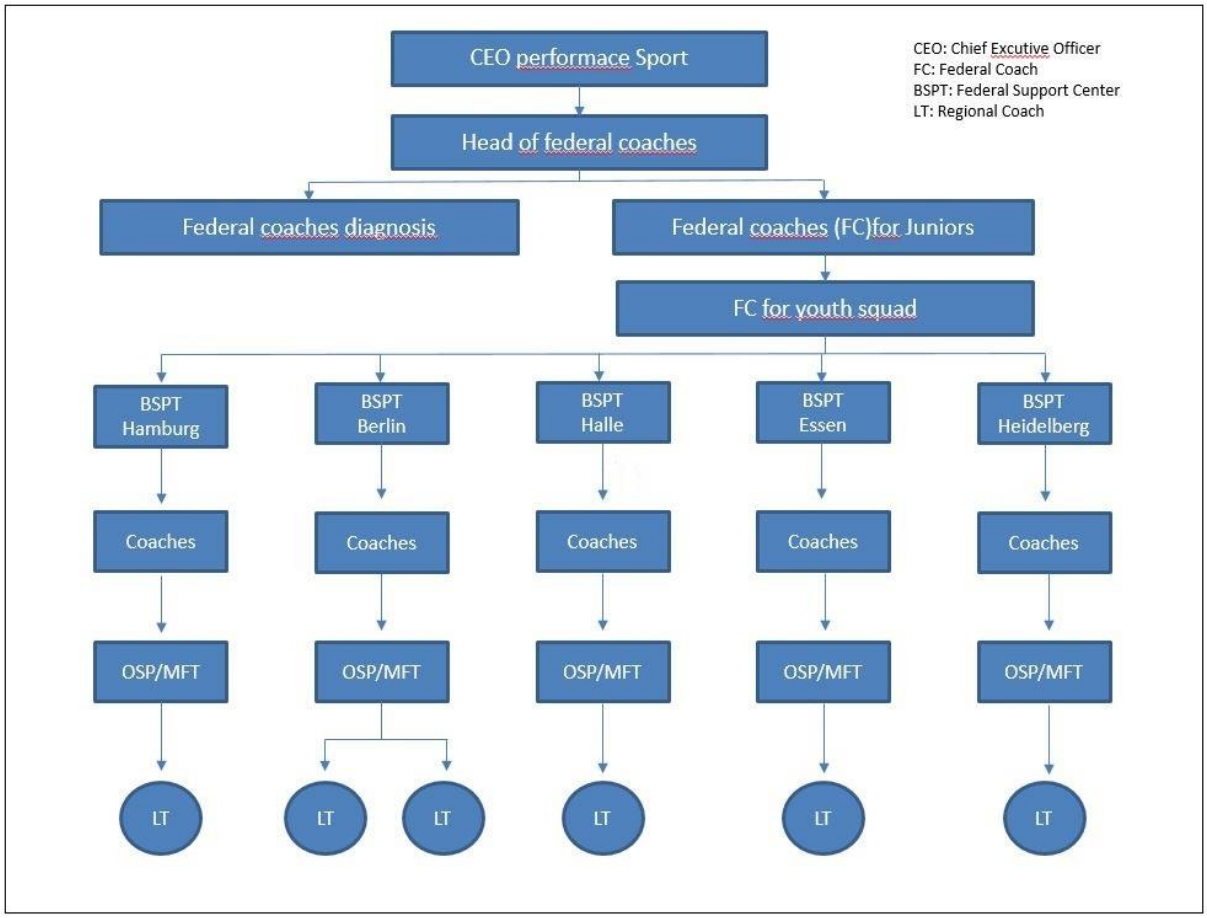

Figure 11 German swimming organisational structure (DSV, 2013a).

National swimming competitions the country organizes and holds create a good opportunity for the swimmers to have more competition and contact chances as a part of their preparations for international competitions. Houlihan & Green (2008, p. 8) mentioned the importance of the competitions for a successful elite sport system. In Germany, the German Swimming Federation is responsible for organizing and planning the national swimming competitions in the country. Accordingly, many swimming competitions take place yearly, as shown in (Table 2).

Table 2 Annual German swimming competitions

Name translated to English language	Original name in German Language
01 German Championships	01 Deutsche Meisterschaften
02 German Short Course Championships	02 Deutsche Kurzbahnmeisterschaften
03 German Championships for Open Water	03 Deutsche Meisterschaften im Freiwasserschwimmen
04 German Championships of the Year	04 Deutsche Jahrgangsmeisterschaften
05 Swimming Multi-Discipline Competition	05 Schwimm-Mehrkampf
06 German's Masters Championships	06 Deutsche Meisterschaften der Masters
07 German's Team Championships for Swimming	07 Deutscher Mannschaftswettbewerb schwimmen
08 German's Team championship for Youth Swimming	08 Deutscher Mannschaftswettbewerb Schwimmen der Jugend
09 German's Team Championship for Masters	09 Deutscher Mannschaftswettbewerb der Masters

Resource: DSV (2013b; 2014)

4.4.2. Australia

A specialised swimming administration for the Australians was first established in 1909 under the name "*Amateur Swimming Union of Australia*" in order to support and supervise the Australian swimmers who had started joining the international swimming events since the 1896 Olympics. The name of the organisation was later changed to "Australian Swimming Incorporated-ASI" due to the increasing importance of the Olympic events. Later in 2004, the name of the organisation was changed again to "Swimming Australia Ltd - SAL" (Green & Houlihan, 2005, p. 63). SAL is responsible for running swimming, open water swimming, in addition to swimming for athletes with special needs according to the Swimming Australia's Annual report 2010/2011 (SAL, 2011 a). It plays a role as sport's parent body for member associations on state and territory levels. Those member organisations are the *Australian Swimming Coaches and Teachers Associations (ASCTA)* and the *Swimmers' Commission;* in addition to the organisations that organize other water sports in Australia such as the *Australian Diving Association*, and the *Australian Water Polo Inc*, which are independent organisations but they are affiliated to the SAL (Green & Houlihan, 2005, p. 63). The governance structure of the SAL is illustrated in (Figure 12).

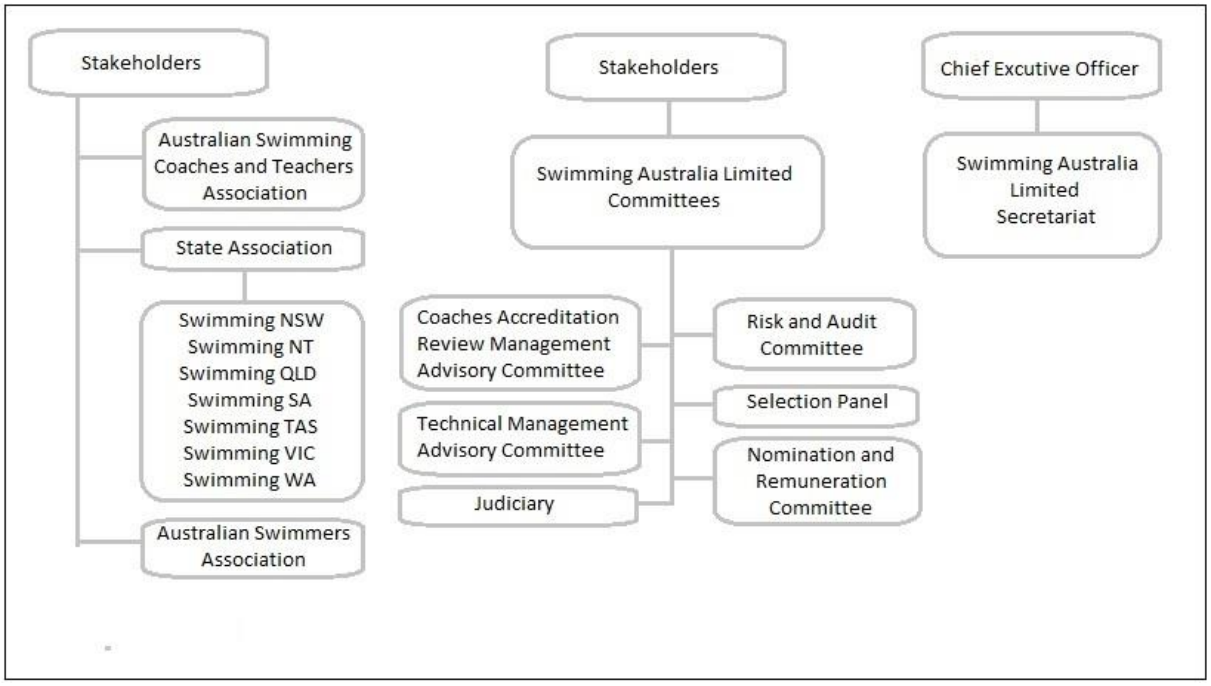

Figure 12 Swimming Australia Limited's governance structure (SAL, 2013 a).

The SAL suffers from some organisational problems regarding decision-making when it comes to the other two "shareholder" organisations, which are the *"Australian Swimming Coaches and Teachers Association-ASCTA"* and the "*Australian Swimmers Association- ASA"*. The problem is that those two organisations have full voting rights at all general meetings. What escalates this problem is the lack of communication channels between those organisations which results in many conflicts when making decisions. (SAL, 2013 b).

The SAL receives support that was described as tremendous by the Georgina Hope Foundation and its Swimmers Support Scheme. Additionally, the SAL is supported by partner organisations which are the Australian Sport Commission, Speedo, Network Ten, Australian National Preventative Health Agency, Accor and 2XU, in addition to another two new partner organisations which are the Regus and Great Big Events who got to be on the partnership board in 2014. This support can even be noticed through the Australian swimming competition's schedule. Georgina Hope Foundation finances a competition by itself that takes place every year (SAL, 2015). The following table (Table 3) illustrates the Australian swimming competitions:

Table 3 Annual swimming competitions in Australia.

Name of the competition	The Month	The location
01 BHP Billiton Aquatic Super Series (Pool event)	January	Perth
02 BHP Billiton Aquatic Super Series (Swim the Swan)	February	Perth
03 Australian Open Water Championships	February	Perth
04 Hancock Prospecting Australian Swimming Championships	April	Sydney
05 Georgina Hope Foundation Australian Age Championships	April	Sydney
06 Grand Prix 1	May	Canberra
07 Grand Prix 2	June	Townsville
08 Handcock Prospecting Pan Pacific Championships	August	Gold Coast
09 State Team Short Course	September	Canberra
10 Australian Short Course	November	Adelaide
11 Swimmer of the Year Awards	December	Brisbane

Resource: SAL (2015).

However, a problem regarding swimming facilities was mentioned by Houlihan and Green (2008, p. 6). The two researchers noted that most of the competition-size swimming pools in Australia are private, and swimming governing bodies do not own many of them, which creates constraints on access for many swimmers. This problem is a result of the difficulty of building enough appropriate swimming pools on the vast geographical areas the country has.

4.4.3. Results

Regarding the "German Swimming Confederation - DSV", there is a lack of literatures concerning the organisational structures and processes. That can be easily noticed through the search in different documents of the DSV, databases, google scholar, and even in Wikipedia.

The DSV in Germany is responsible for organizing and running swimming (long and short distances), water polo, diving and synchronised swimming (DSV, 2013a). However, the Australian swimming organisation SAL is specialised only in swimming (long and short distances). The other water sports organisations in Australia (diving, water polo) are independent but they are affiliated to the SAL (SAL, 2011 a). Accordingly, that might indicate the importance of the different water sports for the Australians. Additionally, it might refer to a bigger and a more specialised administration of the different water sports in Australia, which in turn, could lead to a better administrational performance.

The SAL has a problem with the communication channels with other shareholder organisations, which are the *Australian Swimming Coaches and Teachers Association -ASCTA* and the *Australian Swimmers Association - ASA*. Additionally, the SAL suffers from conflicts with the mentioned organisations when taking decisions in the general meetings, because the two organisations have full voting rights (SAL, 2013 b). However, it was not mentioned that the German swimming administration suffers from problems of this nature, which might refer to the fact that the swimming administration system in Germany is more centralised than the one used in Australia.

Both Germany and Australia have many national swimming competitions and they have almost the same number of annual competitions. But the support for swimming in Australia is described with "tremendous" and it could be clearly noticed through the private national competitions taking place in Australia, such as Georgina Hope Foundation Australian Age Championships (SAL, 2015). However, there were no indicators in the German literature of such strong financial support for German swimming.

In Australia, there is remarkable and organized financial support for swimming from sponsors and foundations, which act as partners for the Australian Swimming Federation SAL, their support was described with "tremendous" (SAL, 2015). However, there were no indicators of such strong financial support from sponsors for German swimming.

The Australian elite swimmers face a problem regarding constraint access to train in the competition-size swimming pools in Australia, because the swimming governing bodies do not own most of the swimming pools in Australia (Houlihan & Green, 2008, p. 6). Such a problem was not mentioned in Germany.

Regarding swimming, Germany places more emphasis on public sports unlike Australia, which emphasises elite sport as a source of their national and cultural identity (Green & Collins, 2008; DOSB, 2016).

4.5. Talent identification and development methods

4.5.1. Germany:

Talent identification

The history of talent identification and development in Germany started in 1952 after the foundation of the *German College for Body Culture* (Deutsche Hochschule für Körperkultur) in Leipzig, which had several activities and achievements regarding boosting the sport in the country. Among those achievements are developing a very thorough system of talent identification and training (Hill, 2007, p.66). East Germany was well-known with its well-evaluated talent identification system, but it was not possible to transfer this advantage of the system into the new common social system after the reunification of Germany (Anderson et al. 2015). Nonetheless, many changes took place in the sport system regarding talent identification which were mentioned in the DOSB's *Elite Youth Sport Concept (EYSC) 2020*, which revealed that the main problem is the lack of coordination between the system and all sports regarding talent identification (DOSB, 2013b). For that reason, the DOSB suggested in the EYSC 2020 a plan to improve the level of talent identification in Germany by testing the motor abilities of children under the age of 10. Accordingly, children would be referred to appropriate sport programmes in sport clubs and sport associations. The important partners for TI are the elementary schools, sport clubs, and sport confederations of cities, regions and states as well as the umbrella organisations for each sport discipline. The plan is applied through special talent tests, promotion measures and training courses in order to find and promote talents with focus more on the performance in competitions as a key criterion of practice-oriented talent identification (Anderson et al., 2015).

However, Diegel, Burk and Fahrner (2006, p. 232) noted that the responsibility of talent identification in Germany is considered a self-organised process by the sport clubs, and it might

be a task of the government. Accordingly, the main responsible organisation for identifying talents are the sport confederations of each sport discipline.

Talent development

Talents are developed in Germany through three main levels as Rudolph, Wiedner, Jedamsky & Wolfgang (2006); and DOSB's EYSC 2020 (DOSB, 2013b) stated. The first level is the *basis training* (Grundlagentraining GLT) through which children learn the basic skills of a sport discipline. Therefore, training will be directed to improve the general body abilities. For swimmers in this stage they learn the different swimming techniques including the start and the turn with more focus on developing the "coordination", since it is considered the basic fitness component for this stage. The other fitness components are improved and developed as well with the consideration of children's growth development. After this level, young athletes move to the level called *advanced training* (Aufbautraining ABT) meaning they get specific performance training relevant to their sport in order to reach highest performance levels. For swimming at this level, coaches improve the conditional requirements for swimmers on land and guide them to master their swimming skills in water. The third level is the *pre-high performance training* (Anschlusstraining AST), which is the preparation stage for the elite level. Therefore, training plans for this level are characterised by high loads in order to prepare athletes to compete on higher levels. Hoffmann (2013) added fourth stage to the past mentioned levels which is the *the high-performance training* (HLT). This level is the last development station before elite sport training through which young athletes receive the highest training loads in order to reach the elite level training as illustrated in (Table 4).

Table 4 Systematic training structure for elite level.

General basic training (Grundausbildung - GAB)		1-2 years training for beginners
Youth training (Nachwuchstraining- NT)	Basis training (Grundlagentraining - GLT)	7-8 years youth training
	Advanced Training (Aufbautraining - ABT)	
	Pre-high performance training (Anschlusstraining - AST)	2-5 years national squad training
High performance training (Hochleistungstraining - HLT)		10 years training in the international sqauds.

Source: (Rudolf et al., 2006).

Hoffmann (2013) noted the past mentioned developmental levels as well, showing the relationships of the different levels of talent development with the processes of talent identification and selection. He described the first part of training for kids (basic general training - GAB) with the level before the first stage of talents journey, where children learn different motor skills and abilities in order to be detected later to join a specific sport discipline that fits their abilities and characteristics. After this stage starts the systematic development which is known as "Youth training" as shown in more detail in (Figure 13).

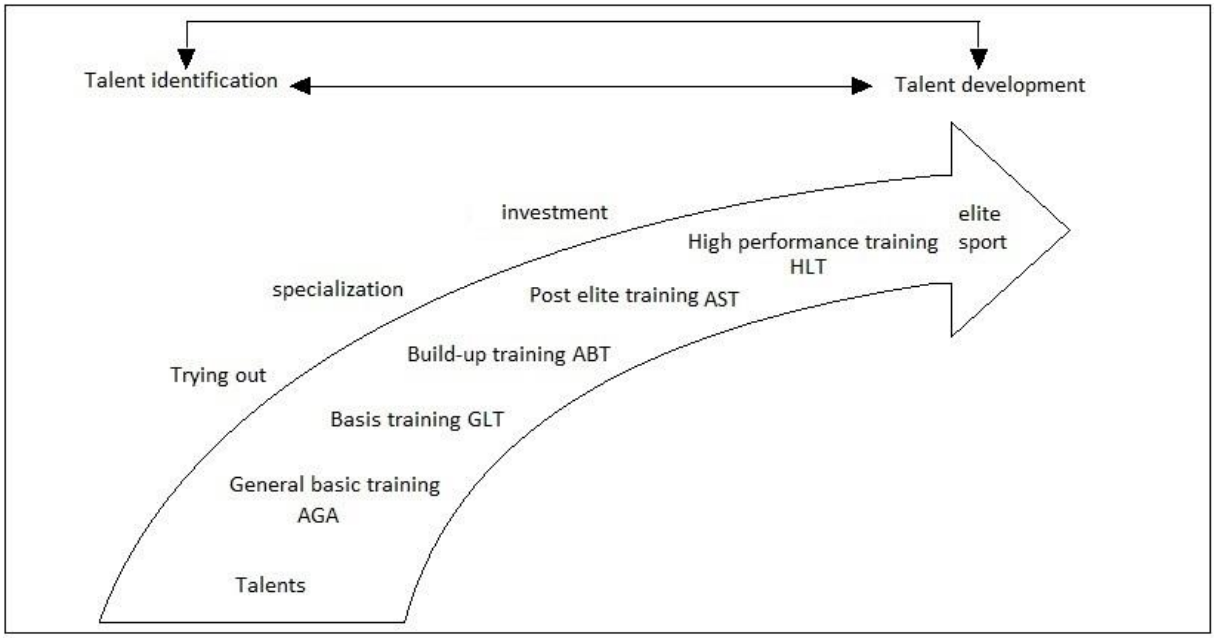

Figure 13 Model of talent identification and development in Germany (Hoffmann, 2013).

Talented athletes get their systematic development through the German squad system. At the beginning, they start with D-squad, which is the first official squad. After that, comes the D/C-squad, C-squad, B-squad, and finally the A-squad. Best athletes move from a squad to the next higher squad till they reach the A-squad, which is the best squad. Athletes would be chosen to move to the next squad according to their results in the competitions, their ages, and the decisions of the umbrella organisations of each sport discipline. In the C-squad, athletes will be state squad members, which puts them under the support programmes of the states, additionally; they might receive support from the non-governmental umbrella sport organisations, which is the swimming federation in the case of swimming. Then, successful athletes, who have the potential to achieve positions in the international championships in the future, move to the B-squad, and later the best athletes in the B-squad move to the A-squad. The A-squad is the best squad and it contains the world elite athletes who have achieved good results in the international championships (Anderson, et al., 2015). Regarding talent identification and development in German swimming, Freyer, et al. (2011) provided a clear description of the system used with more focus on the procedures taking place at schools. They divided the process into four basic levels. The first level takes place at the school and lasts for about one school year (about 60 swimming sessions per year lasting 45 minutes each). Through this sessions talents are identified and moved to train in training groups (Sichtungsgruppe) with higher training levels led by coaches with C-license or by schools' sport teachers with a swimming coaching background. At the end of this level, young swimmers have to pass a set of tests in order to continue training in the following level. Those tests include tests in the sport hall, in the swimming pool, and in the tracking field. After passing the tests, talented swimmers join another training group with a higher training level. This level (third level) is provided and supported by *talent support centres* and *confederation guidelines for schools training groups* and by *district and regional high-performance support centres.* Young swimmers in this level

are in the 5th and 6th school grades (10-12 yo). They train for two school years with 60 training session a year of 90 minutes each. Those training session are led by coaches with C-license, B-license, A-license, or coaches with a diploma, and those trainers get 900 €/year for each group they coach. In this level, young swimmers are prepared physically in terms of condition and coordination. After that, comes the third level, but to join this level, swimmers should go through a decentralised test, which can be described as swimming athletic test. Those decentralised tests are organized by different districts in each state. Based on the results of those tests, best young swimmers join the districts' swimming squad (D-squad). After that, comes the fourth level. In this level, the best talented swimmers will be selected to be a part of *the top team and the perspective teams supported by the state* and the *top team and perspective team supported by the federal support centres.* Swimmers of this level are represented by the squad A and squad B of the German Swimming Federation DSV and they are selected from the squad C of the DSV. Swimmers' ages in this level are 14 for females and 16 for males, and they are supported by the state and by the DSV at the same time.

Table 5 Levels of talent identification and development in German swimming

The level	Targeted group	Development institution
Development level 1	Talent identification groups	School and clubs/ Talent support centres
Development level 2	Training groups	District /Talent support centres
Development level 3	Development squad	Swimming confederation of different states
Development level 4	Federal squad	Swimming confederation of the state / Federal support centres.

Source (Freyer et al., 2011).

Long-term training planning for swimming

In Germany, Rudolph et al. (2006) talked about the long term training plans for the German swimmers. Based on their study, the following table (Table 6) was created emphasising only the highest concentrations for each training component for the different ages.

Table 6 Long-term training plan for the German swimmers.

Chronologica		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Growth level	M						Pre-Maturation		Maturation				Adolescence					
	F					Pre-maturation		Maturation				Adolscence						
Training year	M				1	2	3	4	5	6	7	8	9	10	11	12	13	14
	F		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Skill learning	M																	
	F																	
Flexibility	M																	
	F																	
Speed	M																	
	F																	
Stamina	M																	
	F																	
Strength	M																	
	F																	

Source: based on Rudolph et al., 2006.

4.5.2. Australia

Talent identification

In Australia, the government is responsible for identifying talents through a special programme known as “the talent search programme”. This programme is organised and run by the AIS in cooperation with the different sport confederations and other states’ sport academies and sport institutes, (Digel et al., 2006). The programme evaluates children through four physical and six performance tasks to identify talents who possess characteristics associated with the success in a specific sport discipline (Abbott & Collins, 2002). The selection through this programme is based on scientific selection methods (Sebera & Sedlacek, 2012), which relies mainly on scientists to lead the processes of TD with the help of the coaches (Krasilshchkov, 2013). This method is usually used in order to overcome the problem of limited human resources as in Australia, and to use the well-developed level of sport science in the country (Krasilshchkov, 2013). The Australians have started improving their levels in talent identification in sport since 1990, as a part of their preparation for the Olympic Games in

Sydney in 2000 (Kluka, 2005). However, Hahn (1990) noted that this programme started operating successfully since 1988 in rowing sport but it was developed after winning the bid to host the Olympics, to be named later as the "*National Talent Detection Programme"* to encompass many other individual sports including swimming and one team sport which is water polo. This new TID system was adapted from the TID system used in East Germany because it was an effective system for countries with low populations (Krasilshchkov, 2011). This new adapted TID system, as Wolstencroft (2002) noted, was one of the most successful systems worldwide, which prompted other countries to set it as a role model when improving and developing their TID systems aiming at improving their results in the international championships.

What could have a positive effect on talent identification in Australia is the strategies the swimming umbrella organisations created in order to increase public participation in swimming. As mentioned in SAL (2008), the strategies concentrate on providing equity of access to all junior programmes in addition to providing equal opportunities for young people regardless of their abilities, and finally providing an appropriate club environment.

Talent identification and development in Australia has three main phases. The first phase takes place at the Australian schools with the help of physical education teachers, where students are exposed to a battery of physical tests to identify the students who have the best physical characteristics. According to the results of these tests, identified talents will be referred to join the second level of tests, which have a sport-specific nature. The talents who succeed in the second phase will start the third phase, which is the talent development phase. The third phase is run by either the *national sporting bodies* or by the *state sport academies* (Kluka, 2005; Stewart et al., 2004). At the beginning of the talent search programme in 1994, physical education teachers had the right to give access to other personnel and institutions to search and

select talents within their students, but later the ASC prohibited testing students more than once (Gulbin, 2012).

The National Talent Identification and Development initiated a programme to extend its achievement in TI by establishing the eTID programme. This programme used an internet site to identify talents who might not be able to attend normal TI tests of the NTID. This method extends the talent pool of the country by affording the service cost-free for everyone aged between 12-29 years in Australia. In this way the vast geographic problem could be solved, in addition to the service it provides to the former athletes the opportunity in talent transfer. This internet site gave people the chance to do a battery of self-initiate performance tests and to insert the results of their tests on the site. Ghe site compares the results with normative data. Applicants with results that are more than average will be invited to the *Talent Assessment Centre - TAC* to be retested, then sent to join specific NTID developmental programmes. Nowadays, this programme is not being used any more in Australia (eTID, 2017).

Regarding swimming, the annual report of the Swimming Australia Limited confirmed the importance of talent identification and development through the steps the organisation took in this field, and that it focused on athlete progression through talent scouting in the year 2015 during the 2015 Age Nationals' Championship; expansion of the National Talent Identification programme; and National Talent Camp selection (SAL, 2015).

Talent development

The Australians base their development methods on the "windows of optimal trainability" (SAL, 2011 b). Accordingly, the talented young swimmers start their systematic training at the age of five and continue until they are 17 years old (SAL, 2008). In this part of swimmers' training, "Swimming Australia" concentrates on the tremendous development on physical, psychological, emotional, and social levels (SAL, 2008). As a result, the Australian sport system created a network for talent identification and development with a strong emphasis

on sport specific performance pathways, but without going deep into details (Duffy, 1999). Furthermore, the main principles and framework for talent development in Australia are illustrated by the Swimming Australia Limited as shown in (Table 7) (SAL, 2008).

Table 7 Framework of talent development in Australia.

Stage name	**Swimmers' age**	**Basic characteristics of the stage**
Active start	Females: under 5 Males: under 6	Learning how to swim Playing in the aquatic environment.
FUNdamental	Females: 5-8 Males: 6-9	Learning the basic fundamental skills and movements.
Learn to train	Females: 8-11 Males: 9-12	Mastering the swimming skills and movements.
Train to train	Females: 11-14 Males: 12-15	Developing speed and anaerobic capacity. Swimmers specialise in this stage.
Train to compete	Females 14-16 Males 15-18	Improving physical conditions. Building race pace.
Compete to win	Females +16 Males +18	Train to win competitions.
Active for life	After competition age	Recreational sport for a healthy body.

Source: based on (SAL, 2008).

Long-term training planning for swimming

Raleigh (2011) talked about the long-term training plan for the Australian swimmers in a document published by the SAL. The basic components of the long-term plan were mentioned with its association to the different age stages of the trainees for both genders. The plan starts with early ages starting from 5 years old. Raleigh talked about the different elements of the training plan, with less emphasis on the flexibility element, which was only mentioned in the illustrating figure without being described in detail as a part of the plan. Based on the information from Raleigh (2011), the following table was created (Table 8) to display the information in a similar way represented by Rudolph et al., (2006) regarding the German talent development plans in order to have a better comparison between the two nations.

Table 8 Long-term development plan for the Australian swimmers.

Chronological age		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Growth level	M					Pre-Maturation		Maturation				Adolescence				
	F				Pre-maturation			Maturation				Adolscence				
Training year	M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	F	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Skill learning	M															
	F															
Skills mastering	M															
	F															
Speed development	M															
	F															
Stamina development	M															
	F															
Strength development	M															
	F															
Flexibility	M															
	F															

Source: based on (Raleigh, 2011).

4.5.3. Results

The key criterion to identifying talents in Germany is the children's performance in the competitions, and the main organisations through which they identify talents are the swimming clubs. In Australia in contrast they use this method but they depend mainly on the scientific talent identification test at schools. Talent identification and development in Australia is run basically by the government through a programme that tries to scan the highest number of children belonging to a specific age, and it tries to identify talents for many sport disciplines (Digel, et al, 2006), which gives the TI system in Australia a centralised nature. Nonetheless, the TI system in Germany is a decentralised system, which gives the swimming clubs the freedom to decide and run their own methods to identify and select talents. Accordingly, the method used in Germany to identify and select talented swimmers might miss scanning a big part of children who have the potential to be champions in the future.

In Germany, talented swimmers are always supported by the state (governmental organisations) and by the DSV (non-governmental organisations) (Freyer, et al., 2011), which requires a high level of coordination between the different supportive organisations in order to deliver economic support and to avoid duplicating it or missing delivering some important services. In Australia, the situation is similar to the one in Germany, but most of the support is through the AIS, which is a governmental organisation.

In Germany, coaches of C-, B-, A-license, and graduate coaches are paid €900/year for each group they coach, in case they are coaching groups before the C-squad. Those groups train for 60 training session a year (90 minutes each), which means 90 hours a year according to Freyer et al. (2011). That means, a trainer or a coach is paid 10 € an hour for his/her work. On the other side, the average salary for swimming coaches in Australia is AU$ 27.83 an hour (indeed, n.d.), which equals € 18.40 (Reserve Bank of Australia, October 2017). Consequently, for an Australian coach coaching a group similar to the ones in Germany (60 training sessions a year, 90 minutes each), they would get AU$ 2504 a year which equals around € 994 (October 2017). Accordingly, the Australian coaches and trainers are paid 10 % more than their peers in Germany.

The levels of development systems in Germany and in Australia are similar to each other from the perspective of training groups at the beginning of the swimming career, then moving up through the squad system of the country. But in Germany there are two parallel training groups, which are the "*top team and the perspective teams supported by the state*", and the *"top team and perspective team supported by the federal support centres* (Freyer, et al., 2011). However, there is a cooperation between the two parallel systems, since it was mentioned that the Federal Support Centres for Youth and Federal Support Centres work in partnership with sport clubs, regional sport confederations and the umbrella organisation (Spitzenverband) (DOSB, 2013 d).

Regarding the long-term training plans, there are some differences between the two countries. According to the training plans of the two countries, the following table (Table 9) was created to depict a better overview of the differences and the similarities:

Table 9 Long-term training plan for the German and Australian swimmers.

LONG TERM DEVELOPMENT PLAN FOR GERMAN AND AUSTRALIAN SWIMMERS																		
			5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Training years	M	GER				1	2	3	4	5	6	7	8	9	10	11	12	13
		AUS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	F	GER		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		AUS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Skill learning	M	GER																
		AUS																
	F	GER																
		AUS																
Speed development	M	GER																
		AUS																
	F	GER																
		AUS																
Stamina	M	GER																
		AUS																
	F	GER																
		AUS																
Strength	M	GER																
		AUS																
	F	GER																
		AUS																
Flexibility	M	GER																
		AUS																
	F	GER																
		AUS																
Skill mastering	AUS	M																
		F																
	GER	This Element does not exist in the German plan for long-term talent development.																

Source: Rudolph et al. (2006); Raleigh (2011).

From this table we can notice the following: the German long-term plan for developing swimmers does without the unit *mastering individual specialised swimming* as a part of the long-term development plan for the swimmers, which is included in the Australian long-term development plan for swimming. However, the Australians did not give much attention to the element *flexibility* as a part of the long-term training plan. Furthermore, they start with flexibility 3 years earlier than in the German plan for boys, and two years earlier for girls. Regarding the element *speed*, the Germans concentrate on this element in one continuous period of time for male and female swimmers for about 5 years. On the other hand, the Australians focus on this element in two separate periods of time for both genders with a two-year break in between (Rudolph et al., 2006; Raleigh, 2011). Additionally, the beginning of the long-term plan for swimmers differs between Australia and Germany. In Germany, the plan officially starts at the age of 8 for boys and 6 for girls. However, the Australian long-term plan starts at the age of 5 for both boys and girls, which makes it longer than the German plan. Accordingly, at the age of 20, the Australian swimmers would have three more planned training years for male swimmers and one more training year for female swimmers, compared to the German swimmers.

4.6. Stakeholder organisations regarding talent identification and development

4.6.1. Germany

4.6.1.1. Sport clubs

In Germany, there are over 91,000 non-profit sport clubs that provide service for around 27.5 million registered members. Those sport clubs vary in size, abilities, and number of members. In addition to the sport services they provide to their members, sport clubs cooperate with other institutions such as schools and health insurance funds in order to participate in developing an active and productive community (Petry & Schulze, 2011, p. 46). On the other

hand, German society considers sport clubs as a kind of social centre where people meet and communicate (Krüskemper, 2014). Sport clubs play an essential role regarding talent identification and development through their coordination with schools and providing different methods, through which they can find children with the potential to be elite athletes and represent the club in competitions. Among these methods are *trial courses, demonstration events (parades), championships, free time activities, and through the talent championships and competitions (Talentiaden)* Güllich et al. (2005). The importance of elite sports for sport clubs is noticeable when looking at the statistics, which says that 12.1 % of the overall sport clubs in Germany have (D, D/C, C, B, or A) squads (Breuer & Feiler, 2016, p. 12). The two authors also discussed the cooperation built by the German swimming clubs in order to reach their objects in the TID field. Such a cooperation is established by almost one third of the German swimming clubs. Additionally, they stated that more than one third of the sport clubs cooperate with schools but on different levels, and 16.6 % of them cooperate with kindergarten for the same reason. Furthermore, in some cases sport clubs cooperate with health insurance companies in order to fulfil their objects in general.

Sport clubs in Germany are not for profit organisations, so the government sponsors them with about € 2.05 billion annually. Additionally, sport clubs have accumulated a range of income from membership fees (60 %), donations (8.8 %), subsidies from the municipalities and federal state (9 %) and other sources, such as club restaurants, loans, and sponsoring contracts (Petry & Hollmannn, 2013, p. 79).

Sport clubs in Germany are the most important unit in identifying and developing young athletes. That can be easily noticed from the DOSB's prize known as "Das grüne Band". This prize is directed to the best sport clubs in identifying and developing talents. The DOSB evaluates the level of swimming clubs through a questionnaire that asks about the results of the club, the assets, the human resources, the cooperation, the talent identification and development

procedures used within the club, … etc. in order to evaluate the level of the swimming clubs in Germany and to find out the best one regarding talent identification and development, to win a prize of € 5000, which is offered yearly (DOSB, 2017 c; Das grüne Band, 2012).

Breuer & Haase (2006) noted the problems sport clubs suffer from when it comes to talent identification and development. The first problem is related to the organisational structure of the sport club, which could affect the financial policies of the club negatively. The second problem is related to the lack of sport facilities of the clubs, which are needed to accomplish the main activities of the sport club. Only 45.8 % of the sport clubs in Germany possess their own sport facilities, as the two researchers stated, which prompts many of the sport clubs (31.4 %) to hire sport facilities from schools, municipalities or other sport clubs. However, hiring sport facilities is a problem for many sports including swimming, due to the big number of sport clubs when compared to the limited number of sport facilities available which creates a kind of competition among the sport clubs over the available sport facilities. Breuer & Feiler (2016) mentioned another problem related to swimming clubs, namely that the swimming clubs suffer from problems related to human resources management, and for most of the swimming clubs, it is hard to find volunteers, talented young swimmers, coaches, officials and sometimes clubs members. The rest of the problems they mentioned were related to their ability to adapt to the demographical changes taking place in their environment and to the laws and regulations related to sports in Germany.

4.6.1.2. Support and training centres

The concept of support and training centres is a part of the DOSB structure. They are designed to provide an ideal training and development atmosphere for the elite athletes. The support centres' system includes *federal support centres* (Bundesstützpunkte), *federal support centres for youth* (Bundesstützpunkte-Nachwuchs), *Olympic support centres* (Olympiastützpunkt), *federal performance centres* (Bundesleistungszentern) (DOSB, 2013 d)

and *training groups of the army and police* (Bundeswehr,2016). The core of the German elite training system includes the support and training centres, the training groups of the army and the federal police, and the elite schools of sports (Daumann et al., 2008).

Federal support centres for youth and *federal support centres* work in partnership with *sport clubs, regional sport confederations* (Landesfachverband) and the *umbrella organisation* (Spitzenverband) regarding the athletes' development. The federal support centres provide the appropriate training facilities and the positive atmosphere for the high performance sport. They afford training for A- to D/C squads. In a similar way, the *federal performance centres* (Bundesleistungszentren) are another kind of those training centres as well, and they are supervised and supported by the Federal Ministry of the Interior, the DOSB, and the umbrella organisations (Spitzenverbänden). In those centres, preparation courses and further courses take place for the A, B, and C-squads (DOSB, 2013 d).

In Germany, there are 19 Olympic Support Centres (OSPs), which are located in different parts of the country. Each of them provides support for the squads (A to C of the umbrella organisations (Spitzenverband) for one or more Olympic sport disciplines. The OSPs make sure to provide the required medical support for the athletes including the nutritional consultations and physiotherapy treatments after injuries. They provide performance diagnosis for the athletes in order to screen the changes in their performance and their reactions to the different training plans. Additionally, they provide psychological support for the athletes and they support them with career consultation to make sure they will be prepared to have a work or profession after they finish their elite sport career. In order to accomplish that they have a wide range of cooperation possibilities with schools, higher education institutions, and career preparation institutions. Furthermore, the OSPs provide accommodation for the athletes to make it easier for them to train and study at the same time without losing much time for transportation. This accommodation support can be represented as boarding schools for athletes

in schooling age, or normal accommodation dorms next to the sport facilities for the older athletes (DOSB, 2013 d).

Regarding the training groups for the army and the police, this concept was used first by the Soviet Union and by East Germany (GDR) as a part of their strategies to support and finance their elite athletes (Houlihan & Green, 2008, p. 7). Nowadays, there are 15 training groups in Germany, which are located in different cities, mostly next to the Olympic Support Centers (Bundeswehr, 2016). Each of these training groups provides support for different sport disciplines, Olympic (for squads A, B, C, and D/C) and non-Olympic (for squads A, B, C). The Sport Confederation and the DOSB lead the training of these groups and it takes place in the Olympic Support Centres and the Performance Centres (Leistungszentern) (Bundeswehr, 2011). Some sport disciplines like swimming, for example, are only available in one training group in Germany (Bundeswehr, 2015).

4.6.1.3. Schools system support

Elite sports schools are one of the elite development groups in Germany. The concept was initiated in the beginning of the 1990s, since then, they have showed good results. These schools provide young athletes with education in addition to the professional training in an organized way. In this way students have efficiently organized times to achieve their training and their education. Students at these special schools have flexible time programmes to allow them to train in the morning or to shift their exams schedules in case they have competitions or training camps. Additionally, they provide accommodation next to their schools and their training facilities to avoid losing time in traffic (DOSB, 2010; Emrich et al., 2007). Those schools are a type of “dual career schools” which were described by Borggrefe and Cachay (2012) as a cooperation between the school system and elite sport development in order to reduce the problems of balancing athletics and academic demands, which in turn, gives the

students a higher chance to succeed in both fields. This system is known in Germany as "Verbundsystem".

Organisationally, the *elite sports schools* are part of the regional sport system, meanging that sport elite schools' policies and processes are affected and led by the cooperation between *Olympic Support Centres, regional sport confederations* (Landessportbund), *school system administration, regional federations of sport disciplines* (Landesfachverband), and the *Ministry of Education and Sport* (Ministrium für Bildung und Sport) (DOSB, 2010). The number of elite sport schools in Germany in the year 2014 was 43, and they are connected and supported by the Olympic support centres. 29 of them provide support for summer sport disciplines, seven provide support for winter sport disciplines, and seven provide support for specific focuses (Schwerpunkte). Those schools accommodate around 11,500 athletes who are coached and supervised by around 662 coaches with a diploma and with A-License, and more than 200 educators and teachers who run the educational processes for the grades of intermediate and high school (DOSB, 2017 a). There is another type of sports school in Germany known as "schools with sport profile". Those schools give more attention to sports but not in the same structured and concentrated way as in the elite schools. These kind of schools are designed for all levels of the school system in Germany and as mentioned by the Federal Ministry of the Interior, schools are an important part in talent development especially in cooperation with sport clubs (BMI, 2008).

4.6.2. Australia

4.6.2.1 Sport clubs:

The number of sport clubs in Australia is around 70,000, which are operating in various forms in the nation. Sport clubs are supported by the state and territory governments through the different programmes each state provides, additionally through the Australian government programmes, Peak State Sport Federation (VicSport, NSW Sport Federation… etc.), non-

governmental organisations (The Inclusion Club, Good Sports), and national sports organisation resources (e.g. Swimming Australia support for the swimming clubs) (Hume, 2013). The Australian sport clubs play a positive role as a social experience, employment opportunities, sporting initiatives and different types and sizes of supportive programmes (ClubsAustralia, 2009). Swimming clubs in Australia work in cooperation with the *Australian National Sport Organisations* (NSOs) and the *State Sport Organisations* (SSOs) in order to deliver localised competitions and membership services, additionally to creating participating opportunities for the population. They play an important role as well when implementing talent identification and development programmes (Cuskelly et al., 2013).

4.6.2.2. Training centres

Australia has seven *Olympic Training Centres*, which provide training for the elite athletes in different sport disciplines. These centres are located in the different states (except for two states) and territories of Australia (Australian Olympic Committee, 2017). The Olympic Centres are distributed over the different Australian states and territories as shown in (Table 10).

Table 10 Distribution of Olympic Training Centres in Australia.

STATE OR TERRITORY'S NAME	OLYMPIC TRAINING CENTRE
New south wales	01. Australian Institute of Sport
Australian capital territory	02. ACT Academy of Sport
Victoria	03. Victoria Institute of Sport 04. Olympic Winter Institute of Sport
Tasmania	05. Tasmanian Institute of Sport
Northern territory	06. Northern Territory Institute of Sport
Western australia	07. Western Australia Institute of Sport
South australia	---
Queensland	---

Source: (Australian Olympic Committee, 2017).

In addition to the past mentioned training centres, there is another training centre overseas, that belongs to Australia and it is located in Italy and known as the *AIS European*

Training Centre. This centre is fully equipped for accommodating the Australian athletes in order to accomplish their training camps in Europe. The centre provides accommodation, food, and covers many sport disciplines (ASC, 2015).

Regarding the army, they do not have their own training centres, but there is a specialised programme for the army that was initiated in 2014 and aims at finding the potential talents in the army who might achieve good results in sport. This program is established as a preparation for the Olympic Games in Tokyo 2020 (Army Sport Control Board, 2014).

4.6.2.3. Sporting schools

Sporting schools is Australia's largest school-based sports participation program. Those schools are established to foster a lifelong interest in sport and to help them stay active in their communities, through offering sport programmes developed by 32 national sporting organisations, served for kids in a framework of fun and supporting environment. Those schools are offered for both elementary and secondary school students, with a high cooperation level with the different sport disciplines federation of Australia (Sporting Schools, 2017 a). Sporting schools are characterised by the different sport programmes the sporting schools offer for children. Those sporting schools are an initiative of the *Australian Government* and the *Australian Sports Commission* (ASC), which aim at funding and supporting sports activities before, during and after school in order to offer more sport-based activities. Those schools started in 2015 as an evolution of the *Active After School Community (AASC)* programme, and they offered different sport programmes that are endorsed by the NSOs, aiming at increasing sport participation for children to improve their fundamental movement skills and all-round physical and brain development (Gymnastics NSW, 2017). Those sport programmes are usually offered for primary schools, which are around 6000 schools (AIS, 2017; sporting schools, 2017 b) which offer training for around 850,000 children (Gymnastics NSW, 2017).

Regarding the connection between the Australian swimming administration organisations and school system in the country, a problem could be detected through the case mentioned by Green and Houlihan (2005, p. 66). The two researchers stated that most of the good sport facilities, including swimming pools, are provided and owned by private schools, but teachers and coaches are not allowed to use those facilities to train kids who are not registered at those schools. That means the private school system sits outside the state school system and they both sit outside the national and state bodies for swimming, besides there is no connection between both systems.

4.6.3. Results

The number of sport clubs differs between Germany and Australia. In 2011, Germany had 91,000 sport clubs (Petry & Schulze, 2011, p. 46), but Australia had only 70,000 in 2013 (Hume, 2013). However, when relating the number of sport clubs in each country to its population, another results show up. The population of Germany in 2011 was (80.933) million (Worldmeter, 2018 b), hence there is a sport club for every 883.5 persons. On the other hand, Australia had a population of 23,150 million in 2013 (Worldmeter, 2018 a), which means there is a sport club for very (330.7) persons. Accordingly, the number of sport clubs in Australia is 2.6 times more than the number of sport clubs in Germany when considering the population of each country. Nevertheless, the Olympic training centers of Australia are not distributed fairly on all states of the country. Some states have two centres and there are two states without any Olympic training centres (Australian Olympic Committee, 2017). Additionally, it was noted that some parts of Australia have a problem regarding the available swimming pools to teach and coach children. In many areas in Australia the only available competition-size swimming pools are the ones belonging to the private schools. That causes a problem for the swimming club of the area while developing their own swimmers (Green & Houlihan, 2005, p. 66).

There is a lack of documents or scientific literature that focus on the Australian sport clubs regarding the organisational and administrational processes connected to talent identification and development. However, most of the documents and literature repeatedly investigate and inform about the umbrella sport organisations in Australia and their role in talent identification and development through their different training centres. On the other hand, swimming clubs in Germany are the most important unit in talent identification and development (DOSB, 2017 c; Das grüne Band, 2012), and they have a wide range of freedom regarding decisions and procedures related to TID. Accordingly, a limited role of German umbrella sport organisations could be noticed in the literature regarding this point.

In Germany, there are elite schools of sports which are schools designed for the young elite athletes at intermediate and high schools ages, and there are 43 schools of this kind in Germany (DOSB, 2017 a). However, in Australia they have sporting schools, which are normal schools that offer special sport programmes provided and run by the NSOs in Australia, and there are around 6,000 of these schools in Australia (AIS, 2017; Sporting schools, 2017 b). Those programmes are not prepared for elite athletes, but they give a good advantage to identify talents by providing a contact between the professional coaches and trainers who run the sport programmes on one side, and a big number of school students who participate in those programmes on the other side. In a similar concept, Germany has other schools with sport programmes and they are known as *schools with sport profile*. These schools are designed for all levels of the school system and they concentrate on sport in a similar way as in Australian sporting schools. Nonetheless, it was not mentioned that Australia has special schools for elite athletes. The number of those schools in Germany is 102 schools distributed over the different states of Germany (DOSB, 2017 c). Accordingly, there are 43 elite sport schools and 102 sport schools with sport profile, which means 145 schools in all of Germany. However, in Australia there are around 6,000 sporting schools.

In Germany there are special training centres for the army and for the police that specialise in providing high level training for the elite athletes in different sport disciplines who belong to the army or to the police. However, in Australia, there is a program for the army, which works on finding talents who have the potential to achieve good results in a sport discipline. Adding to that, there is a lack of literature regarding the police and army sports in Australia.

Finally it is noticeable that Germany concentrates on providing talent development centres in the country when compared to Australia, such as the centres belonging to the school system, to the army and the police, to the non-governmental sport organisations, and finally to the governmental sport organisations. However, Australia has fewer development centres for elite athletes, which might be affected by the demographical distribution of the country. These centres belong to Australian sport institutes and academies, and to the Commonwealth government. On the other hand, Australia concentrates on the concepts of talent identification, through initiating many programmes in different fields in an attemptto cover the whole country, which could be noticed when looking at the sporting schools, or when looking at army and police sport programmes. These sport programmes applied at sporting schools are not designed to provide a perfect talent development atmosphere, but rather to provide a good atmosphere to identify talents by the coaches and specialists who run those programmes. In a similar way, the army and the police in Australia are not provided with any programmes to develop their talented athletes, but they have a talent identification programme to find the elite athletes in the army and the police.

Summary

The sport systems in Germany and in Australia have a similar structure, which reflects the federal administrational system used in both countries.

Elite sport is administrated in Australia through the *Australian Institute of Sport AIS*, which belongs to the governmental organisation *Australian Sport Commission ASC.* However, in Germany, the elite athletes are administrated and supervised through governmental and non-governmental organisations. The governmental organisation is the *Ministry of the Interior*, and the non-govermental organisation is the *performance division* of the *DOSB.*

Water sports in Germany are administrated through one organisation, which is the *German Swimming Federation (DSV)*. However, in Australia, the *Swimming Australia Ltd (SAL) i*s only responsible for running swimming (long and short distances) in the country, and each of the other water sports such as water polo or synchronised swimming is run by its own organisation, although those water sports organisations are affiliated to the SAL.

Germany and Australia have different strategies regarding running sport in the country. Germany focuses more on public sport development for many sport disciplines, including swimming, to make those sports available to all citizens. Nonetheless, the Germans focus on elite sport development for some sport disciplines, and mostly team sports, such as soccer and handball. However, the Australians focus on elite sport over public sport, to use it as a means to reach international success, particularly through individual sport disciplines.

The key criterion for identifying talents in Germany is the children's performance in the competitions, and the main organisations through which talents are identified are the swimming clubs. However, in Australia they use this method as well, but they depend mainly on the scientific talent identification test at schools.

The SAL in Australia has a problem regarding communication channels with other shareholder organisations, which leads to conflicts with this organisations when making decisions concerning swimming in the country. Nonetheless, in Germany there is no indicator for such a problem.

Chapter V - Analysis of systems of talent identification and development in swimming clubs in Baden-Wuerttemberg

Introduction

This part of the study aims at analysing the level of quality in systems responsible for talent identification and development on the level of swimming clubs located in the Wuerttemberg area in Germany. It focuses mainly on the administrational and organisational aspects related to the processes and procedures of talent identification and development. Additionally, it focuses on the connections and the cooperation that are built between swimming clubs on one side, and other organisations and institutions on the other side, in order to improve the results of talent identification and development within their swimming club. The object of this part is to give a better understanding of TID systems used within swimming clubs, and to show the advantages and the weaknesses within it, which allow the personnel in administrational positions to improve the level of the TID and its outcome.

5.1. Descriptive analysis of the respondent swimming clubs

5.1.1. Main characteristics

The size of the responding sport clubs is varied, the number of departments of the sport clubs has a range of 1 - 28 (M = 8.98, SD = 7.4), with total club members (for all departments) ranging from 118 to 7500 members (M = 1882.7, SD = 1613.1). However, the number of members who belong only to the swimming club/department ranged from 40 to 1176 (M = 345.5, SD = 290.3). Among them, the number of children and youth in the swimming department had an average of 215.7 (SD = 164. 2). Which means that 62.2 % of the members of the swimming clubs or departments are children and youth. Regarding elite swimmer members of the swimming department or the swimming club who train with regional or national squads, only 27.5 % of the swimming clubs have elite swimmers among their members.

Nonetheless, the majority of the swimming clubs (72.5 %) have no elite swimmers at all. In other words, the number of elite swimmers of the studied sample ranged from 0 to 10 swimmers (Average = 0.75, *SD* = 1.7), as illustrated in detail in (Figure 14).

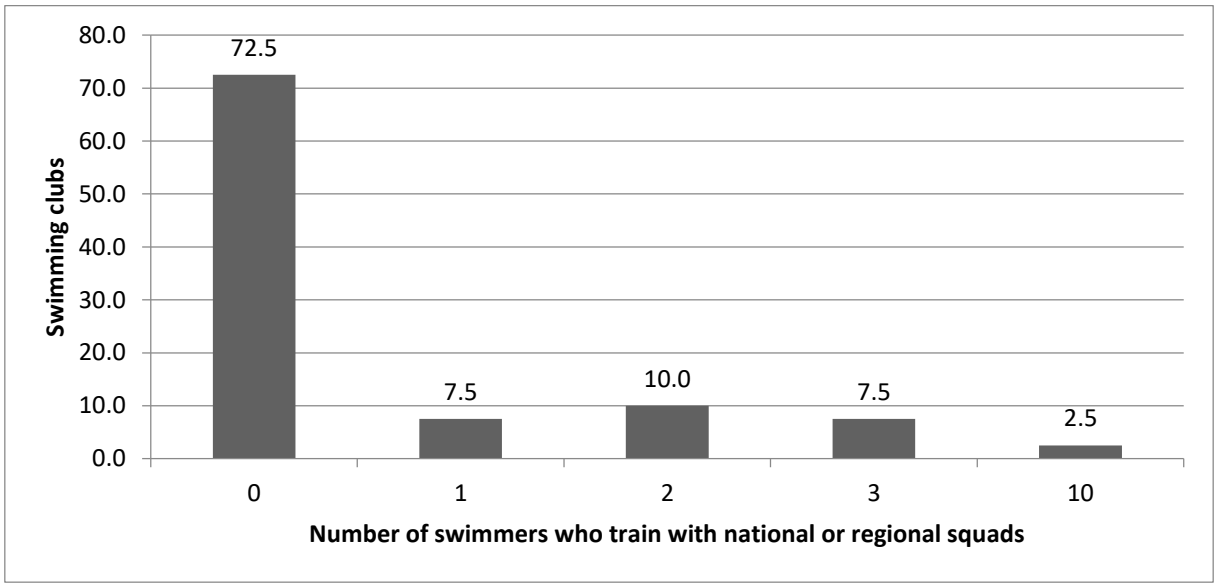

Figure 14 Elite swimmers of swimming clubs who are members of national or regional squads.

5.1.2. Demographic and geographic characteristics of swimming club locations

The area of Wuerttemberg is divided into three main organisational sections "Mittlerer Neckar", "Ostwuerttemberg", and "Suedwuerttemberg". Swimming clubs are distributed evenly on the three sections. The first section that encloses the biggest number of swimming clubs (37.5 % of the sample) is the "Mittlerer Neckar". After that comes the "Ostwuerttemberg" section with 32.5 % of the sample, and finally comes the "Suedwurttemberg" section with 30 %. Adding to that, the questionnaire revealed the developmental level of the residential areas surrounding the swimming clubs. The highest number of respondent swimming clubs (37.5 %) belongs to urban areas, then clubs belonging to rural areas with (32.5 %), and finally clubs belonging to suburban areas with (30 %). These areas surrounding the swimming clubs have different numbers of population. Around (35 %) of the swimming clubs belong to an area with

a population ranging from 20,000 to 50,000 residents. Then 20% belong to areas with a population ranging from 50,000 to 100,000. Third are the areas with a population ranging from 10,000 to 20,000 residents, with 12.5 % of the swimming clubs. The rest of the clubs were distributed over areas with a lower number of inhabitants, except for the areas with a population of 250,000 – 500,000 which were not represented with any swimming club. The (Figure 15) clarifies the results in more detail:

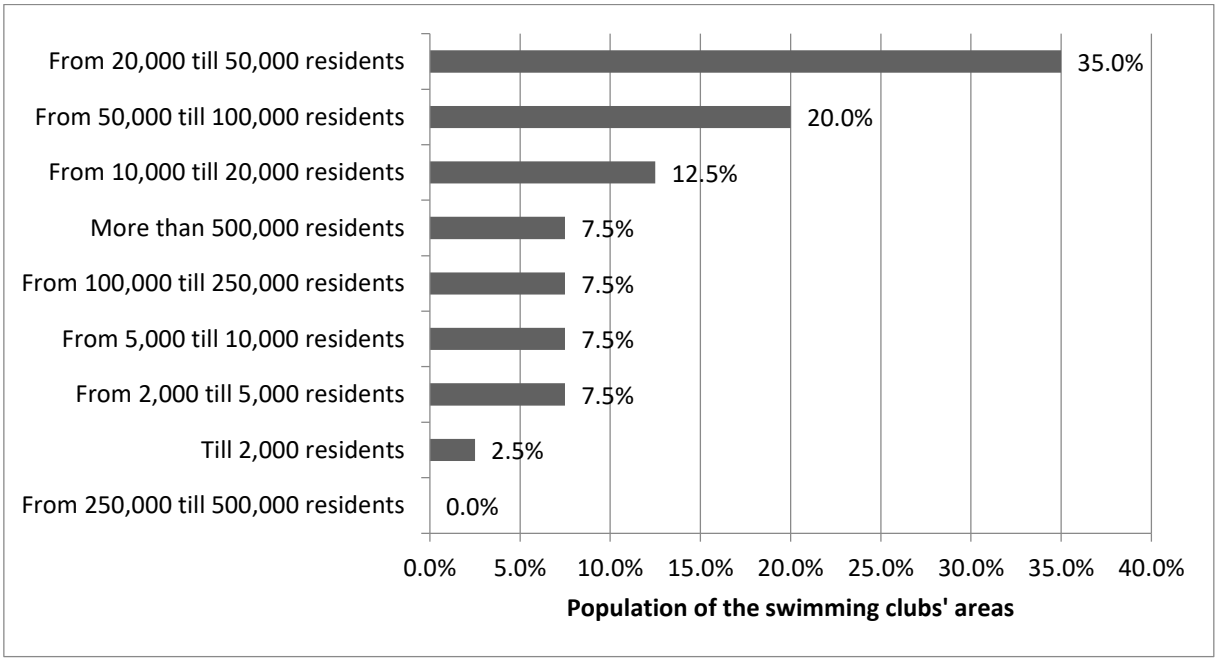

Figure 15 Surrounding population of the sport clubs of Wuerttemberg.

5.1.3. The role of the personnel who filled in the questionnaire at the club

The questionnaires were filled in by the clubs' personnel who occupy different positions at the clubs. Most of the responses were filled in by department directors (40 % of the swimming clubs), then comes Board Chairman with 30 %, then coach or trainer with 15%. The rest of the questionnaires were filled in by personnel with other positions at the swimming clubs, such as managing director, technical director, assistant department director, official and official

director. The average experience of the respondents in working at the club is 10.88 years (*SD* = 11.2)

5.1.4. Entries and dropouts within the swimming clubs/departments

The overall entries to the swimming clubs/departments in the Wuerttemberg area in 2015 ranged from 0 to 200 entries with an average of 48.28 (*SD* = 47.8). Among the new entries, the average number of children and youth was 39.8 (*SD* = 41.9), which means that 82.4 % of the new entries in the year 2015 were children and youth. Regarding the dropouts in 2015, the average of the dropouts in the swimming clubs or the swimming departments was 29.1 (*SD* = 35.1). Accordingly, when we compare the mean of the new entries and the mean of the dropouts in swimming clubs/departments in the year 2015, we can find that swimming clubs in the Wuerttemberg area were developing and expanding, as illustrated in (Figure 16).

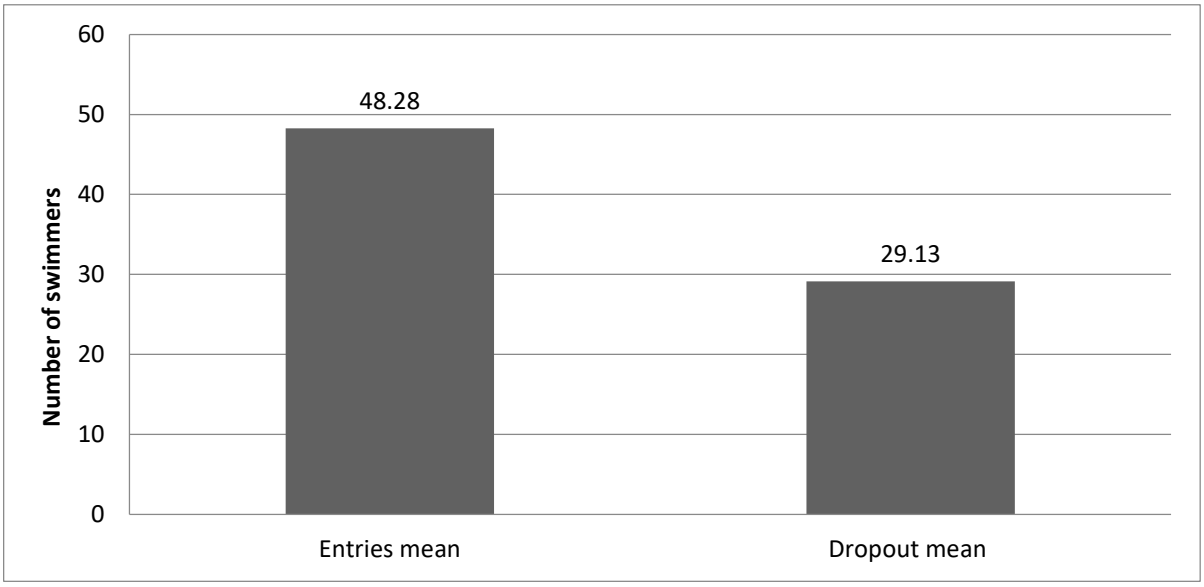

Figure 16 Entries and dropouts in the year 2015 in swimming clubs/departments in Wuerttemberg.

Talent identification procedures used within the swimming clubs have a positive effect on the level of the annual new entries to the swimming club. The study confirms that a part of the new entries, ranged from 0 to 24 with a mean of 3.95% (*SD*= 5.8), is a result of the talent identification procedures used within the swimming clubs of the sample.

5.2. Talent identification

5.2.1. The self-evaluation of the swimming clubs regarding the achievement of TI at their clubs

The biggest section of the swimming clubs of the study (37.5 %) evaluated their achievement concerning TI with “good”, the second biggest section (35.0 %) stated an intermediate level, then comes the third section of the swimming clubs (20 %) who stated a “bad” self-evaluation for their achievement in this field TI. Nonetheless, only 25 % of the sample gave a negative evaluation for the level of TI at their clubs, as described in (Figure 17).

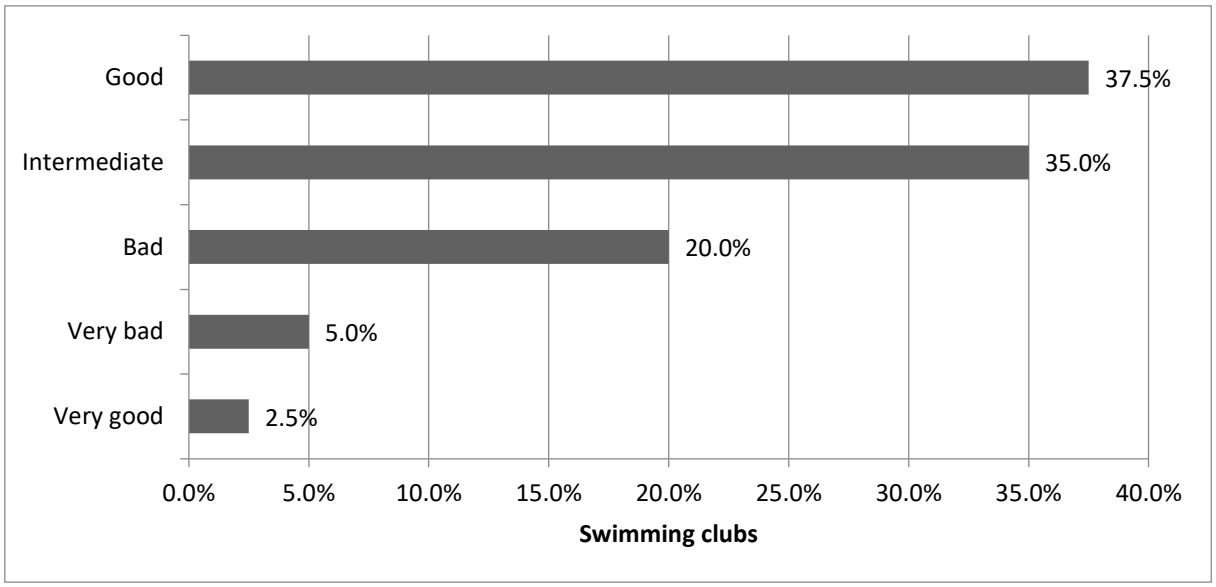

Figure 17 Self-evaluation regarding the level of talent identification within the swimming clubs.

5.2.2. The correlation matrix

In order to explore the relationships between the different variables related to talent identification at sport clubs in the area of Wuerttemberg, the Spearman correlation analysis was applied. This method was chosen because it is designed to be used when the data has violated parametric assumptions such as non-normally distributed data (Field, 2009, p. 179).

The variables used in the Likert scale in order to explore the level of talent identification within the swimming clubs, are classified according to the main elements of the Donabedian theory for quality, as shown in (Table 11).

Table 11 The administrational variables representing the Donabedian Model.

V. Nr.	**The variable**	**The classification**
01	We are successful in professional sport through talent identification and selection.	Outcome
02	Many athletes have come to talent development through talent identification and selection.	Outcome
03	The official goals of talent identification and selection are met.	Outcome
04	Systematic planning is taking place regarding talent identification and selection.	Process - planning
05	Orienteering through elite sports concept of the federation regarding talent identification and selection.	Structure - Obligations
06	New scientific insights are being taken into consideration in talent identification and selection.	Process - Implementations
07	The implementation of talent identification and selection are well organised.	Process - Implementations
08	The results of talent identification and selection are documented.	Process - Implementations
09	There are very concrete goals for talent identification and selection.	Structure - Goals
10	The goals of talent identification and selection are defined in writing.	Structure - Goals
11	The teachers are sufficiently qualified for talent identification and selection.	Structure - Opportunity
12	The coaches are sufficiently qualified for talent identification and selection.	Structure - Opportunity
13	There are selection tests in schools.	Structure - Opportunity
14	There are selection tests in clubs.	Structure - Opportunity
15	The identification and selection procedures are provided.	Process - Implementations
16	There are many regulations and laws (from feds or sport clubs) regarding talent identification and selection.	Structure - Obligations
17	There is a good support from schools for talent identification and selection.	Structure - Resources
18	There is a big amount of talents.	Structure - Resources

Accordingly, the correlation matrix between the different variables is presented in (Table 13), and the values of the correlation were interpreted according to Evans (1996) as illustrated in (Table 12).

Table 12 Interpretation of Pearson's correlation

Spearman correlation	The correlation's strength
.00- .19	Very week
.20- .39	Weak
.40- .59	Moderate
.60- .79	Strong
.80- 1.0	Very strong

Source: Evans (1996).

Table 13 The correlation matrix for the variables representing talent identification and selection at swimming clubs.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.000																	
2	.682**	1.000																
	.000																	
3	.654**	.623**	1.000															
	.000	.000																
4	.631**	.562**	.828**	1.000														
	.000	.000	.000															
5	.570**	.572**	.489**	.574**	1.000													
	.000	.000	.001	.000														
6	.481**	.574**	.543**	.602**	.675**	1.000												
	.002	.000	.000	.000	.000													
7	.644**	.614**	.857**	.876**	.578**	.598**	1.000											
	.000	.000	.000	.000	.000	.000												
8	.469**	.475**	.661**	.761**	.719**	.618*	.716**	1.000										
	.002	.002	.000	.000	.000	.000	.000											
9	.652**	.644**	.761**	.816**	.763**	.705**	.839**	.789**	1.000									
	.000	.000	.000	.000	.000	.000	.000	.000										
10	.554**	.575**	.733**	.821**	.568**	.555**.000	.807**	.766**	.875**	1.000								
	.000	.000	.000	.000	.000		.000	.000	.000									
11	.115	.007	.049	.231	.134	.147	.182	.354*	.156	.122	1.000							
	.481	.968	.763	.152	.411	.365	.260	.025	.335	.452								
12	.475**	.597**	.584**	.556**	.436	.524**	.666**	.511**	.616**	.528**	.011	1.000						
	.002	.000	.000	.000	.005	.001	.000	.001	.000	.000	.946							
13	.250	.526**	.328*	.470**	.358*	.371*	.391*	.393*	.575**	.635**	.136	.295	1.000					
	.120	.000	.039	.002	.023	.019	.013	.012	.000	.000	.402	.064						
14	.584**	.569**	.774**	.772**	.599**	.550**	.729**	.720**	.686**	.649**	.207	.616**	.380*	1.000				
	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.199	.000	.016					
15	.557**	.561**	.722**	.882**	.649**	.552**	.747**	.735**	.764**	.734**	.279	.480**	.502**	.812**	1.000			
	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.082	.007	.001	.000				
16	.287	.373*	.414	.541**	.561**	.567**	.469**	.443	.507**	.367*	.236	.419**	.395*	.569**	.559**	1.000		
	.073	.018	.008	.000	.000	.000	.002	.004	.001	.020	.143	.007	.012	.000	.000			
17	.,025	.204	.241	.384*	.179	.289	.209	.423**	.312*	.391*	.373*	.008	.665**	.239	.370*	.354*	1.000	
	.881	.207	.135	.015	.269	.071	.195	.006	.050	.013	.018	.960	.000	.138	.019	.025		
18	.382*	.203	.271	.387*	.319*	.293	.337*	.264	.315*	.204	.086	.405**	131	.309	.319*	.420**	.031	1.000
	,015	,208	,090	,014	,045	,067	,034	.100	,048	,208	,596	,010	,420	,052	,045	,007	,849	

5.2.3. Success in competitive sport through talent identification and selection

Only 27.5 % of the sample related their success in swimming competitions to the talent identification and selection methods used within their swimming clubs. However, for the majority of the swimming clubs, TI has a neutral or no effect on their success in the swimming competitions as shown in (Figure 18).

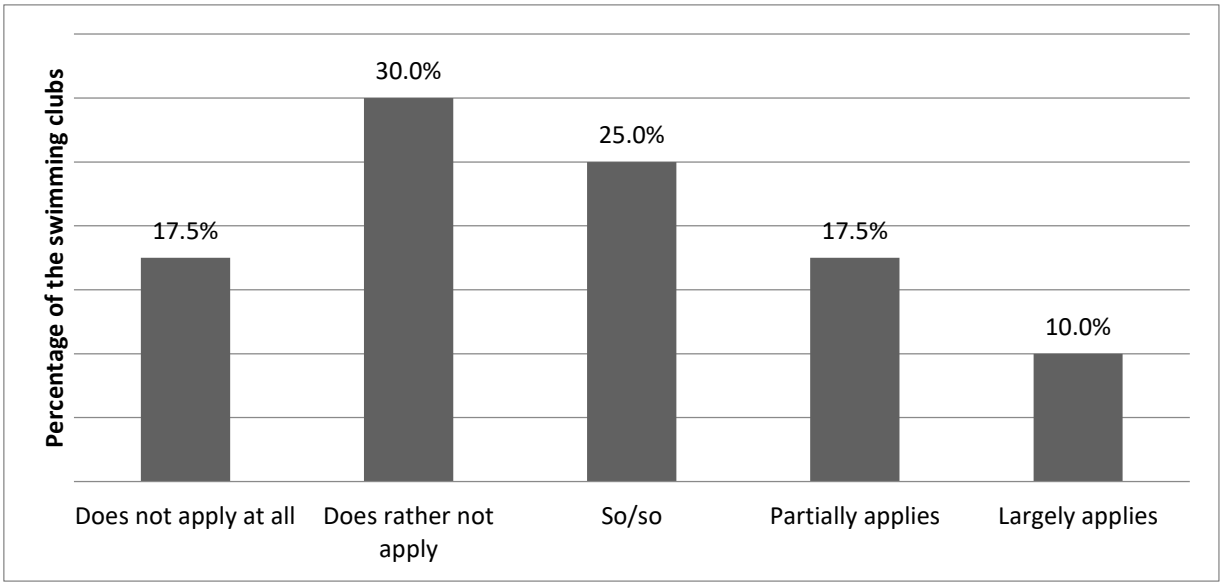

Figure 18 Success in competitive sport through talent identification and selection.

According to the correlation matrix, the variable "success in competition sport through talent identification and selection" has strong positive correlations with all other variables representing the outcome in the study:

1. The official goals of talent identification and selection are met, r =.654, p<.05

2. Many athletes ahave come to talent development through talent identification and selection, r =.682, p<.05.

Adding to that, there are strong positive correlations between the discussed variable and the following variables:

3. There are very concrete goals for talent identification and selection (structure, goals), r =.652, p<.05.

4. Systematic planning is taking place regarding talent identification and selection (process, planning), r =.631, p<.05.

5. The implementation of talent identification and selection are well organized (process, implementations), r =.644, p<.05.

There are no strong or very strong correlations between the discussed variable and any of the variables representing the resources, the opportunities or the obligations, which are sub-items of structure, as illustrated in (Table 14).

Table 14 The correlations of the variable "success in professional sport through TI" with other variables of the correlations matrix.

1. We are successful in professional sport through talent identification and selection (outcome).			V. Strong positive	Strong positive	Moderate positive	Weak positive	Insig.
Structure	Goals	9. There are very concrete goals for talent identification and selection.		.652			
		10. The goals of talent identification and selection are defined in writing.			.554		
	Resources	17. There is a good support from schools for talent identification and selection.					-.025
		18. There is a big amount of talents.				.382	
	Opportunities	11. The teachers are sufficiently qualified for talent identification and selection.					-.115
		12. The coaches are sufficiently qualified for talent identification and selection.			.475		
		13. There are selection tests in schools.					.250
		14. There are selection tests in clubs.			.584		
	Obligations	5. Orienteering through elite sports concept of the federation regarding talent identification and selection.			.570		
		16. There are many regulations and laws (from feds or sport clubs) regarding talent identification and selection.					.287
Process	Planning	4. Systematic planning is taking place regarding talent identification and selection.		.631			
	Implementation	6. New scientific insights are being taken into consideration in talent identification and selection.			.481		
		7. The implementation of talent identification and selection are well organized.		.644			
		8. The results of talent identification and selection are documented.			.469		
		15. The identification and selection procedures are provided.			.557		
Outcome		2. Many athletes have come to talent development through talent identification and selection.		.682			
		3. The official goals of talent identification and selection are met		.654			

5.2.4. Many athletes come to talent development through talent identification and selection

This variable is an outcome variable. For half of the swimming clubs (50 %), swimmers were not identified or found through TI programmes and procedures used within the swimming club. Only (22.5%) of the sample have confirmed that they partly got their swimmers through TI programmes used within their clubs, and none of them fully confirmed that as presented in (Figure 19).

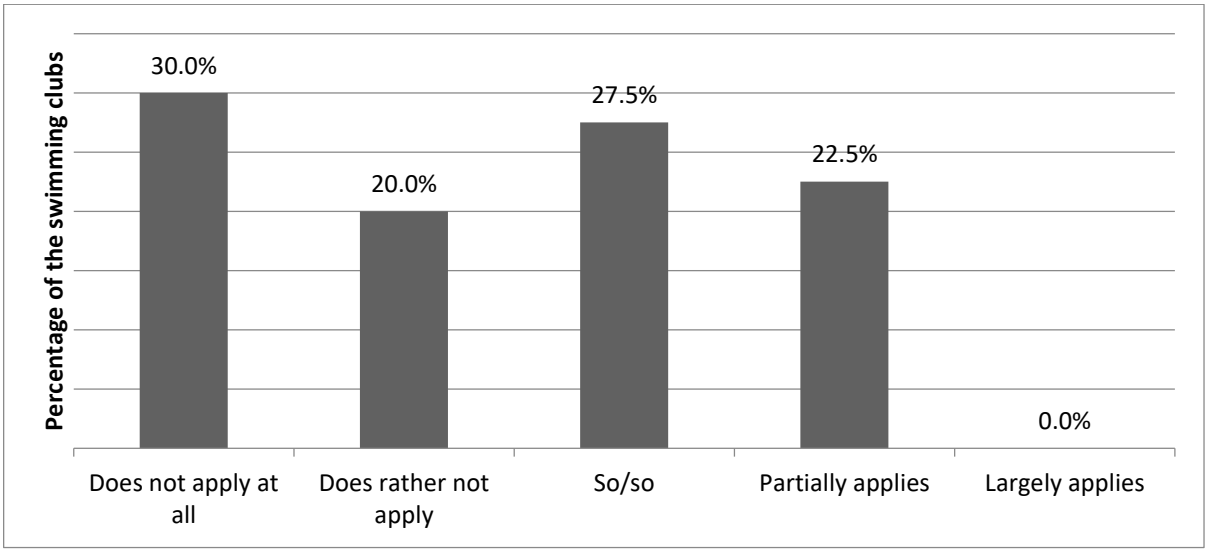

Figure 19 Many athletes have come to talent development through talent identification and selection.

The variable "many athletes have come to talent development through talent identification and selection" has strong positive correlations with the following outcome variables:

1. We are successful in professional sport through talent identification and selection, r =.654, p<.05.

2. The official goals of talent identification and selection are met, r =.623, p<.05.

Adding to that, there are strong correlations between the discussed variables and the following variables:

3. There are very concrete goals for talent identification and selection (structure, goals), r =.644, p<.05.

4. The implementation of talent identification and selection are well-organized (process, implementations), r =.614, p<.05.

However, the variable has no strong positive correlations with any of the variables representing the resources, the opportunities, the obligations, which are sub-items of structure. Plus, no strong positive correlations with the planning, item of process, as illustrated in (Table 15).

Table 15 The correlations of the variable "many athletes come to TD through TI" with other variables of the correlation matrix.

2. Many athletes have come to talent development through talent identification and selection.			V. Strong positive	Strong positive	Moderate positive	Weak positive	Insig.
Structure	Goals	9. There are very concrete goals for talent identification and selection.		.644			
		10. The goals of talent identification and selection are defined in writing.			.575		
	Resources	17. There is a good support from schools for talent identification and selection.					.204
		18. There is a big amount of talents.					.203
	Opportunities	11. The teachers are sufficiently qualified for talent identification and selection.					-.007
		12. The coaches are sufficiently qualified for talent identification and selection.			.597		
		13. There are selection tests in schools.			.526		
		14. There are selection tests in clubs.			.569		
	Obligations	5. Orienteering through elite sports concept of the federation regarding talent identification and selection.			.572		
		16. There are many regulations and laws (from feds or sport clubs) regarding talent identification and selection.				.373	
Process	Planning	4. Systematic planning is taking place regarding talent identification and selection.			.562		
	Implementation	6. New scientific insights are being taken into consideration in talent identification and selection.			.574		
		7. The implementation of talent identification and selection are well organized.		.614			
		8. The results of talent identification and selection are documented.			.475		
		15. The identification and selection procedures are provided.			.561		
Outcome		1. We are successful in professional sport through talent identification and selection.		.654			
		3. The official goals of talent identification and selection are met.		.623			

5.2.5. The official goals of talent identification and selection are met

This variable means the official goals and targets the swimming club sets regarding its processes of talent identification and selection. For most of the swimming clubs in the sample (67 %), the goals of TI of the club are not achieved. However, only a small number of the swimming clubs (17.5 %) have totally or partly reached their goals, as shown in (Figure 20).

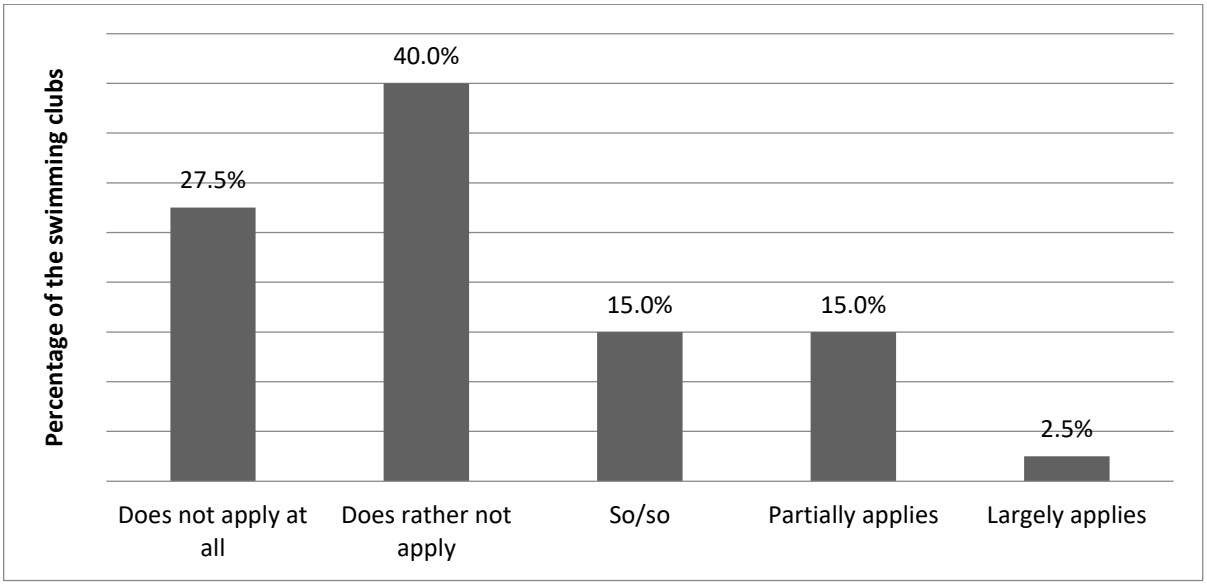

Figure 20 The official goals of talent identification and selection are met.

There are very strong positive correlations between the variable "the official goals of talent identification and selection are met" and the following variables:

1. Systematic planning is taking place regarding talent identification and selection (planning, process), r =.828, p<.05.

2. The implementation of talent identification and selection are well organized (implementation, process), r =.857, p<.05

It has strong positive correlations with the following outcome variables:

1. We are successful in professional sport through talent identification and selection, r =.654, p<.05.

2. Many athletes have come to talent development through talent identification and selection, r =.763, p<.05.

Additionally, it has strong positive correlations with other variables which represent the structure and the process:

3. There are very concrete goals for talent identification and selection (goals, structure), r =.761, p<.05.

4. The goals of talent identification and selection are defined in writing (goals, structure), r =.733, p<.05.

5. There are selection tests in clubs (opportunities, structure), r =.774, p<.05.

6. The results of talent identification and selection are documented (implementation, process), r =.661, p<.05.

7. The identification and selection procedures are provided (implementation, process), r =.722, p<.05.

Accordingly, the variable “official goals of talent identification and selection” has strong positive correlations with all variables which represent the item “goals” sub-category of “structure”. In addition to the variables representing the item “outcome”, as illustrated in (Table 16).

Table 16 The correlations of the variable "the official goals of talent identification and selection are met" with other variables in the matrix.

3. The official goals of talent identification and selection are met.			V. Strong positive	Strong positive	Moderate positive	Weak positive	Insig.
Structure	Goals	9. There are very concrete goals for talent identification and selection.		.761			
		10. The goals of talent identification and selection are defined in writing.		.733			
	Resources	17. There is a good support from schools for talent identification and selection.					.241
		18. There is a big amount of talents.					.271
	Opportunities	11. The teachers are sufficiently qualified for talent identification and selection.					.049
		12. The coaches are sufficiently qualified for talent identification and selection.			.584		
		13. There are selection tests in schools.				.328	
		14. There are selection tests in clubs.		.774			
	Obligations	5. Orienteering through elite sports concept of the federation regarding talent identification and selection.			.489		
		16. There are many regulations and laws (from feds or sport clubs) regarding talent identification and selection.			.414		
Process	Planning	4. Systematic planning is taking place regarding talent identification and selection.	.828				
	Implementation	6. New scientific insights are being taken into consideration in talent identification and selection.			.543		
		7. The implementation of talent identification and selection are well organized.	.857				
		8. The results of talent identification and selection are documented.		.661			
		15. The identification and selection procedures are provided.		.722			
Outcome		1. We are successful in professional sport through talent identification and selection.		.654			
		2. Many athletes have come to talent development through talent identification and selection.		.623			

5.2.6. Systematic planning is taking place regarding talent identification and selection

Most of the swimming clubs (65 %) lack the systematic planning for their talent identification and selection processes taking place within their clubs. Nonetheless, a part of the sample (18 %) of the swimming clubs confirmed that they partly or fully plan the processes and procedures of talent identification systematically within their swimming club as presented in (Figure 21).

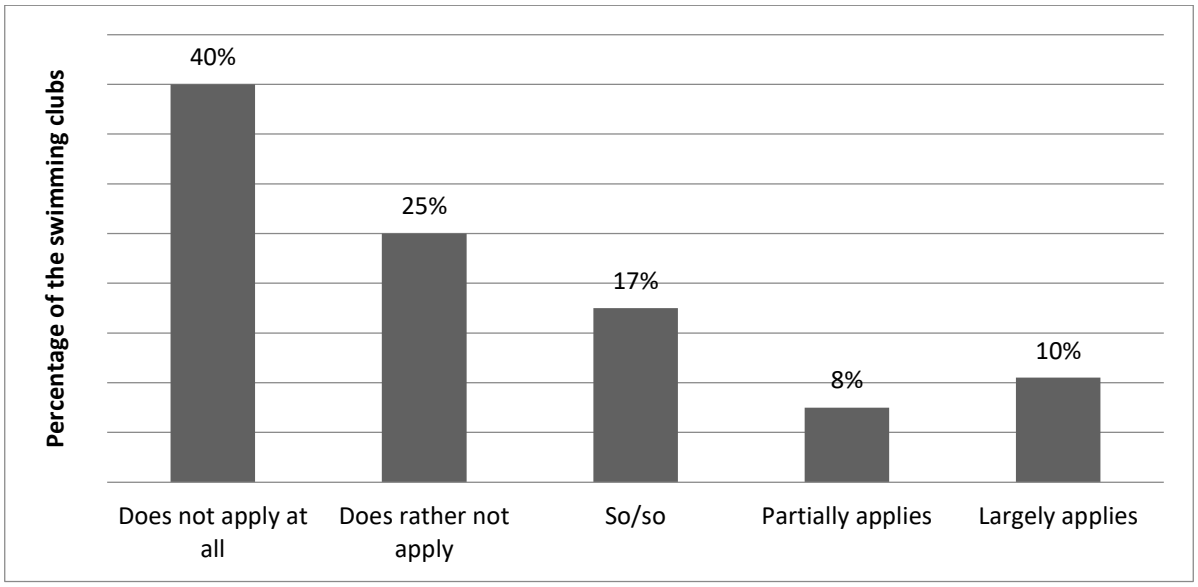

Figure 21 Systematic planning is taking place regarding talent identification and selection.

The variable has very strong positive correlations with the following variables:

1. The implementation of talent identification and selection are well-organized (implementation, process), r =.857, p<.05.

2. The official goals of talent identification and selection are met (goals, structure), r=.828, p<.05.

Moreover, it has strong positive correlations with the following variables:

1. We are successful in professional sport through talent identification and selection (outcome), r =.631, p<.05.

2. The goals of talent identification and selection are defined in writing (goals, structure), r =.761, p<.05.

3. There are very concrete goals for talent identification and selection (goals, structure), r =.733, p<.05.

4. There are selection tests in clubs (opportunities, structure), r =.774, p<.05.

5. The results of talent identification and selection are documented (implementation, process), r =.661, p<.05.

6. The identification and selection procedures are provided (implementation, process), r =.722, p<.05.

5.2.7. Orienteering through the “Elite Sport Concept” of the federation regarding talent identification and selection

The majority of the swimming clubs (80 %) do not use the “Elite Sports Concept” of the swimming federation as a guidance for identifying and selecting talented swimmers within the club. However, only a minor part of the sample (15 %) partly or fully uses it, as shown in (Figure 22).

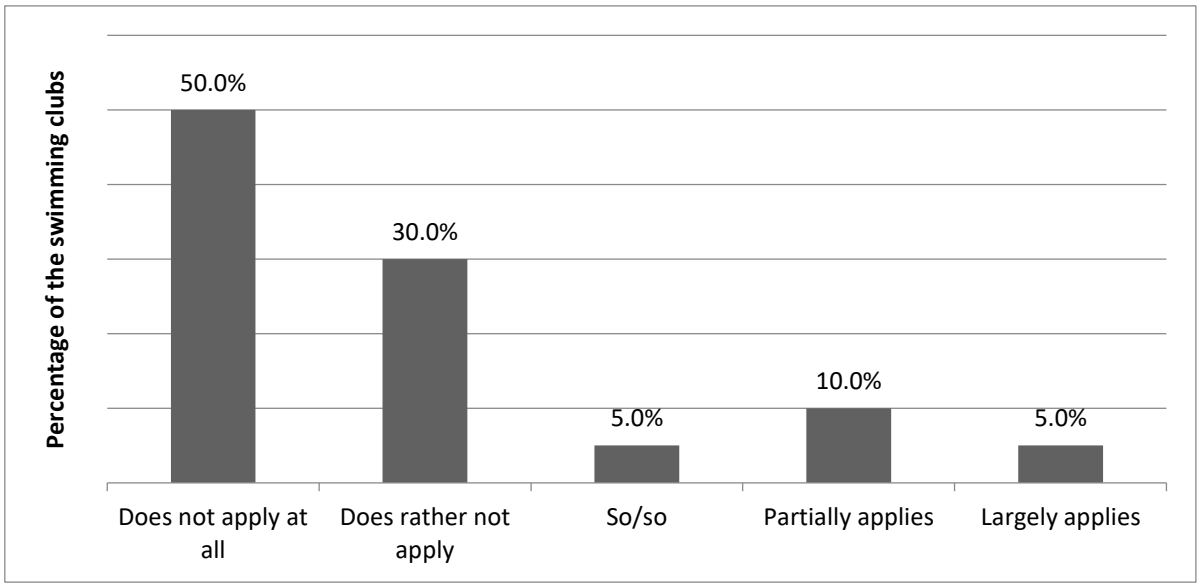

Figure 22 Orienteering through the "Elite Sports Concept" of the swimming federation regarding talent identification within the swimming clubs.

There are strong positive correlations between the discussed variable and the following variables:

1. There are very concrete goals for talent identification and selection (goals, structure), r =.763, p<.05

2. New scientific insights are being taken into consideration in talent identification and selection (implementation, process), r =.675, p<.05

3. The results of talent identification and selection are documented (implementation, process), r =.719, p<.05

4. The identification and selection procedures are provided (implementation, process), r =.649, p<.05

Accordingly, the variable has strong positive correlations with most of the variables representing the "implementation" sub-category of the "processes".

5.2.8. New scientific insights are being taken into consideration in talent identification and selection

The variable represents the "implementation", which is a sub-element of "process". Most of the swimming clubs of the sample (74 %) do not use the new scientific insights when identifying or selecting talented swimmers, and only (15 %) of the sample confirmed a partial or full usage of new scientific insights when identifying and selecting talents at their swimming clubs, as illustrated in (Figure 23) in more detail.

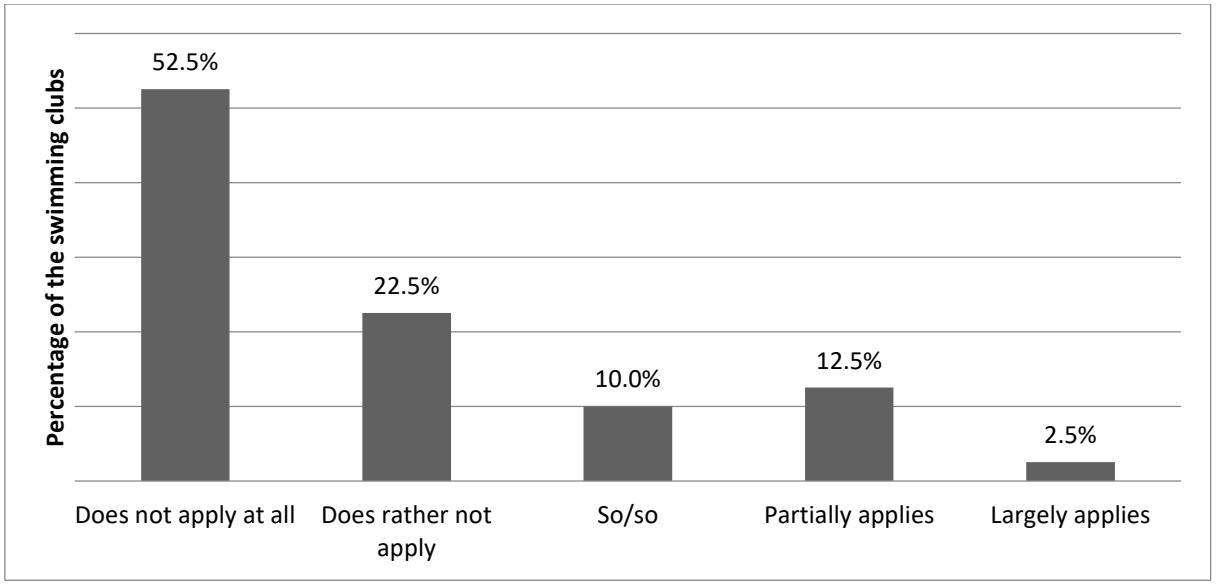

Figure 23 New scientific insights are being taken into consideration in talent identification and selection.

The variable has strong positive correlations with the following variables:

1. There are very concrete goals for talent identification and selection (goals, structure), r =.763, p<.05.

2. Orienteering through the "Elite Sports Concept" of the federation regarding talent identification and selection (obligations, structure), r =.675, p<.05

3. Systematic planning is taking place regarding talent identification and selection (planning, process), r =.602, p<.05.

4. The results of talent identification and selection are documented (implementation, process), r =.618, p<.05.

Nonetheless, the variable has no strong or very strong positive correlations with any of the variables which represent the outcome.

5.2.9. The implementation of talent identification and selection are well organized

Talent identification and selection procedures and processes are not well organized for the majority of the swimming clubs in the sample (59 %). However, only 16 % of the swimming clubs showed positive responses regarding this point. The rest of the swimming clubs have an intermediate level as shown in (Figure 24):

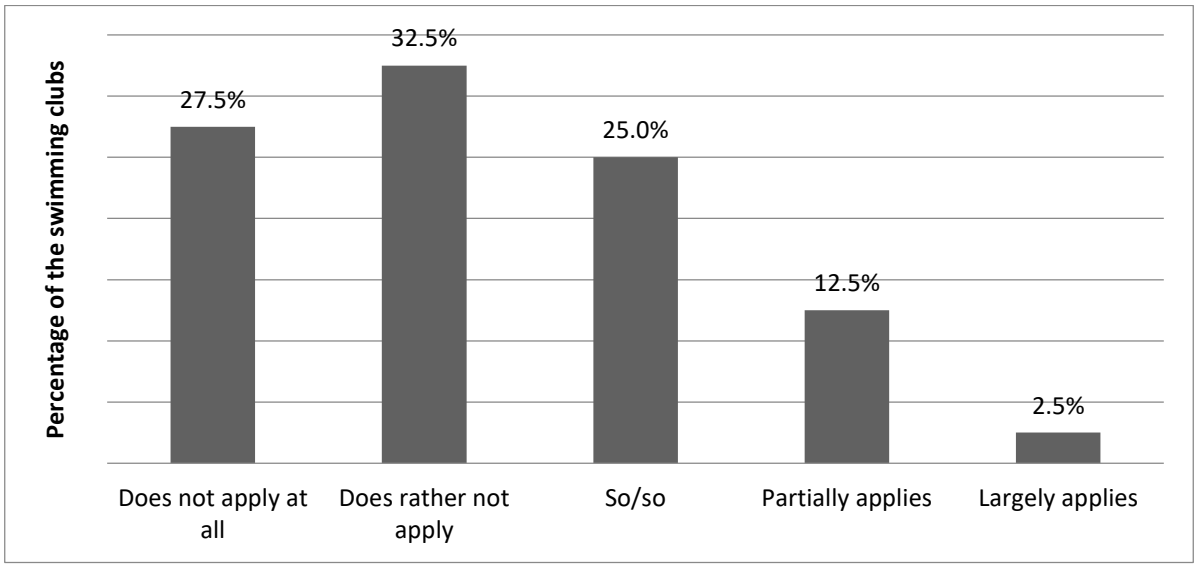

Figure 24 The implementation of talent identification and selection are well organized.

The variable has very strong positive correlations with the following variables:

1. The official goals of talent identification and selection are met (outcome), r =.857, p<.05.

2. There are very concrete goals for talent identification and selection (goals, structure), r =.839, p<.05.

3. The goals of talent identification and selection are defined in writing (goals, structure), r =.807, p<.05.

4. Systematic planning is taking place regarding talent identification and selection (planning, process), r =.876, p<.05.

Additionally, the variable has strong positive correlations with the following variables:

5. We are successful in professional sport through talent identification and selection (outcome), r =.644, p<.05.

6. Many athletes have come to talent development through talent identification and selection (outcome), r =.614, p<.05.

7. The coaches are sufficiently qualified for talent identification and selection (opportunities, structure), r =.666, p<.05.

8. There are selection tests in clubs (opportunities, structure), r =.729, p<.05.

9. The results of talent identification and selection are documented (implementation, process), r =.716, p<.05.

10. The identification and selection procedures are provided (implementation, process), r =.747, p<.05.

Accordingly, the variable has very strong positive correlations with all variables representing the “goals” sub-category of the “structure”, and strong and very strong positive correlations with all the variables representing the outcome. Adding to the fact that it has strong or very strong correlations with more than 50 % of the variables in the correlation matrix.

5.2.10. The results of talent identification and selection are documented

This variable represents the implementation as well, which is a sub-item of the processes. The majority of the swimming clubs of the sample (80 %) do not document the results or the actions related to talent identification taking place in their clubs. However, only (5 %) partially document the result of their TI, as presented in (Figure 25).

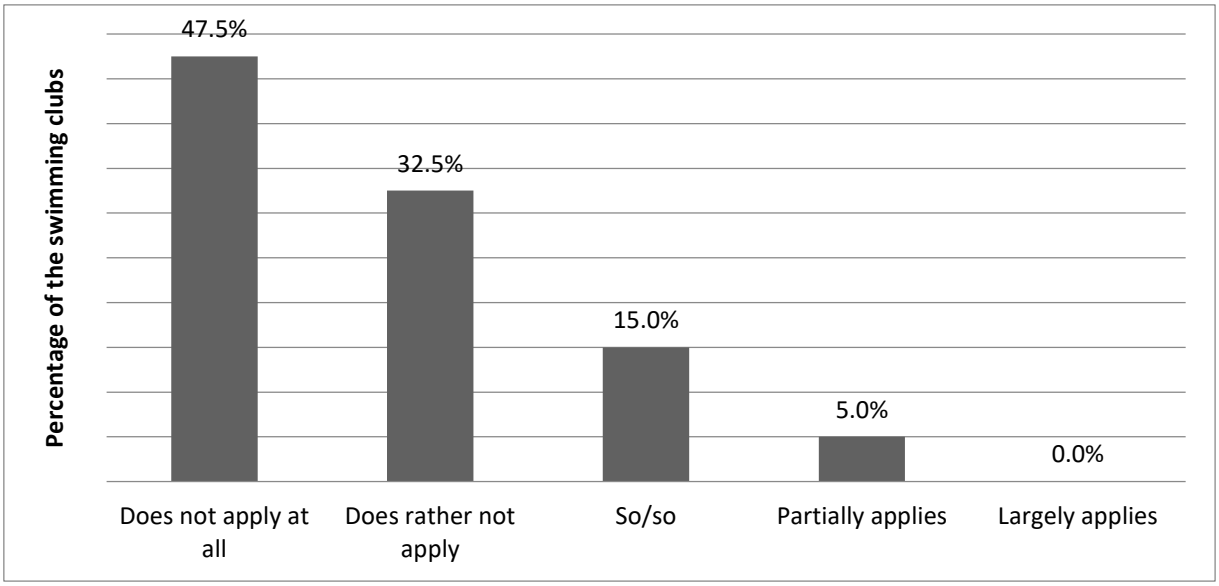

Figure 25 The documentation of the results of TI at the swimming club.

The variable has strong positive correlations with the following variables:

1. The official goals of talent identification and selection are met (outcome),

r =.661, p<.05.

2. There are very concrete goals for talent identification and selection (goals, structure), r =.789, p<.05.

3. The goals of talent identification and selection are defined in writing, (goals, structure) r =.766, p<.05.

4. There are selection tests in clubs (opportunities, structure), r =.720, p<.05.

5. Orienteering through the “Elite Sports Concept” of the federation regarding talent identification and selection, (obligations, structure) r =.719, p<.05.

6. Systematic planning is taking place regarding talent identification and selection (planning, process), r =.761, p<.05.

7. The implementation of talent identification and selection are well organized (implementations, process), r =.716, p<.05.

8. The identification and selection procedures are provided (implementations, process), r =.735, p<.05.

5.2.11. There are very concrete goals for talent identification and selection

The study revealed that (70 %) of the swimming clubs in the sample do not have (partially or totally) concrete targets and objects regarding talent identification processes and procedures within their clubs. However, (15 %) of the sample admitted a partial or a total presence of such targets, as illustrated in (Figure 26).

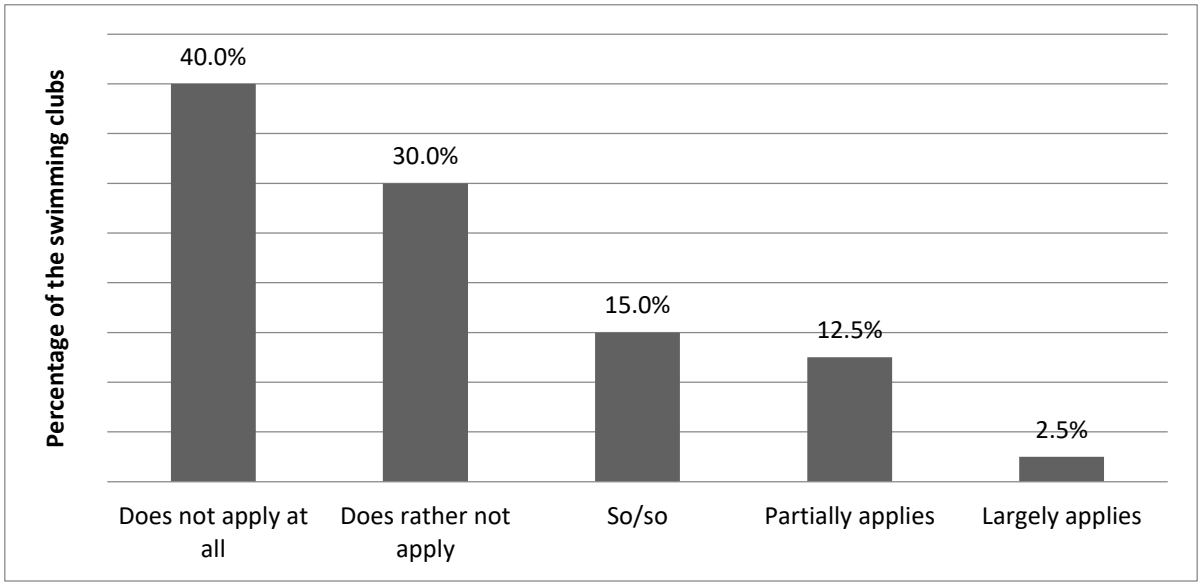

Figure 26 There are very concrete goals for talent identification and selection.

There are very strong positive correlations between the mentioned variable and the following variables:

1. The goals of talent identification and selection are defined in writing (goals, structure), r =.875, p<.05.

2. Systematic planning is taking place regarding talent identification and selection (planning, process), r =.816, p<.05.

3. The implementation of talent identification and selection are well organized (implementations, process), r =.839, p<.05.

Additionally, there are strong positive correlations between the variable and the following variables:

1. We are successful in professional sport through talent identification and selection (outcome), r =.652, p<.05.

2. Many athletes have come to talent development through talent identification and selection (outcome), r =.644, p<.05.

3. The official goals of talent identification and selection are met (outcome), r =.761, p<.05.

4. The coaches are sufficiently qualified for talent identification and selection (opportunities, structure), r =.616, p<.05.

5. There are selection tests in clubs (opportunities, structure), r =.686, p<.05.

6. Orienteering through the “Elite Sports Concept” of the federation regarding talent identification and selection (obligations, structure), r =.763, p<.05.

7. New scientific insights are being taken into consideration in talent identification and selection (implementations, process), r =.705, p<.05.

8. The results of talent identification and selection are documented (implementations, process), r =.789, p<.05.

9. The identification and selection procedures are provided (implementations, process), r =.764, p<.05.

The variable has very strong and strong correlations with all variables representing the item (process). Adding to that, it has very strong correlations with the variables representing the sub-item (goals) of the (structure).

5.2.12. The goals of talent identification and selection are defined in writing

That means the presence of the club's goals regarding TIin a written form at the club so that they are available for everyone to read. For the majority of the sample (77 %), the targets and objects of TI within the club are not or not clearly illustrated in a written form, therefore not everyone has the access to them. However, only (16 %) of the swimming clubs have totally or partially confirmed having their goals regarding TI in a written form, as illustrated in (Figure 27).

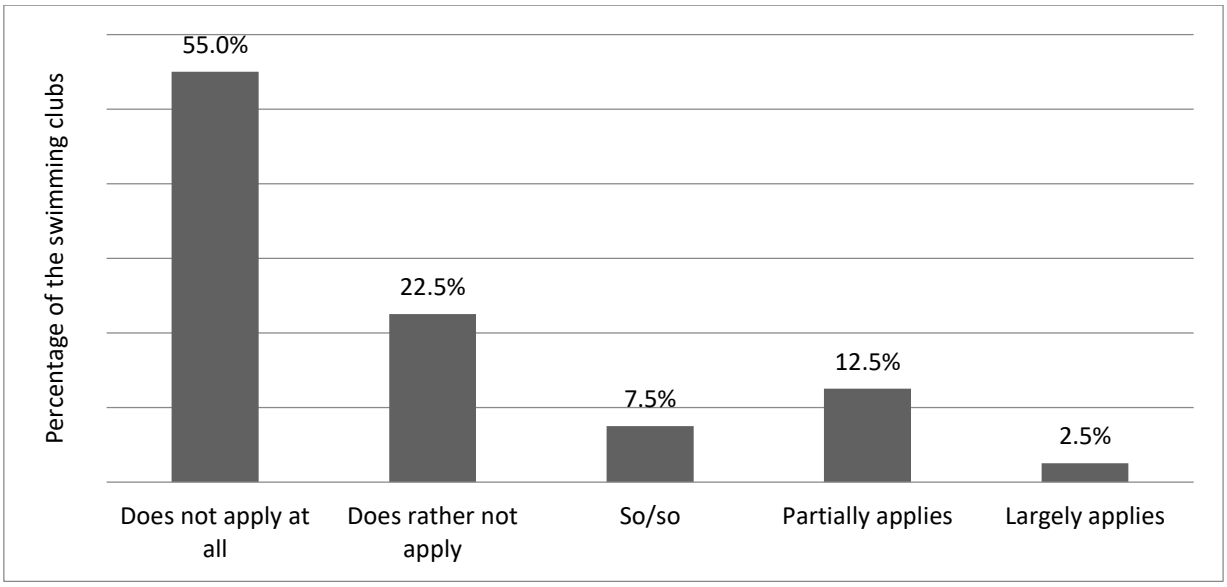

Figure 27 The goals of talent identification and selection are defined in writing.

According to the correlation matrix, there are very strong positive correlations between the variable "the goals of talent identification and selection are defined in writing" and the following variables:

1. There are very concrete goals for talent identification and selection (goals, structure), r =.875, p<.05.

2. Systematic planning is taking place regarding talent identification and selection (planning, process), r =.821, p<.05.

3. The implementation of talent identification and selection are well organized (implementations, process), r =.807, p<.05.

Adding to that, there are strong positive correlations with the following variables:

1. There are selection tests in schools (opportunities, structure), r =.635, p<.05.

2. There are selection tests in clubs (opportunities, structure), r =.649, p<.05.

3. The results of talent identification and selection are documented (implementations, process), r =.766, p<.05.

4. The identification and selection procedures are provided (implementations, process), r =.734, p<.05.

5. The official goals of talent identification and selection are met (outcome), r =.733, p<.05.

5.2.13. The qualification level of school teachers regarding TI at swimming clubs

This variable refers to the ability of the physical education teachers at schools to identify and select talented swimmers during sport sessions in the swimming pool. The majority of swimming clubs (90 %) stated that school teachers are not qualified enough to identify talented swimmers. However, only (5 %) of the sample gave positive answers regarding the level of sport teachers at schools to identify talented swimmers, as shown in (Figure 28).

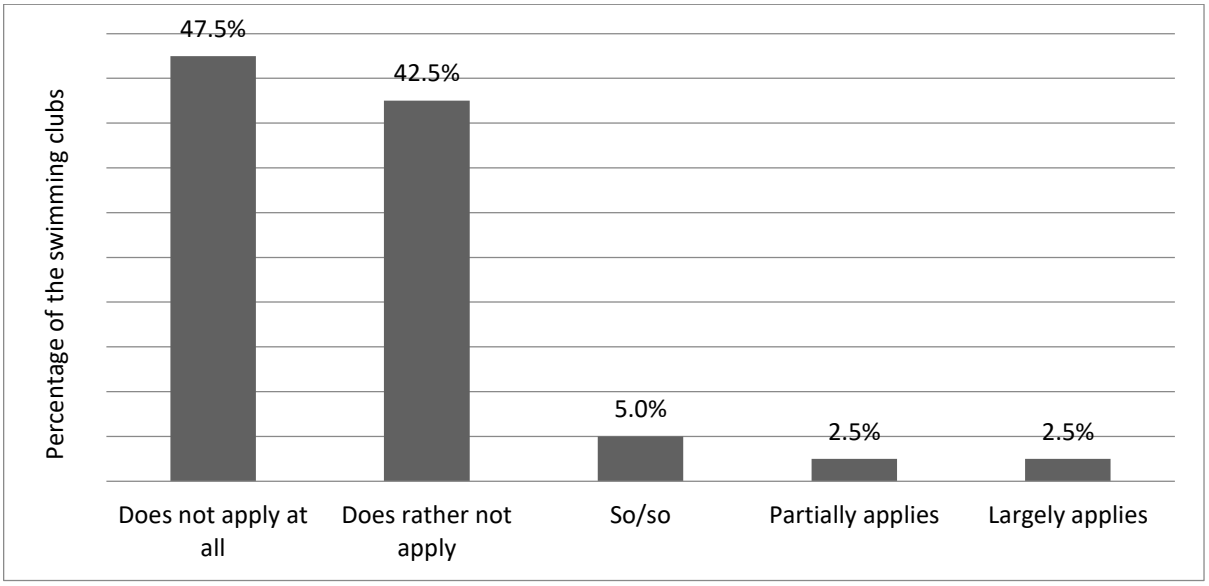

Figure 28 The teachers at schools are sufficiently qualified for talent identification and selection.

According to the correlation matrix, the variable has only weak positive correlations with two variables in the correlation matrix, and the rest of the correlations in the matrix are insignificant.

5.2.14. The qualification level of swimming coaches regarding TI at swimming clubs

The variable refers to the ability of the coaches and trainers at the swimming clubs to discover and identify the talented young swimmers who have the potential to reach the highest performance levels. A big portion of the swimming clubs (40 %) placed the level of their coaches in identifying talents in the middle, then come the positive evaluation with (38 %) of the sample, and finally, the negative evaluations with only (13 %) of the swimming clubs as shown in (Figure 29).

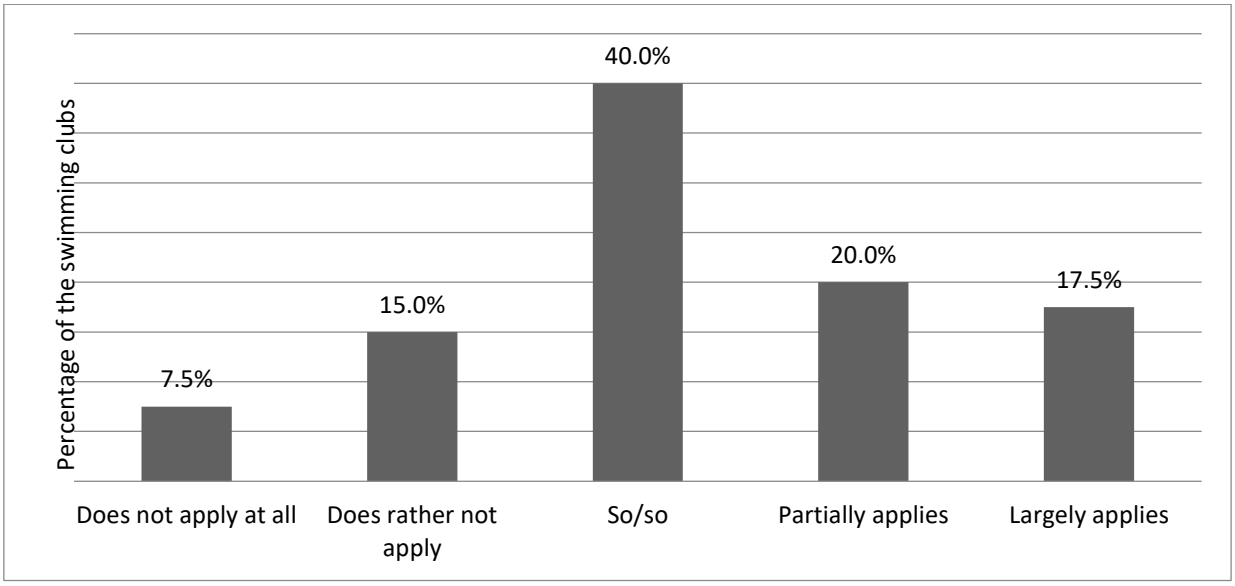

Figure 29 The coaches are sufficiently qualified for talent identification and selection.

According to the correlation matrix, the variable has strong positive correlations to the following three variables:

1. There are very concrete goals for talent identification and selection (goals, structure), r =.616, p<.05.

2. There are selection tests in clubs (opportunities, structure), r =.616, p<.05.

3. The implementation of talent identification and selection are well-organized (implementation, process), r =.666, p<.05.

5.2.14. There are selection tests in schools

Most of the swimming clubs (87 %) stated a full or a partial absence of talent identification tests and programmes within the framework of schools and school sports, as indicated in (Figure 30).

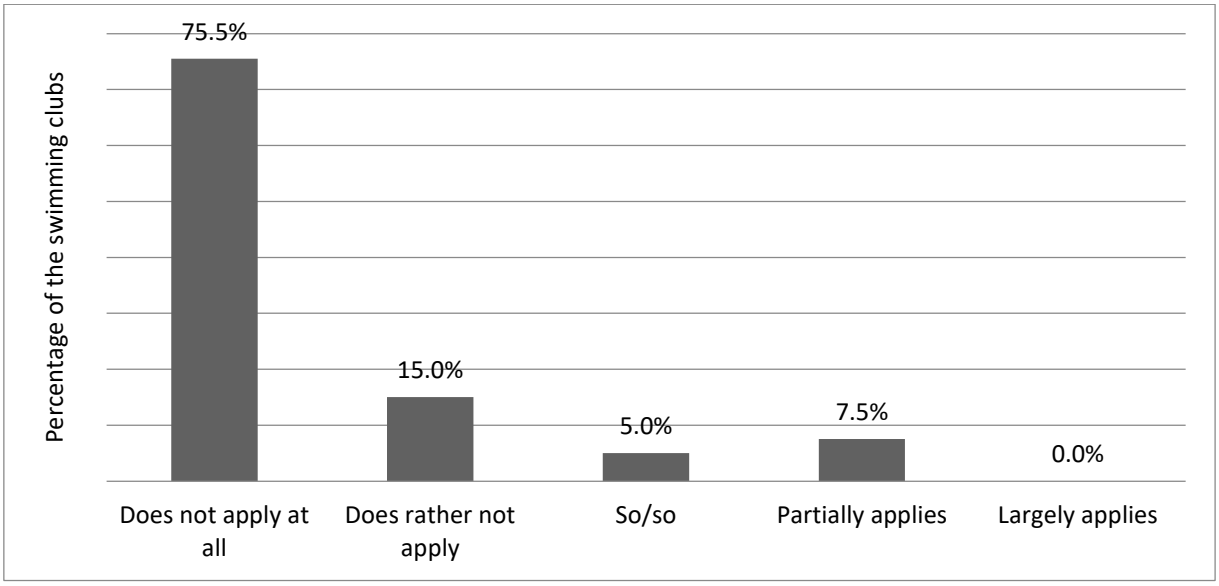

Figure 30 There are selection tests at schools

Based on the correlation matrix, the variable has strong positive correlations with the following variables:

1. The goals of talent identification and selection are defined in writing (goals, structure), r =.635, p<.05.

2. There is a good support from schools for talent identification and selection (resources, structure), r =.665, p<.05.

Respectively, the variable “there are selection tests at schools” has positive correlations only with the variables representing the item (structure).

5.2.15. There are selection tests at clubs

The biggest portion of the swimming clubs in the sample (55 %) gave negative responses regarding the presence of TI tests at their swimming clubs in order to identify talented swimmers. However, another (35 %) of them stated a partial or full presence of such tests at their clubs. Finally, (10 %) were neutral regarding this question, as shown in (Figure 31).

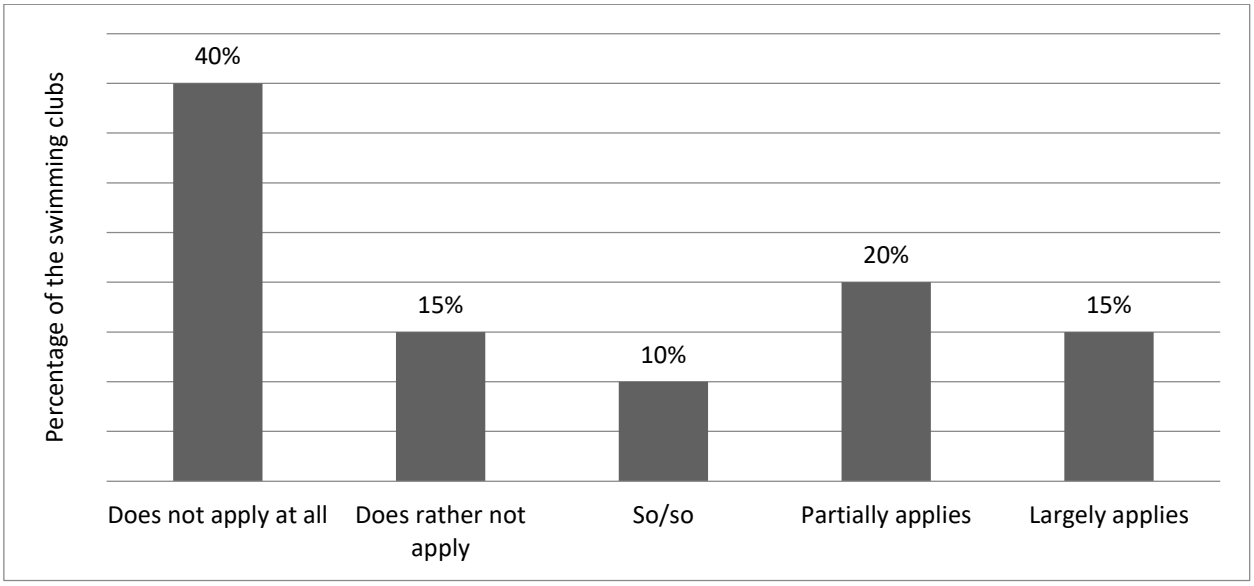

Figure 31 There are selection tests at clubs.

As the correlation matrix shows, the variable has very strong positive correlations with the variable:

1. The identification and selection procedures are provided (implementation, process), r =.812, p<.05.

It has strong positive correlations with the following variables in the matrix:

2. The official goals of talent identification and selection are met (outcome), r =.774, p<.05.

3. There are very concrete goals for talent identification and selection (goals, structure), r =.686, p<.05.

4. The goals of talent identification and selection are defined in writing (goals, structure), r =.649, p<.05.

5. Systematic planning is taking place regarding talent identification and selection (planning, process), r =.772, p<.05.

6. The coaches are sufficiently qualified for talent identification and selection (opportunities, structure), r =.616, p<.05.

7. The implementation of talent identification and selection are well organized (implementation, process), r =.729, p<.05.

8. The results of talent identification and selection are documented (implementations, process), r =.720, p<.05.

Based on the past mentioned correlations, the variable has strong positive correlations with all variables representing the “goals”, which is a sub-item of “structure”

5.2.16. The identification and selection procedures are provided

The variable refers to the procedures and methods used at the swimming clubs and provided by the umbrella sport organisations in order to identify and select talents within the swimming club. The majority of the swimming clubs (77 %) stated a total absence or a lack of these predetermined procedures. However, only (12.5 %) of the sample stated that they partly receive such predetermined procedures to follow, as illustrated in (Figure 32).

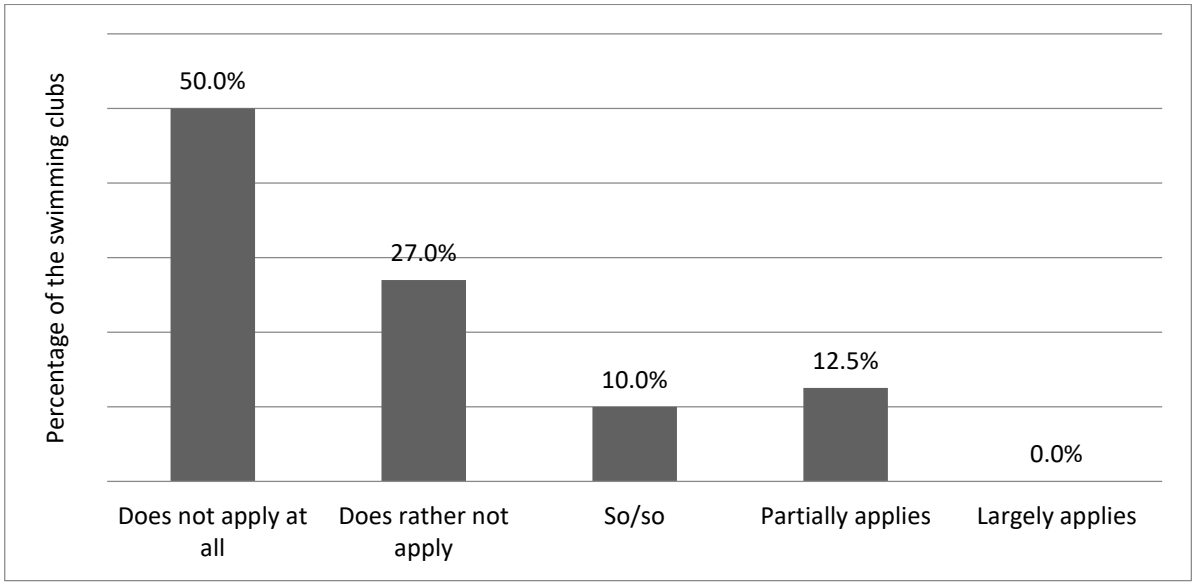

Figure 32 The identification and selection procedures are provided.

As the correlation matrix shows, there are very strong positive correlations between the mentioned variable and the following variables:

1. There are selection tests in clubs (opportunities, structure), r =.812, p<.05.

2. Systematic planning is taking place regarding talent identification and selection (planning, process), r =.882, p<.05.

The variable has strong positive correlations with the following variables:

3. The official goals of talent identification and selection are met (outcome),

r =.722, p<.05.

4. There are very concrete goals for talent identification and selection (goals, structure), r =.764, p<.05.

5. The goals of talent identification and selection are defined in writing (goals, structure), r =.734, p<.05.

6. Orienteering through the "Elite Sports Concept" of the federation regarding talent identification and selection (obligations, structure), r =.649, p<.05.

7. The implementation of talent identification and selection are well organized (implementations, process), r =.747, p<.05.

8. The results of talent identification and selection are documented (implementations, process), r =.736, p<.05.

5.2.17. The presence of the regulations and laws (from feds or sport clubs) regarding talent identification and selection

The biggest section of the sample (67 %) do not receive predetermined regulations regarding talent identification and selection, which should take place within the swimming club. Anyhow, only (10 %) of the sample stated a partial or total presence of such regulations, as illustrated in (Figure 33).

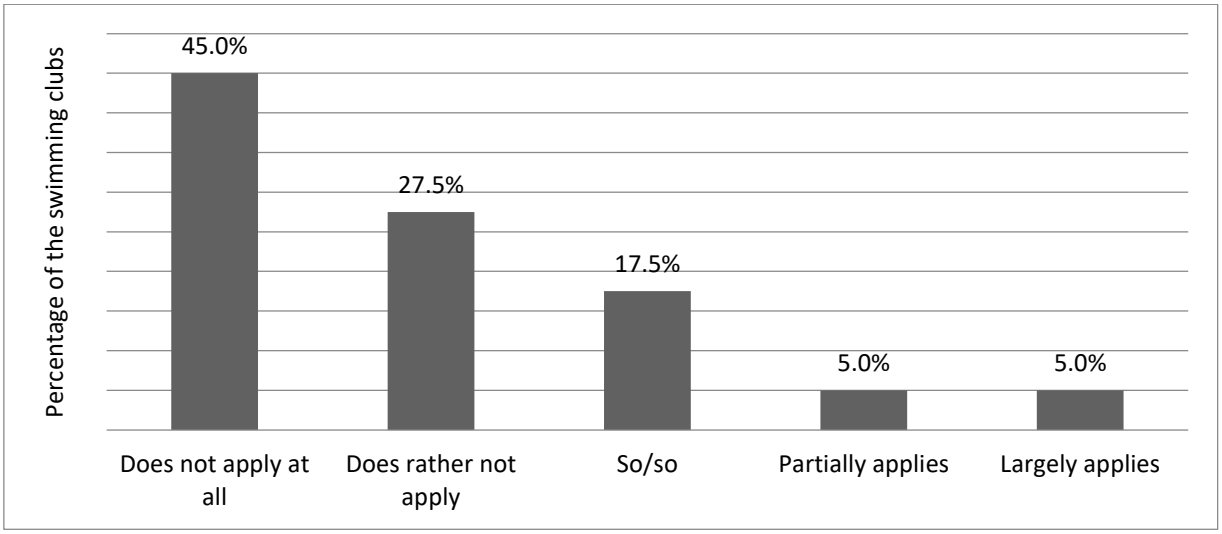

Figure 33 There are many regulations and laws regarding talent identification.

According to the correlation matrix, the variable does not have any strong or very strong correlations with any of the other variables in the matrix.

5.2.18. Schools' support for talent identification and selection at swimming clubs

The majority of the swimming clubs (97.5 %) of the sample, have totally or partly negated the support from schools to the processes of talent identification and selection at the swimming club. Furthermore, none of the swimming clubs in the sample gave a positive answer regarding this point, as presented in (Figure 34).

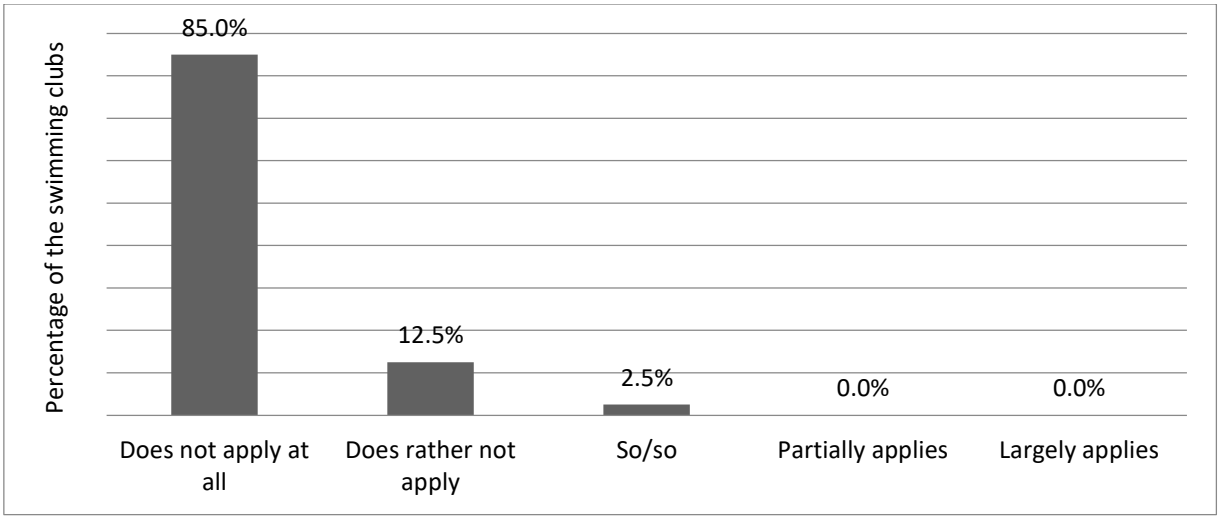

Figure 34 There is a good support from schools for talent identification and selection.

Based on the correlation matrix, the variable has only one strong positive correlation with the variable “there are selection tests in schools” (r =.665, p<.05) representing the item opportunity of structure.

5.2.19. There is a big amount of talents

The majority of the swimming clubs (62.5 %) provided neutral answers regarding the presence of a big amount of talents at their swimming clubs. On the other side, both negative and positive responses were presented with moderate numbers, as shown in (Figure 35).

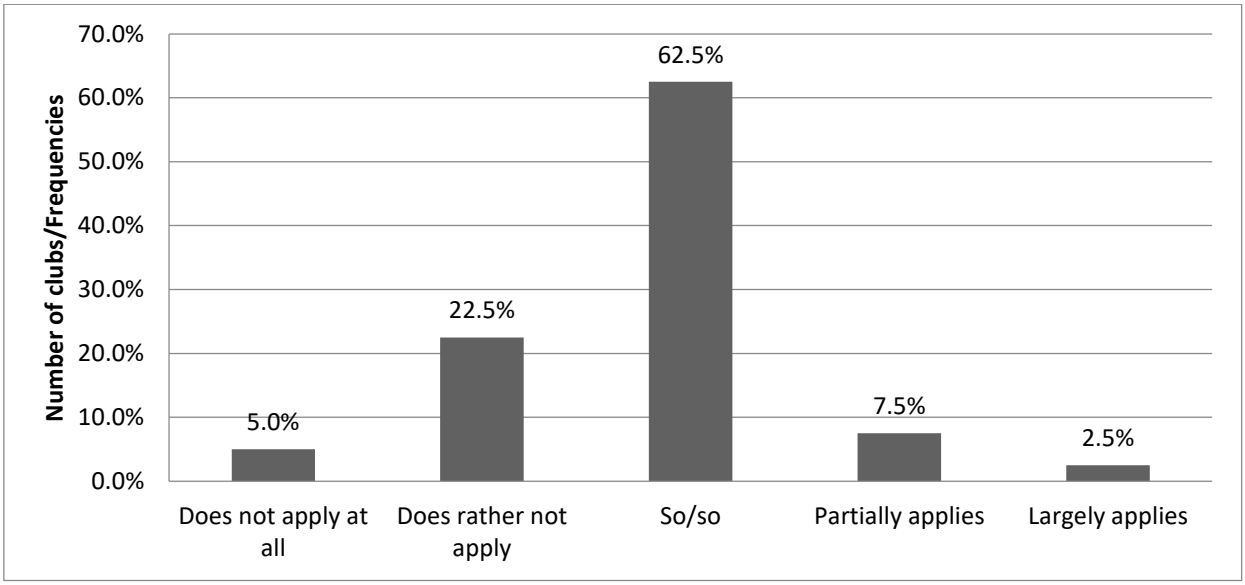

Figure 35 There is a big amount of talents.

The variable has no strong or very strong positive correlations with any variables in the matrix, and it has insignificant correlations with 50 % of the variables in the matrix.

5.2.20. Summary of the correlation matrix

For most of the variables related to processes and procedures that take place within the swimming club in order to run TI, they have positive correlations with each other according to spearman correlation rho. However, some variables, which are related to TI in schools, do not have many significant correlations with other variables. Nonetheless, none of the variables in the correlation matrix has significant negative correlations with another variable.

5.2.21. Personnel responsible for identifying and selecting talented swimmers

The majority of the swimming clubs in the sample (66 %) supported the positive role of the swimming coaches and trainers in identifying and selecting talented swimmers. However, 15 % of the sample gave partly negative or very negative evaluations for the role of coaches and trainers. Nonetheless, it is clear that almost half of the swimming clubs in the sample (47.5 %) are very satisfied with the performance of their coaches and trainers regarding this point. The second effective personnel, according to the study, are the talent scouts and the physical education teachers at school, both of them have a negative or very negative evaluation regarding their role in identifying and selecting talented swimmers. However, a minor part of the swimming clubs (2.5 %) stated a partly positive role of talent scouts, but the majority of the sample (95 %) have partly or totally negated any positive roles of both personnel regarding the discussed point, as illustrated in (Figure 36).

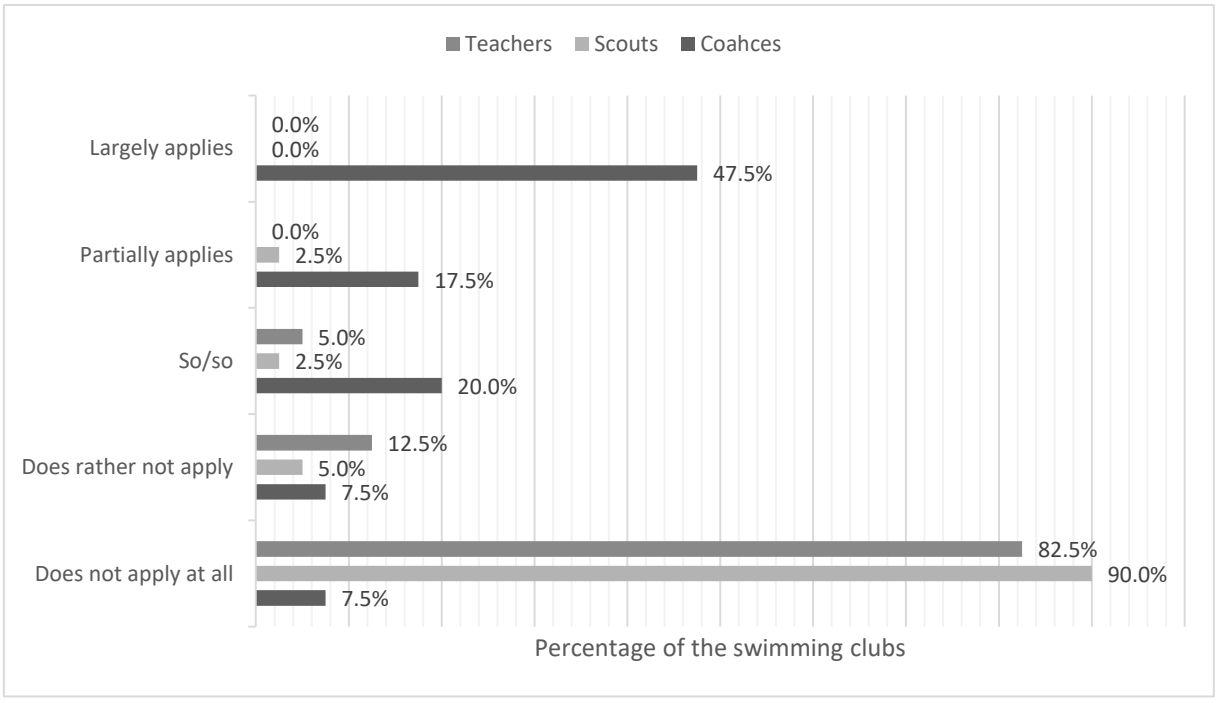

Figure 36 Personnel responsible for identifying and selecting talents.

5.2.22. Cooperation between sport clubs and schools regarding TI

Schools are one of the most important talent pools for sport, due to the fact that they enclose the children of a certain age when they are most suitable to be identified as talents (as mentioned before). However, the study showed that a big portion of the swimming clubs in the sample (52 %) have no contact with schools regarding talent identification and selection, and only 45 % of the sample confirmed the presence of such a contact. This cooperation between schools and swimming clubs takes place through six main sport events that occur in or through schools. The biggest number (25 %) of the swimming clubs who stated having contact with schools cooperate with schools' sport through the *Youth Training for Olympia* event. Secondly, a portion of 22.5 % of the sample stated their cooperation with schools' sport through *sport sessions* which include swimming sessions. In the third place, cooperation occurs through *all-day-schools*, an opportunity which is used by (20 %) of the swimming clubs. Furthermore, sport clubs cooperate with schools through other sport events, but with a moderate percentage of the sample. Those events are *schools' working groups*; *sport fests* and finally, *Federal Youth Games*, as illustrated in detail in (Figure 37).

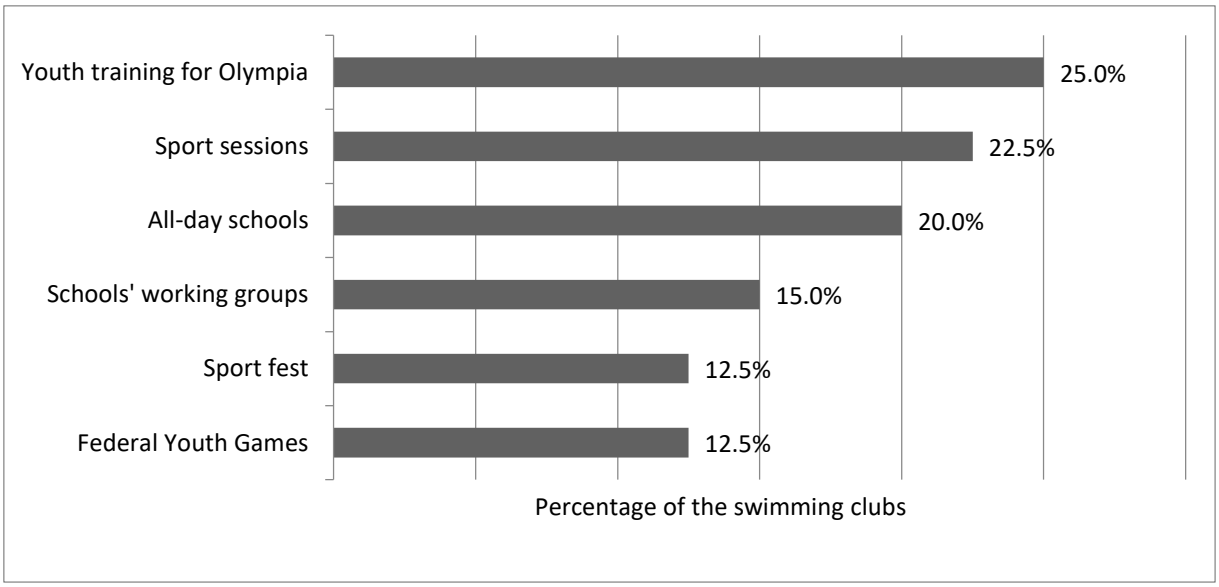

Figure 37 Different events and methods of cooperation between swimming clubs and schools' sport regarding TI.

5.2.23. TI procedures used at swimming clubs

In order to identify and select talented swimmers, swimming clubs use some methods and opportunities to achieve that. As revealed by the study, a major portion of swimming clubs in the sample (82.5 %) depends in the first place on *sport clubs' competition* to identify and select talents. The second procedure used is the *federal regional multi-faceted test*, which is used by (52.5 %) of the sample. Adding to that, around 45 % of the sample offer and use *trial courses* as an opportunity to identify and to select talents. In the fourth place, swimming clubs (32.5 %) identify and select talented swimmers depending on their cooperation with schools, through the *swimming lessons at schools*, which is a part of the physical education curriculum at schools in Germany. Furthermore, some other methods are used by small percentages of the sample such as *sport festivals*; *kids' sport schools - KISS*; *talent identification events* and others, as shown in detail in (Figure 38).

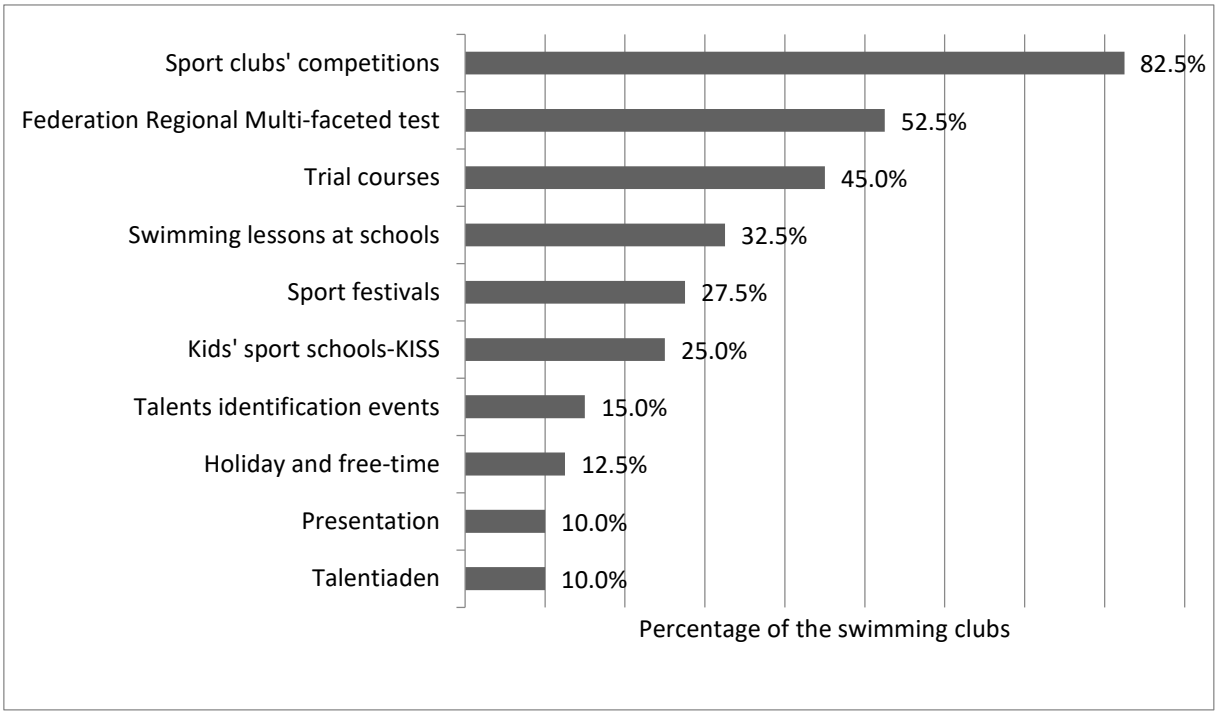

Figure 38 The usage of different methods to identify talents by swimming clubs.

5.3. Talent development

5.3.1. Self-evaluation regarding the achievement of talent development within the swimming club

Most of the swimming clubs in the sample (47.5 %) stated that they have an intermediate level regarding their achievements in talent development. The second biggest portion of the sample (30 %) have a good or a very good level, and the smallest portion (22.5 %) have a bad or a very bad level in talent development, as presented in (Figure 39).

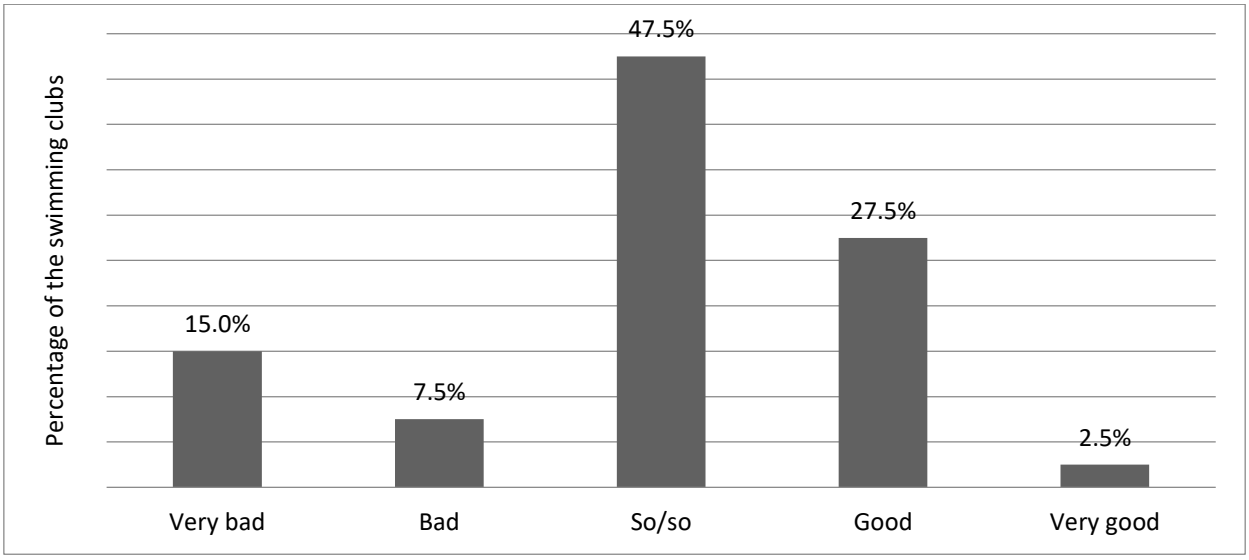

Figure 39 Self-evaluation regarding the level of talent development in swimming clubs.

5.3.2. The correlation matrix

Since the variables of talent development are similar to the variables of talent identification and selection, and since they are both designed according to the Donabedian theory for quality, the Spearman correlation analysis is done for talent development variables in the same way used for the variables of talent identification and selection in order to explore the relationships between the different variables.

The main variables used in the Likert scale in order to explore the level of talent development within the swimming clubs are classified according to the main elements of the Donabedian theory for quality. The variables and their classifications are described in (Table 17).

Table 17 Variables of talent development.

V. Nr.	The variable	The classification
01	Much success is achieved in competitions through talent development.	Outcome
02	Enough talent is developed.	Outcome
03	Fulfilment of talent development targets.	Outcome
04	Systematic planning is taking place.	Process – Planning
05	Orienteering through the "Elite Sports Concept" of the federation regarding talent development.	Structure – Obligations
06	New scientific insights are being taken into consideration.	Process – Implementations
07	Training for talents is well organized.	Process – Implementations
08	Training is sufficiently documented.	Process – Implementations
09	There are very concrete goals for talent identification and selection.	Structure – Goals
10	The goals of talent development are defined in writing.	Structure – Goals
11	There are enough training facilities that we can use.	Structure – Resources
12	The coaches are sufficiently qualified.	Structure – Opportunities
13	There is enough cooperation between schools and sport clubs.	Structure – Opportunities
14	There is enough support for competitive sports in schools.	Structure – Resources
15	Master plans are taken into consideration as a basis for training.	Process – Planning
16	Laws and regulations (e.g. of the association and feds) play a large role in talent development.	Structure - Obligations
17	There is good support from schools for talent development.	Structure - Resources
18	There is good support from parents for talent development.	Structure - Resources
19	The talent pool is sufficient for talent development.	Structure - Resources

A correlation coefficient matrix was made between the past mentioned variables in order to see the correlations between the different variables, as presented in (Table 18), and the correlations were interpreted according to Evans (1996) as mentioned before.

Table 18 Correlation matrix for talent development variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	1.000																		
2	.770**	1.000																	
	.000																		
3	.697**	.710**	1.000																
	.000	.000																	
4	.590**	.696**	.827**	1.000															
	.000	.000	.000																
5	.583**	.524**	.777**	.600**	1.000														
	.000	.001	.000	.000															
6	.592**	.560**	.655**	.680**	.733**	1.000													
	.000	.000	.000	.000	.000														
7	.667**	.755**	.733**	.773**	.576**	.552**	1.000												
	.000	.000	.000	.000	.000	.000													
8	.513**	.496**	.496**	.584**	.517**	.546**	.644**	1.000											
	.001	.001	.001	.000	.001	.000	.000												
9	.588**	.677**	.723**	.870**	.608**	.668**	.676**	.695**	1.000										
	.000	.000	.000	.000	.000	.000	.000	.000											
10	.469**	.651**	.749**	.871**	.587**	.680**	.707**	.515**	.847**	1.000									
	.002	.000	.000	.000	.000	.000	.000	.001	.000										
11	.453**	.502**	.573**	.565**	.427**	.408**	.551**	.221	.422**	.507**	1.000								
	.003	.001	.000	.000	.006	.009	.000	.171	.007	.001									
12	.569**	.473**	.515**	.469**	.484**	.345*	.495**	.377*	.433**	.322*	.409**	1.000							
	.000	.002	.001	.002	.002	.029	.001	.016	.005	.043	.009								
13	.172	.030	.246	.254	.327*	.390*	.140	.340*	.195	.257	.063	.292	1.000						
	.288	.853	.126	.114	.040	.013	.388	.032	.229	.109	.702	.068							
14	.273	.194	.342*	.272	.419**	.525**	.166	.263	.263	.280	.240	.335*	.676**	1.000					
	.088	.230	.031	.090	.007	.001	.307	.101	.101	.080	.135	.034	.000						
15	.454**	.515**	.517**	.654**	.565**	.576**	.514**	.650**	.743**	.659**	.300	.580**	.309	.369*	1.000				
	.003	.001	.001	.000	.000	.000	.001	.000	.000	.000	.060	.000	.053	.019					
16	.515**	.486**	.604**	.575**	.750**	.737**	.463**	.577**	.653**	.586**	.226	.322*	.357*	.417**	.641**	1.000			
	.001	.001	.000	.000	.000	.000	.003	.000	.000	.000	.162	.043	.024	.007	.000				
17	.406**	.371*	.410**	.365*	.376*	.452**	.288	.288	.439**	.393*	.263	.082	.485**	.523**	.276	.444**	1.000		
	.009	.018	.009	.020	.017	.003	.071	.072	.005	.000	.101	.617	.002	.001	.084	.004			
18	.577**	.664**	.577**	.533**	.569**	.490**	.584**	.305	.541**	.577**	.421**	.480**	.184	.342*	.518**	.440**	.404**	1.000	
	.000	.000	.000	.000	.000	.001	.000	.055	.000	.000	.007	.002	.255	.031	.001	.004	.010		
19	.684**	.650**	.553**	.489**	.654	.625**	.512**	.359*	.508**	.481**	.378*	.367*	.233	.334*	.404**	.597**	.472**	.611**	1.000
	.000	.000	.000	.001	.000	.000	.001	.023	.001	.002	.016	.020	.149	.035	.010		.002	.000	

5.3.3. Much success is achieved in competitions through talent development

This variable refers to the effect of talent development methods and procedures used in the swimming clubs on the success of the club in swimming competitions. According to the study, the biggest part of the sample (40 %) stated a partial or total positive effect of the talent development in their club on the success they achieve in the competitions. However, another (32.5 %) of the sample stated negative responses regarding this point, as illustrated in (Figure 40).

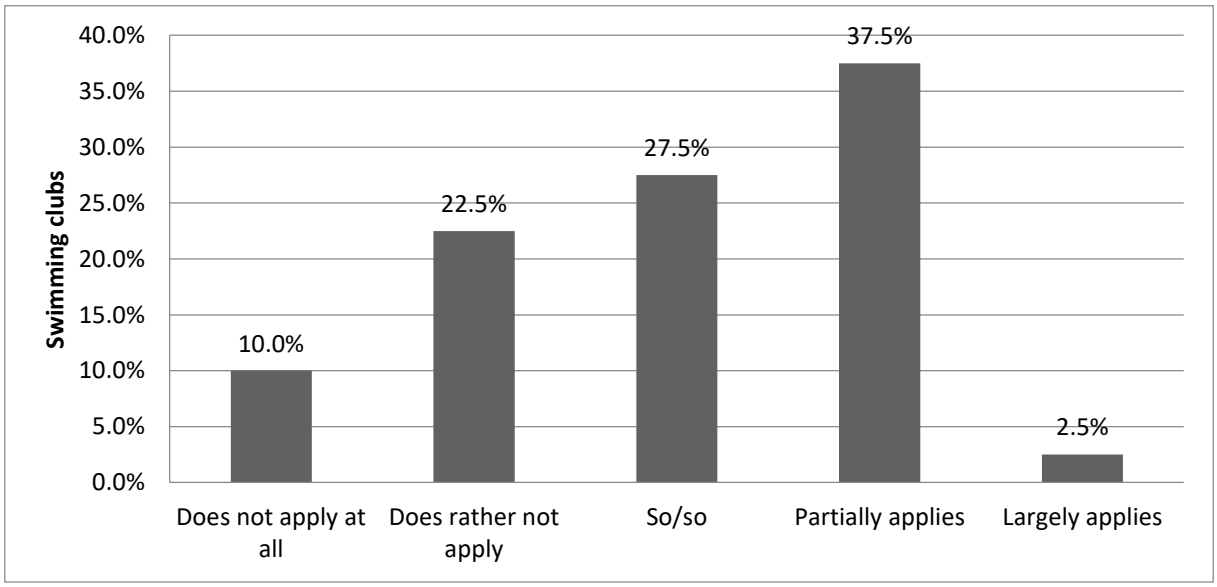

Figure 40 Much success is achieved in competitions through talent development.

Based on the correlation matrix, the variable "much success is achieved in competitions through talent development" has positive correlations with most other variables in the correlation matrix, but most of the correlations are moderate, and it has no negative correlation with any other variable. However, it has strong positive correlations with the following variables:

01. The talent pool is sufficient for talent development (resources, structure),

(r =.684, p<.05).

02. Training for talents is well organized (implementations, process), (r =.667, p<.05).

Adding to that, it has strong positive correlations with all the variables representing the outcome:

03. Enough talents are developed (outcome) (r =.770, p<.05).

04. Fulfilment of talent development targets (outcome) (r =.697, p<.05).

To have a better understanding of the results, (Table 19) describes the results of the correlations related to the discussed variable.

Table 19 The correlations of the variable (much success is achieved in competitions through talent development) with other variables of the correlation matrix.

1. Much success is achieved in competitions through talent development.			V. Strong positive	Strong positive	Moderate positive	Weak positive	Insig.
Structure	Goals	9. There are very concrete goals.			.588		
		10. The goals are defined in writing.			.469		
	Resources	11. There are enough training facilities that we can use.			.453		
		14. There is enough support for competitive sports in schools.					.273
		17. There is good support from schools for talent development.			.406		
		18. There is good support from parents for talent development.			.577		
		19. The talent pool is sufficient for talent development.		.684			
	Opportunities	12. The coaches are sufficiently qualified.			.569		
		13. There is enough cooperation between schools and sports clubs.					.172
	Obligations	5.Orienteering through the “Elite Sports Concept” regarding TD			.583		
		16. Laws and regulations (e.g. of the association and feds) play a large role in talent development.			.515		
Process	Planning	4. Systematic planning is taking place.			.590		
		15. Master plans are taken into consideration as a basis for training.			.454		
	Implementation	6. New scientific insights are being taken into consideration.			.592		
		7. Training for talents is well organized.		.667			
		8.Training is sufficiently documented.			.513		
Outcome		2.Enough talent is developed.		.770			
		3.Fulfilllment of talent development targets		.697			

5.3.4. Enough talent is developed at the swimming clubs

The biggest part of the sample (45 %) denied that their swimming clubs are developing enough talent. However, less than quarter of the sample (22.5 %) stated that they have enough talent to develop in their swimming clubs, and the rest of the sample had moderate responses regarding this point, as shown in (Figure 41).

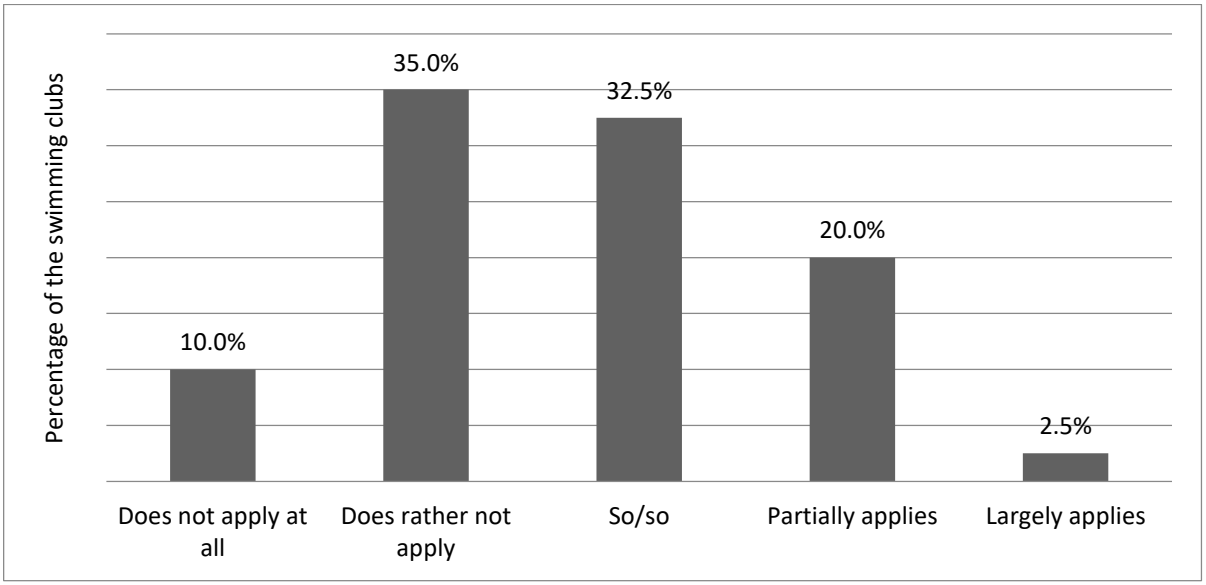

Figure 41 Enough talent is developed at the swimming clubs.

Based on the correlation matrix, the discussed variable has strong positive correlations with the following variables of the matrix:

01. There are very concrete goals (goals, structure), (r =.677, p<.05).

02. The goals are defined in writing (goals, structure), (r =.651, p<.05).

03. There is good support from parents for talent development (resources, structure), (r =.664, p<.05).

04. The talent pool is sufficient for talent development (resources, structure), (r =.650, p<.05).

05. Systematic planning is taking place (planning, structure), (r =.696, p<.05).

06. Training for talents is well organized (implementations, process), (r =.755, p<.05).

Additionally, there is a strong positive correlation between the discussed variable and all variables representing the outcome, which are:

07. Much success is achieved in competition through TD (r =.770, p<.05).

08. Fulfilment of talent development targets (r =.710, p<.05).

Generally, the variable has positive correlations with all other variables in the correlation matrix, but it has strong positive correlations with all variables representing the goals, which is a sub-item of structure, and with all other variables representing the outcome, as shown in (Table 20).

Table 20 The correlations of the variable (enough talent is developed) with other variables of the correlation matrix.

2.Enough talent is developed.			V. Strong positive	Strong positive	Moderate positive	Weak positive	Insig.
Structure	Goals	9. There are very concrete goals.		.677			
		10. The goals are defined in writing.		.651			
	Resources	11. There are enough training facilities that we can use.			.502		
		14. There is enough support for competitive sports in schools.					.194
		17. There is good support from schools for talent development.				.371	
		18. There is good support from parents for talent development.		.664			
		19. The talent pool is sufficient for talent development.		.650			
	Opportunities	12. The coaches are sufficiently qualified.			.437		
		13. There is enough cooperation between schools and sports clubs.					.030
	Obligations	5.Orienteering through the “Elite Sports Concept” regarding TD			.524		
		16. Laws and regulations (e.g. of the association and feds) play a large role in talent development.			.486		
Process	Planning	4. Systematic planning is taking place.		.696			
		15. Master plans are taken into consideration as a basis for training.			.515		
	Implementation	6. New scientific insights are being taken into consideration.			.560		
		7. Training for talents is well organized.		.755			
		8.Training is sufficiently documented.			.496		
Outcome		1. Much success is achieved in competitions through talent development.		.770			
		3.Fulfilllment of talent development targets		.710			

5.3.5. Fulfilment of talent development targets

The study shows that (55 %) of the swimming clubs in the sample do not, partially or totally, achieve the goals and targets of the swimming club regarding talent development. Yet, only a small portion of the sample (10 %) partly achieve their goals, and the rest of the sample gave neutral responses, as clarified in (Figure 42).

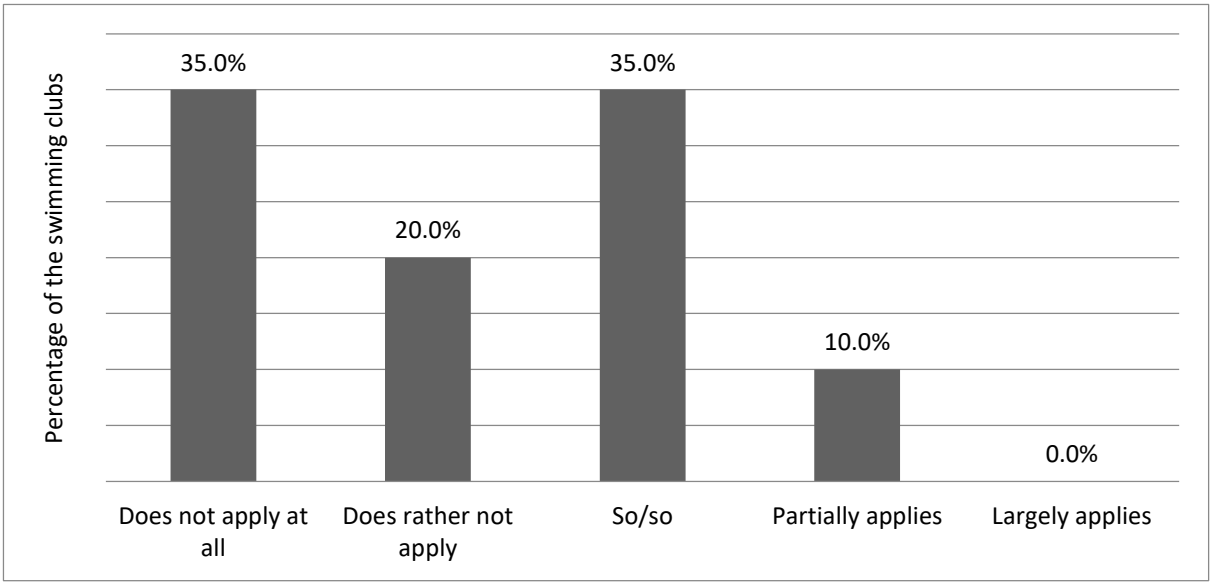

Figure 42 Fulfilment of talent development targets.

Based on the correlation matrix, the variable "fulfilment of talent development targets" has very strong positive correlations with the variable:

01. Systematic planning is taking place (planning, process), (r =.827, p<.05).

Additionally, it has strong positive correlations with the following variables:

02. There are very concrete goals (goals, structure), (r =.723, p<.05).

03. The goals are defined in writing (goals, structure), (r =.749, p<.05).

04. Orienteering through the "Elite Sports Concept" regarding TD (obligations, structure), (r =.777, p<.05).

05. Laws and regulations play a large role in talent development (obligations, structure), (r =.604, p<.05).

Furthermore, it has strong positive correlations with all other variables representing the outcome, which are:

06. Much success is achieved in competition through TD (outcome), (r =.697, p<.05).

07. Enough talent is developed (outcome), (r =.710, p<.05).

Accordingly, the variable has positive significant correlations with most of the other variables in the matrix with no negative correlations at all. However, it has strong positive correlations with all variables representing the “goals” and “obligations, the sub-items of “structure”. Additionally, it has strong positive correlations with all other variables representing the “outcome” in the study, as shown in (Table 21).

Table 21 the correlations of the variable (Fulfilment of talent development's targets) with other variables in the correlation matrix..

3.Fulfilment of talent development targets			V. Strong positive	Strong positive	Moderate positive	Weak positive	Insig.
Structure	Goals	9. There are very concrete goals.		.723			
		10. The goals are defined in writing.		.749			
	Resources	11. There are enough training facilities that we can use.			.573		
		14. There is enough support for competitive sports in schools.				.342	
		17. There is good support from schools for talent development.			.410		
		18. There is good support from parents for talent development.			.577		
		19. The talent pool is sufficient for talent development.			.553		
	Opportunities	12. The coaches are sufficiently qualified.			.515		
		13. There is enough cooperation between schools and sports clubs.					.246
	Obligations	5.Orienteering through the "Elite Sports Concept" regarding TD		.777			
		16. Laws and regulations (e.g. of the association and feds) play a large role in talent development.		.604			
Process	Planning	4. Systematic planning is taking place.	.827				
		15. Master plans are taken into consideration as a basis for training.			.517		
	Implementation	6. New scientific insights are being taken into consideration.		.655			
		7. Training for talents is well organized.		.733			
		8.Training is sufficiently documented.			.496		
Outcome		1. Much success is achieved in competitions through talent development. (outcome) Spearman correlation		.697			
		2.Enough talent is developed.		.710			

5.3.6. Systematic planning is taking place

The variable represents the "planning", which is a sub-item of "structure". As the study shows, most of the swimming clubs in the sample (63 %) do not have their processes and procedures of talent development systematically planned, totally or partly. However, there are another (15 %) of the sample that do a total or partial systematic planning for the talent development processes, as shown in (Figure 43).

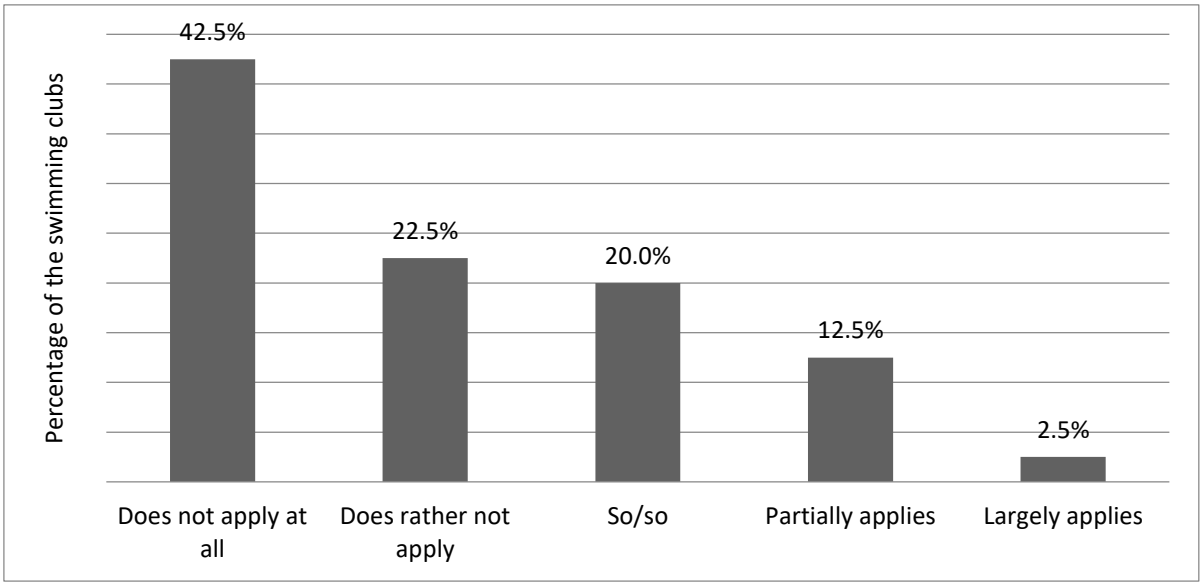

Figure 43 Systematic planning for talent development is taking place at the swimming clubs.

The variable “Systematic planning is taking place” has very strong positive correlations with the following variables:

01. There are very concrete goals (goals, structure), (r =.870, p<.05).

02. The goals are defined in writing (goals, structure), (r =.871, p<.05).

03. Fulfilment of talent development targets (outcome), (r =.827, p<.05).

Additionally, it has strong positive correlations with the following variables:

04. Orienteering through the “Elite Sport Concept” regarding TD (obligations, structure), (r =.600, p<.05).

05. Master plans are taken into consideration as a basis for training (planning, process), (r =.654, p<.05).

06. New scientific insights are being taken into consideration (implementations, process), (r =.680, p<.05).

07. Training for talents is well organized (implementations, process), (r =.773, p<.05).

08. Enough talent is developed (outcome), (r =.696, p<.05).

Based on the correlation matrix, the systematic planning of talent development in a swimming clubs has very strong positive correlations with the presence of concrete goals at the

swimming clubs regarding their talent development processes, and having their goals of talent development in a written form. Furthermore, it has very strong positive correlations with fulfilling the targets of talent development at the swimming club. Plus, the variable has strong positive correlations almost with all variables representing the “process” item as shown in (Table 22).

Table 22 The correlations of the variable (Systematic planning is taking place regarding talent development) with other variables in the correlation matrix.

4.Systematic planning is taking place.			V. Strong positive	Strong positive	Moderate positive	Weak positive	Insig.
Structure	Goals	9. There are very concrete goals.	.870				
		10.The goals are defined in writing.	.871				
	Resources	11. There are enough training facilities that we can use.			.565		
		14. There is enough support for competitive sports in schools.					.272
		17. There is good support from schools for talent development.				.365	
		18. There is good support from parents for talent development.			.533		
		19. The talent pool is sufficient for talent development.			.489		
	Opportunities	12. The coaches are sufficiently qualified.			.469		
		13. There is enough cooperation between schools and sports clubs.					.254
	Obligations	5.Orienteering through the “Elite Sports Concept” regarding TD		.600			
		16. Laws and regulations (e.g. of the association and feds) play a large role in talent development.			.575		
Process	Planning	15. Master plans are taken into consideration as a basis for training.		.654			
	Implementation	6. New scientific insights are being taken into consideration.		.680			
		7. Training for talents is well organized.		.773			
		8.Training is sufficiently documented.			.584		
Outcome		1. Much success is achieved in competitions through talent development.			.590		
		2.Enough talent is developed.		.696			
		3.Fulfilllment of talent development targets	.827				

5.3.7. Orienteering through the “Elite Sports Concept” of the federation regarding talent development

The biggest portion of the swimming clubs (63 %) do not use the "Elite Sport Concept", published by the DOSB, as an orientation guide when developing talented swimmers at the

club. However, 12.5 % of the swimming clubs confirmed that they partially use it, and only a minor portion of the sample (2.5 %) affirmed their orientation through the “Elite Sport Concept” when developing talented swimmers, as presented in (Figure 44).

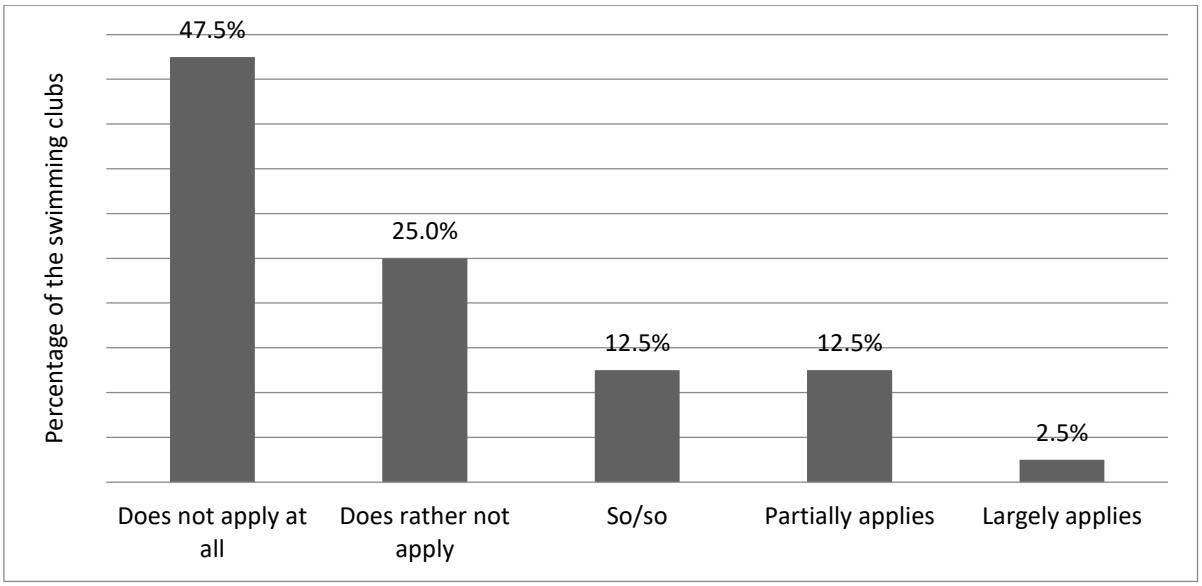

Figure 44 Orienteering through the "Elite Sport Concept" of the federation regarding talent development within the swimming clubs.

Based on the correlation matrix, the variable “Orienteering through the Elite Sport Concept of the federation regarding TD” has strong positive correlations with the following variables:

01. Fulfilment of talent development targets (outcome), (r =.777, p<.05).

02. The talent pool is sufficient for talent development (resources, structure),

(r =.654, p<.05).

03. Laws and regulations (e.g. of the fed) play a large role in TD (obligations, structure), (r =.750, p<.05).

04. Systematic planning is taking place (planning, process), (r =.600, p<.05).

05. Master plans are taken into consideration as a basis for training (planning, process), (r =.565, p<.05).

06. New scientific insights are being taken into consideration (implementation, structure), (r=.733, p<.05).

Accordingly, there is a strong positive correlation between the discussed variable and achieving the targets of talent development. Additionally, the variable has a strong positive correlation with all variables representing "planning", the sub-item of "structure", as exposed in (Table 23).

Table 23 The correlations of the variable (Orienteering through the "Elite Sport Concept" regarding TD) with other variables in the correlation matrix.

5. Orienteering through the "Elite Sport Concept" regarding talent development.			V. Strong positive	Strong positive	Moderate positive	Weak positive	Insig.
Structure	Goals	9. There are very concrete goals.		.608			
		10. The goals are defined in writing.			,587		
	Resources	11.There are enough training facilities that we can use.			.427		
		14. There is enough support for competitive sports in schools.			.419		
		17. There is good support from schools for talent development.				.376	
		18. There is good support from parents for talent development.			.569		
		19. The talent pool is sufficient for talent development.		.654			
	Opportunities	12. The coaches are sufficiently qualified.			.484		
		13. There is enough cooperation between schools and sports clubs.				.327	
	Obligations	16. Laws and regulations (e.g. of the association and feds) play a large role in talent development.		.750			
Process	Planning	4. Systematic planning is taking place.		.600			
		15.Master plans are taken into consideration as a basis for training.		.565			
	Implementation	6. New scientific insights are being taken into consideration.		.733			
		7. Training for talents is well organized.			.576		
		8.Training is sufficiently documented.			.517		
Outcome		1. Much success is achieved in competitions through talent development.			.583		
		2.Enough talent is developed.			.524		
		3.Fulfilllment of talent development targets		.777			

5.3.8. New scientific insights are being taken into consideration

The majority of the studied sample (72.5 %) submitted negative responses when it comes to considering new scientific insights when developing talents within their swimming

clubs. Nonetheless, 10 % of the swimming clubs admitted a partial consideration for the scientific insights, and only another 2.5 % of the sample confirmed using them when developing their talents, as presented in (Figure 45).

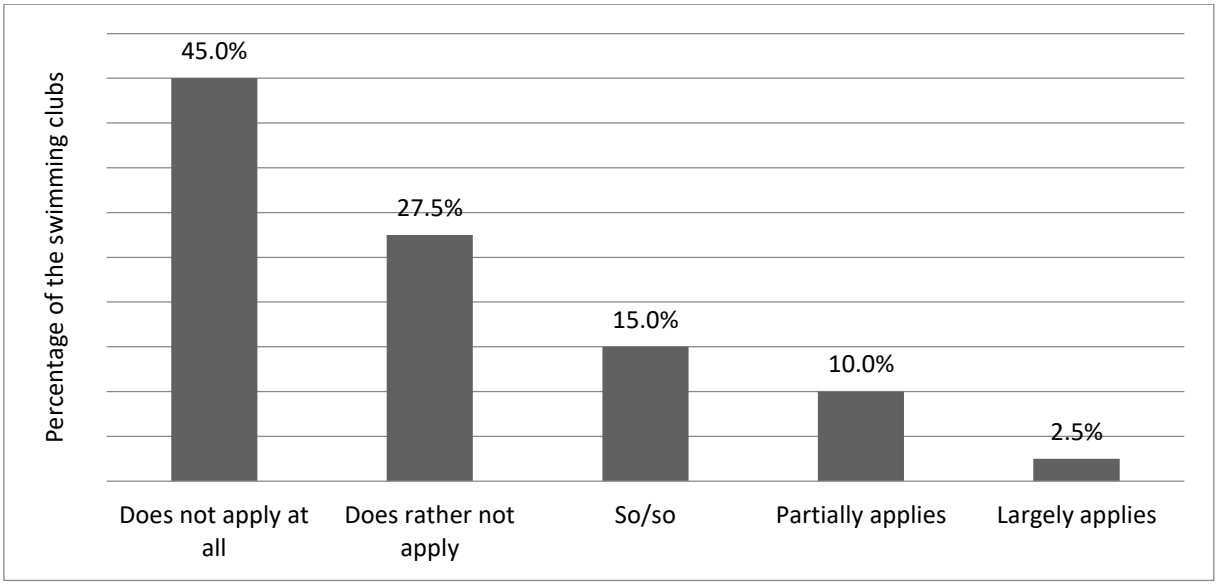

Figure 45 New scientific insights are being taken into consideration regarding TD at swimming clubs.

According to the correlation matrix, there are strong positive correlations between the variable "New scientific insights are being taken into consideration" and the following variables:

01. Fulfilment of talent development targets (outcome), (r =.655, p<.05).

02. There are very concrete goals (goals, structure), (r =.668, p<.05).

03. The goals are defined in writing (goals, structure), (r =.680, p<.05).

04. The talent pool is sufficient for talent development (resources, structure), (r =.625, p<.05).

05. Orienteering through the "Elite Sport Concept of the federation (obligations, structure), (r =.733, p<.05).

06. Laws and regulations play a large role in talent development (obligations, structure), (r=.737, p<.05).

07. Systematic planning is taking place (planning, process), (r =.680, p<.05).

That makes us able to conclude that considering the new scientific insights regarding talent development is correlated with achieving the targets of talent development in the swimming club. Additionally, most of the strong positive correlations are between the discussed variable and the variables representing the "structure", as illustrated in (Table24).

Table 24 The Correlations of the variable (New scientific insights are being taken into consideration regarding TD) with other variables in the correlation matrix.

6. New scientific insights are being taken into consideration.			V. Strong positive	Strong positive	Moderate positive	Weak positive	Insig.
Structure	Goals	9. There are very concrete goals.		.668			
		10.The goals are defined in writing.		.680			
	Resources	11. There are enough training facilities that we can use.			.408		
		14. There is enough support for competitive sports in schools.			.525		
		17. There is good support from schools for talent development.			.452		
		18. There is good support from parents for talent development.			.490		
		19. The talent pool is sufficient for talent development.		.625			
	Opportunities	12. The coaches are sufficiently qualified.				.345	
		13. There is enough cooperation between schools and sports clubs.				.390	
	Obligations	5.Orienteering through the "Elite Sport Concept" regarding TD		.733			
		16. Laws and regulations (e.g. of the association and feds) play a large role in talent development.		.737			
Process	Planning	4. Systematic planning is taking place.		.680			
		15.Master plans are taken into consideration as a basis for training.			.576		
	Implementation	7. Training for talents is well organized.			.552		
		8.Training is sufficiently documented.			.546		
Outcome		1. Much success is achieved in competitions through talent development.			.592		
		2.Enough talent is developed.			.560		
		3.Fulfilllment of talent development targets		.655			

5.3.9. Training for talents is well organized

The biggest portion of the sample (39.5 %) submitted positive responses regarding the well-organized training provided for the swimmers at their swimming clubs, but only 12.5 % of this portion confirmed that. However, a portion of the sample (37.5 %) totally or partially

denied this fact at their clubs, and the rest of the sample provided neutral responses, as illustrated in (Figure 46).

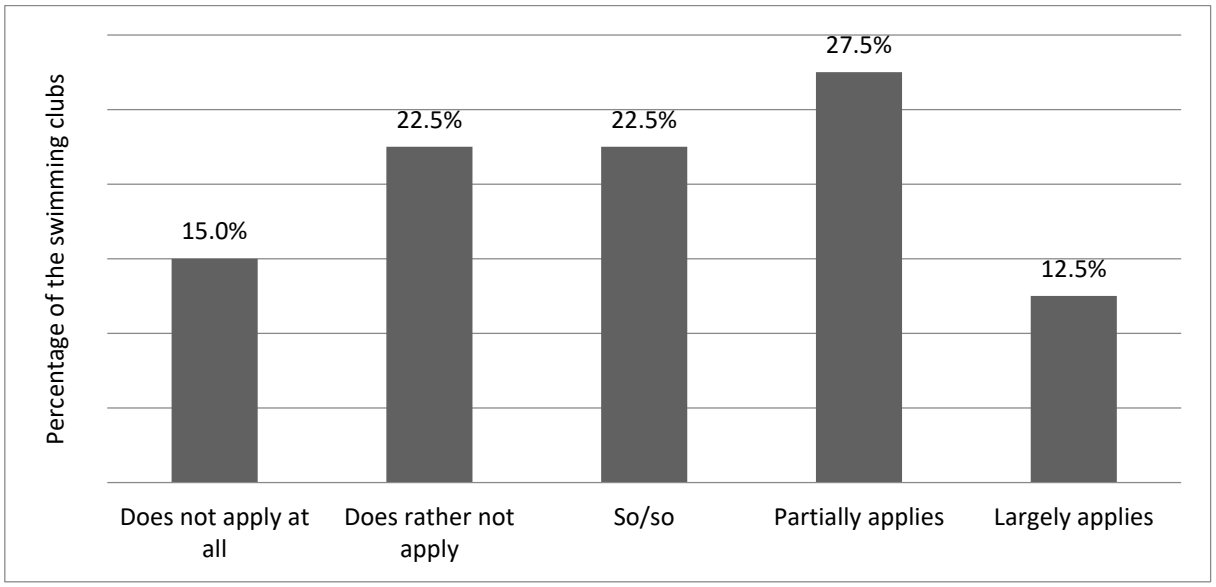

Figure 46 Training for talents is well organized at the swimming clubs.

The variable “Training for talents is well organized” has strong positive correlations with the following variables:

01. Much success is achieved in competitions through TD (outcome), (r =.667, p<.05).

02. Enough talent is developed (outcome), (r =.755, p<.05).

03. Fulfilment of talent development targets (outcome), (r =.733, p<.05).

04. There are very concrete goals (goals, structure), (r =.676, p<.05).

05. The goals are defined in writing (goals, structure), (r =.707, p<.05).

06. Systematic planning is taking place (planning, process), (r =.773, p<.05).

07. Training is sufficiently documented (implementations, process), (r =.644, p<.05).

According to the past results, there are strong positive correlations between the studied variable and all variables representing the “outcome”. Accordingly, providing well-organized training for the swimmers at the sport club might have an influence on improving the results of the swimming club. Additionally, the variable has strong positive correlations with all variables representing the “goals”, the sub-item of “structure”. Finally, there are a strong positive

correlations between the presence of a well-organized training at a clubs on one side, and the systematic planning for talent development and the documentation of the training on the other side. More details about the correlations of the discussed variable are provided in (Table 25).

Table 25 The correlations of the variable (Training for talent is well organized) with other variables in the correlation matrix.

7.Training for talents is well organized.			V. Strong positive	Strong positive	Moderate positive	Weak positive	Insig.
Structure	Goals	9. There are very concrete goals.		.676			
		10. The goals are defined in writing.		.707			
	Resources	11. There are enough training facilities that we can use.			.551		
		14. There is enough support for competitive sports in schools.					.166
		17. There is good support from schools for talent development.					.288
		18. There is good support from parents for talent development.			.584		
		19. The talent pool is sufficient for talent development.			.512		
	Opportunities	12. The coaches are sufficiently qualified.			.495		
		13. There is enough cooperation between schools and sports clubs.					.140
	Obligations	5.Orienteering through the “Elite Sport Concept” regarding TD			.576		
		16. Laws and regulations (e.g. of the association and feds) play a large role in talent development.			.463		
Process	Planning	4. Systematic planning is taking place.		.773			
		15.Master plans are taken into consideration as a basis for training.			.514		
	Implementation	6. New scientific insights are being taken into consideration.			.552		
		8.Training is sufficiently documented.		.644			
Outcome		1. Much success is achieved in competitions through talent development.		.667			
		2.Enough talent is developed.		.755			
		3.Fulfilllment of talent development targets		.733			

5.3.10. Training is sufficiently documented

A part of the swimming clubs (37 %) noted that the documentation of the talents’ training is totally or partly missed at their swimming clubs. Nonetheless, 22.5 % of the sample partially document their talents’ training and only 12.5 % of the sample fully document the trainings of their talented swimmers, as depicted in (Figure 47).

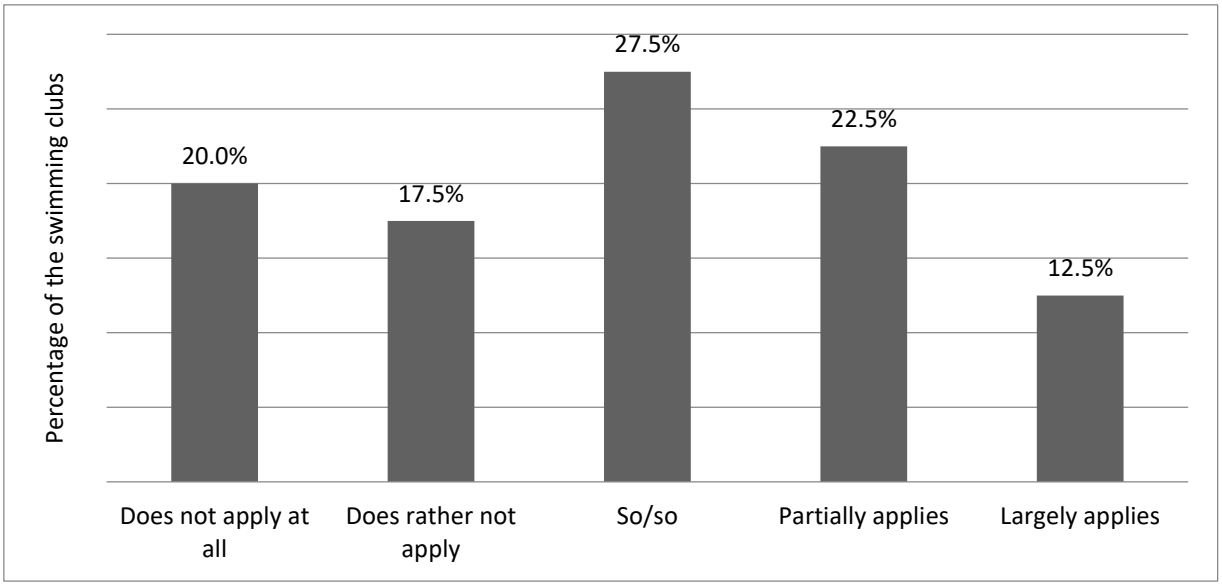

Figure 47 Training for talents is sufficiently documented.

Based on the correlation matrix, there are strong positive correlations between the variable "Training is sufficiently documented" and the following variables:

01. Master plans are taken into consideration as a basis for training (planning, process), (r =.650, p<.05).

02. Training for talents is well organized (implementations, process), (r =.644, p<.05).

So that, the variable has no strong or very strong correlations with any variable representing the outcome, and it has only correlations with two variables that represent the process, as shown in (Table 26).

Table 26 The correlations of the variable (Training is sufficiently documented) with other variables in the correlation matrix.

8. Training is sufficiently documented			V. Strong positive	Strong positive	Moderate positive	Weak positive	Insig.
Structure	Goals	9. There are very concrete goals.		.695			
		10.The goals are defined in writing.			.515		
	Resources	11. There are enough training facilities that we can use.					.221
		14. There is enough support for competitive sports in schools.					.263
		17. There is good support from schools for talent development.					.288
		18. There is good support from parents for talent development.					.305
		19. The talent pool is sufficient for talent development.				.359	
	Opportunities	12. The coaches are sufficiently qualified.				.377	
		13. There is enough cooperation between schools and sports clubs.				.340	
	Obligations	5.Orienteering through the "Elite Sport Concept" regarding TD			.517		
		16. Laws and regulations (e.g. of the association and feds) play a large role in talent development.			.577		
Process	Planning	4. Systematic planning is taking place.			.584		
		15. Master plans are taken into consideration as a basis for training.		.650			
	Implementation	6. New scientific insights are being taken into consideration.			.546		
		7. Training for talents is well organized.		.644			
Outcome		1. Much success is achieved in competitions through talent development.			.513		
		2.Enough talent is developed.			.496		
		3.Fulfilllment of talent development targets			.496		

5.3.11. There are very concrete goals

The biggest portion of the swimming clubs (62.5 %) partially or totally negated the presence of concrete targets and goals for talent development at their clubs. On the other hand, a small part of the sample (22.5 %) stated a positive response regarding this point, and only another 5 % of the sample fully approved the presence of such concrete goals, as shown in (Figure 48).

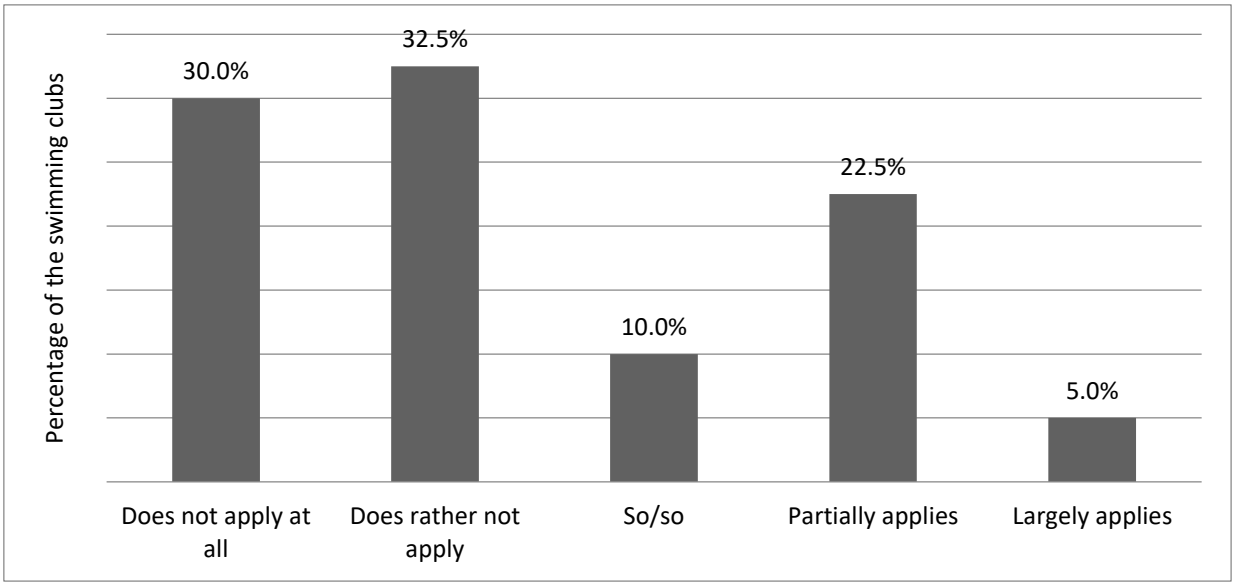

Figure 48 There are very concrete goals for talent development.

Based on the correlation matrix, there are very strong positive correlations between the discussed variable and the following variables:

01. The goals are defined in writing (goals, structure), (r =.847, p<.05).

02. Systematic planning is taking place (planning, process), (r =.870, p<.05).

Additionally, It has as strong positive correlations with the following variables:

03. Fulfilment of TD targets (outcome), (r =.723, p<.05).

04. Orienteering through the “Elite Sport Concept of the fed (obligations, structure), (r =.608, p<.05).

05. Laws and regulations play a large role in talent development (obligations, structure), (r =.653, p<.05).

06. Master plans are taken into consideration as a basis for training (planning, process), (r =.743, p<.05).

07. New scientific insights are being taken into consideration (implementations, process), (r =.668, p<.05).

08. Training for talents is well organized (implementations, process), (r =.676, p<.05).

The variable has a strong correlation with fulfilling the targets of talent development at the club. Additionally, it has a strong or very strong positive correlation with all the variables representing the “processes” item, as shown in the following table:

Table 27 The correlations of the variable (There are very concrete goals for TD) with other variables in the correlation matrix.

9. There are very concrete goals for TD			V. Strong positive	Strong positive	Moderate positive	Weak positive	Insig.
Structure	Goals	10. The goals are defined in writing.	.847				
	Resources	11. There are enough training facilities that we can use.			.422		
		14. There is enough support for competitive sports in schools.					.263
		17. There is good support from schools for talent development.			.439		
		18. There is good support from parents for talent development.			.541		
		19. The talent pool is sufficient for talent development.			.508		
	Opportunities	12. The coaches are sufficiently qualified.			.433		
		13. There is enough cooperation between schools and sports clubs.					.195
	Obligations	5.Orienteering through the “Elite Sport Concept” regarding TD		.608			
		16. Laws and regulations (e.g. of the association and feds) play a large role in talent development.		.653			
Process	Planning	4. Systematic planning is taking place.	.870				
		15. Master plans are taken into consideration as a basis for training.		.743			
	Implementation	6. New scientific insights are being taken into consideration.		.668			
		7. Training for talents is well organized.		.676			
		8.Training is sufficiently documented.		.695			
Outcome		1. Much success is achieved in competitions through talent development.			.588		
		2.Enough talent is developed.			.677		
		3.Fulfilllment of talent development targets		.723			

5.3.12. The goals are defined in writing

The majority of the swimming clubs in the sample (75 %) submitted negative responses regarding this point. Nonetheless, a portion of the sample (7.5 %) stated a partial presence of their goals in a written form and only additional 5 % of the sample have all their goals defined in a written form, as described in (Figure 49).

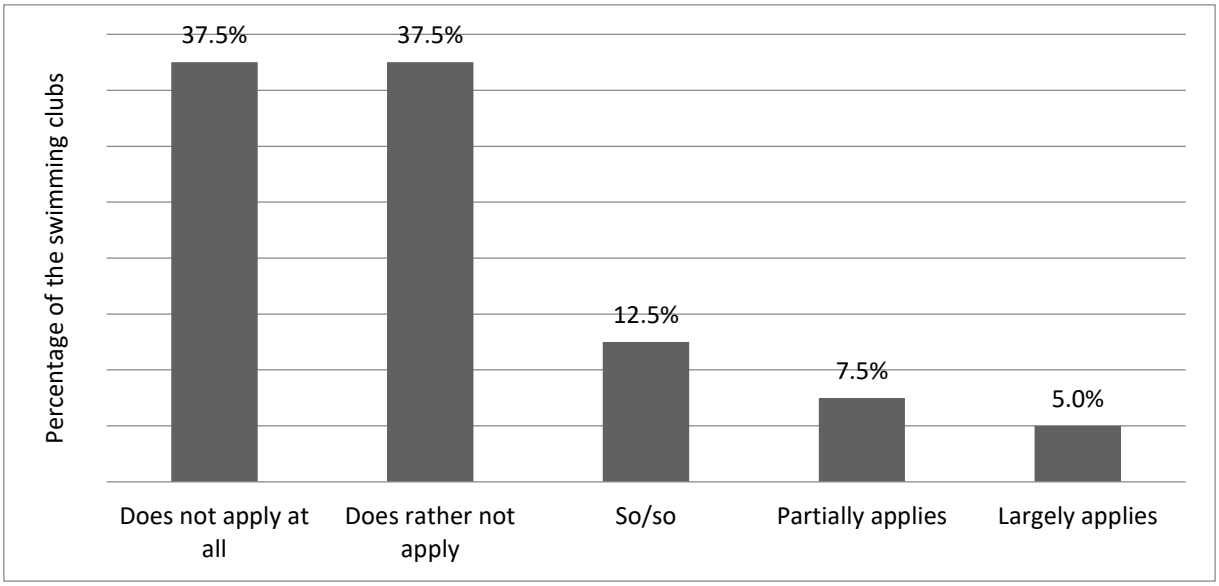

Figure 49 Goals of TD are defined in writing at the swimming clubs.

Based on the correlation matrix, there are very strong positive correlations between the discussed variable and the following variables:

01. There are very concrete goals (goals, structure), (r =.847, p<.05).

02. Systematic planning is taking place (planning, process), (r =.871, p<.05).

Additionally, there are strong positive correlations with the following variables:

03. Master plans are taken into consideration as a basis for training (planning, process), (r =.659, p<.05).

04. New scientific insights are taken into consideration regarding TD (implementations, process), (r =.680, p<.05).

05. Training for talents is well organized (implementations, process), (r =.707, p<.05).

06. Enough talent is developed (outcome), (r =.651, p<.05).

07. Fulfilment of talent development targets (outcome), (r =.749, p<.05).

Correspondingly, the variable has strong or very strong positive correlations with most of the variables representing the “process” category. Additionally, having the goals of TD in a written form is very strongly correlated with the systematic planning of TD on one side, and with having concrete goals regarding TD in the club on the other side. Plus, the variable has

strong correlations with fulfilling the targets of TD in a club, and with developing enough talents. Accordingly, having the goals of TD in a written form is positively correlated to the outcome of the swimming club regarding TD, as illustrated in (Table 28).

Table 28 The correlations of the variable (The goals of TD are defined in writing) with other variables in the correlation matrix.

10. The goals are defined in writing			V. Strong positive	Strong positive	Moderate positive	Weak positive	Insig.
Structure	Goals	9. There are very concrete goals.	.847				
	Resources	11. There are enough training facilities that we can use.			.507		
		14. There is enough support for competitive sports in schools.					.280
		17. There is good support from schools for talent development.				.393	
		18. There is good support from parents for talent development.			.577		
		19. The talent pool is sufficient for talent development.			.481		
	Opportunities	12. The coaches are sufficiently qualified.				.322	
		13. There is enough cooperation between schools and sports clubs.					.257
	Obligations	5.Orienteering through the "Elite Sport Concept" regarding TD			.587		
		16. Laws and regulations (e.g. of the association and feds) play a large role in talent development.			.586		
Process	Planning	4. Systematic planning is taking place.	.871				
		15. Master plans are taken into consideration as a basis for training.		.659			
	Implementation	6. New scientific insights are being taken into consideration.		.680			
		7. Training for talents is well organized.		.707			
		8.Training is sufficiently documented.			.515		
Outcome		1. Much success is achieved in competitions through talent development.			.469		
		2.Enough talent is developed.		.651			
		3.Fulfilllment of talent development targets		.749			

5.3.13. There are enough training facilities that we can use

The biggest portion of the sample (57.5 %) suffers from the lack of adequate sport facilities. However, a small portion of the sample (20 %) have admitted that they have partly or totally enough adequate sport facilities available to develop their talents, as shown in (Figure 50).

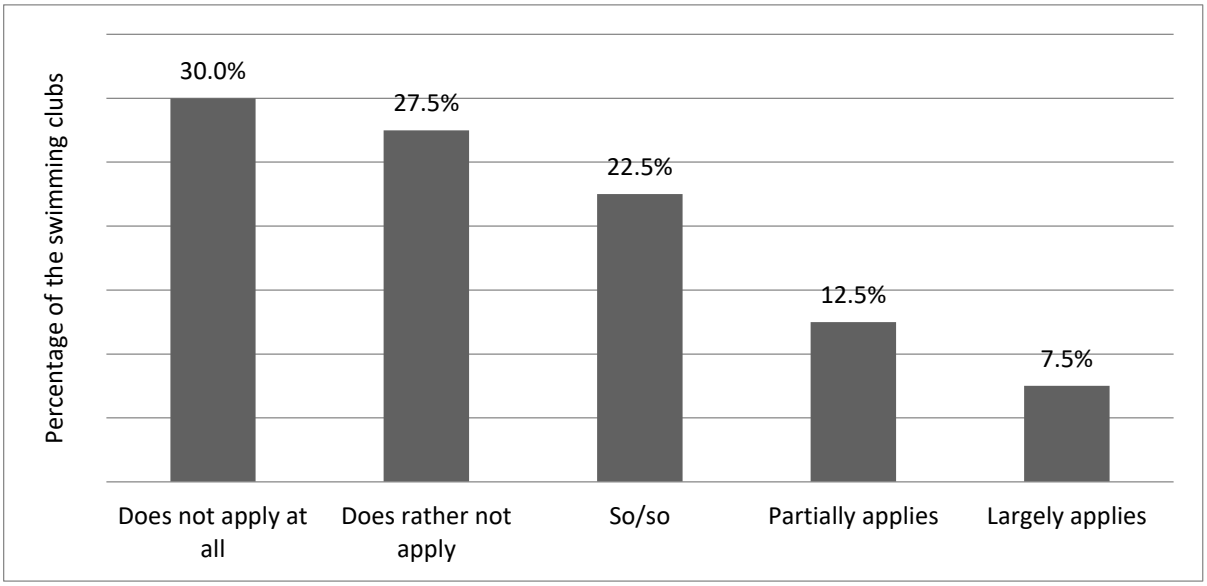

Figure 50 There are enough training facilities the swimming club can use.

Based on the correlation matrix, there are no strong or very strong positive correlations with any of the variables in the matrix.

5.3.14. The qualification level of coaches regarding talent development

Most of the swimming clubs in the sample (56 %) have, partly or totally, well-qualified coaches at the swimming clubs to develop the talented swimmers appropriately. As depicted in (Figure 51), only 22 % of the swimming clubs submitted negative responses regarding this point.

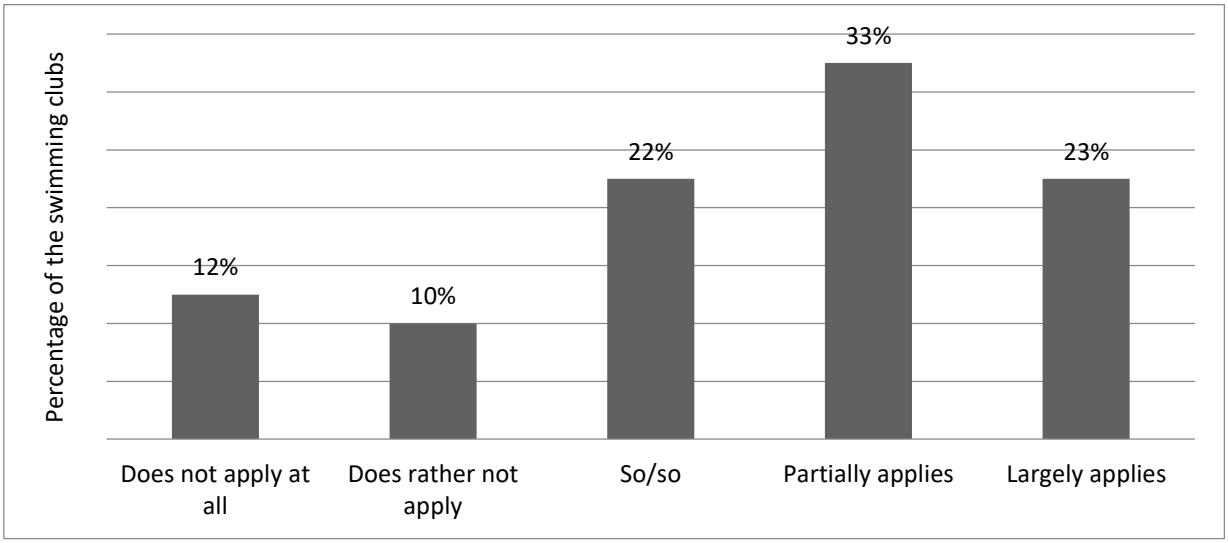

Figure 51 The coaches are sufficiently qualified at the swimming clubs.

The variable “The coaches are sufficiently qualified” has no strong or very strong correlations with any other variables in the correlation matrix.

5.3.15. There is enough cooperation between schools and sport clubs

The majority of swimming clubs (85 %) have a total or partial lack of cooperation with schools regarding talent development. The positive responses regarding this point were relatively modest. Only 7.5 % of the sample stated a partial cooperation with schools, and the rest submitted neutral responses as shown in (Figure 52).

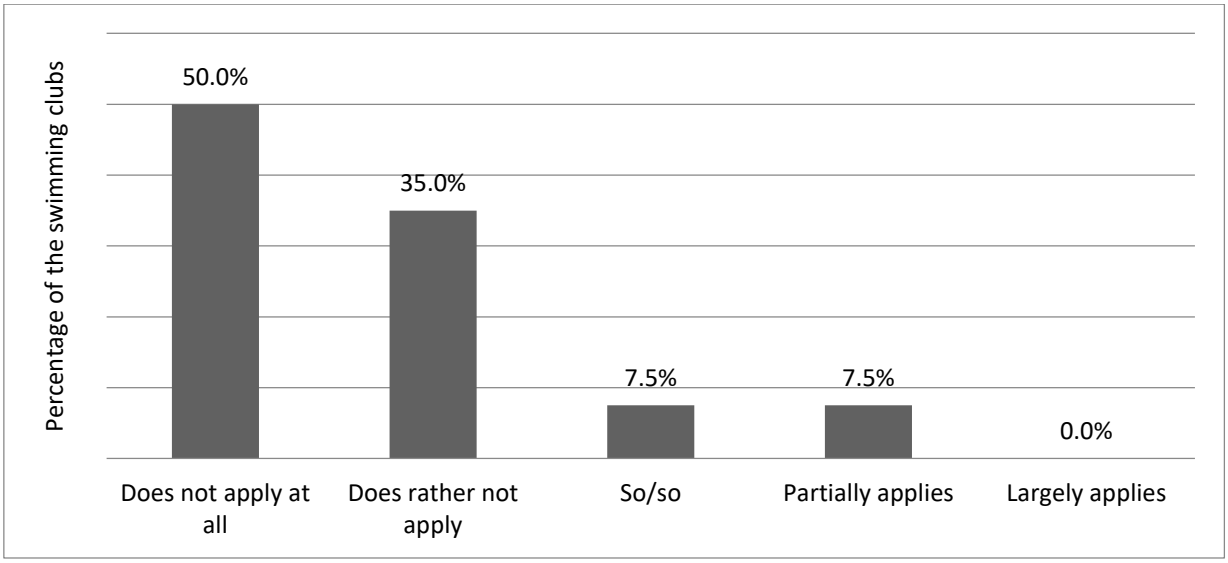

Figure 52 There is enough cooperation between schools and sport clubs.

The variable “There is enough cooperation between schools and sport clubs” has insignificant correlations with most of the other variables in the correlation matrix. Except for one strong positive correlation with the variable referring to the adequate support for competitive sports in schools, which represents “resources”, the sub-item of “structure”, (r =.676, p<.05).

5.3.16. There is enough support for competitive sports in school

The majority of the swimming clubs in the sample (82.5 %) have partially or totally negated the presence of support from schools for high performance sports. However, only 10 % of the sample stated the presence of such support, as represented in (Figure 53).

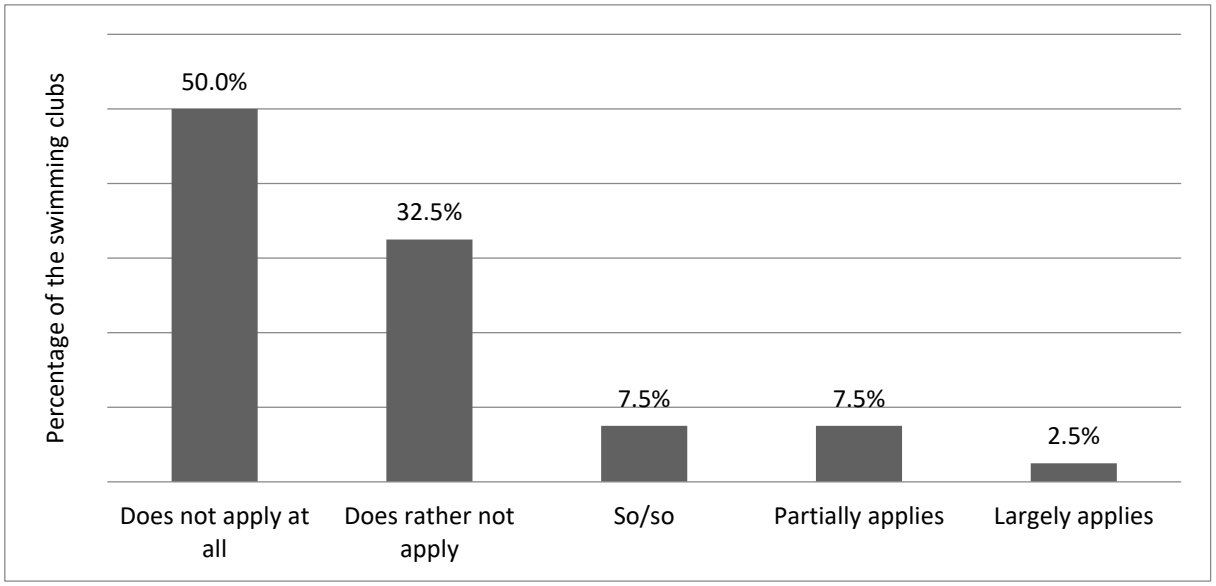

Figure 53 There is enough support for competitive sports in schools.

Based on the correlation matrix, there is only one strong positive correlation between the studied variable and the variable referring to the cooperation between schools and sport club (r=.676, p<.05), which represents the "resource", the sub-item of "structure".

5.3.17. There is a master plan

A portion of the sample (27.5 %) confirmed the presence of a master plan for talent development in their club, and another portion (15 %) stated that they partly have such a plan. However, 40 % of the sample partially or totally denied that they have a master plan at their club for developing their talents, and the rest of the clubs provided neutral responses regarding this point, as illustrated in (Figure 54).

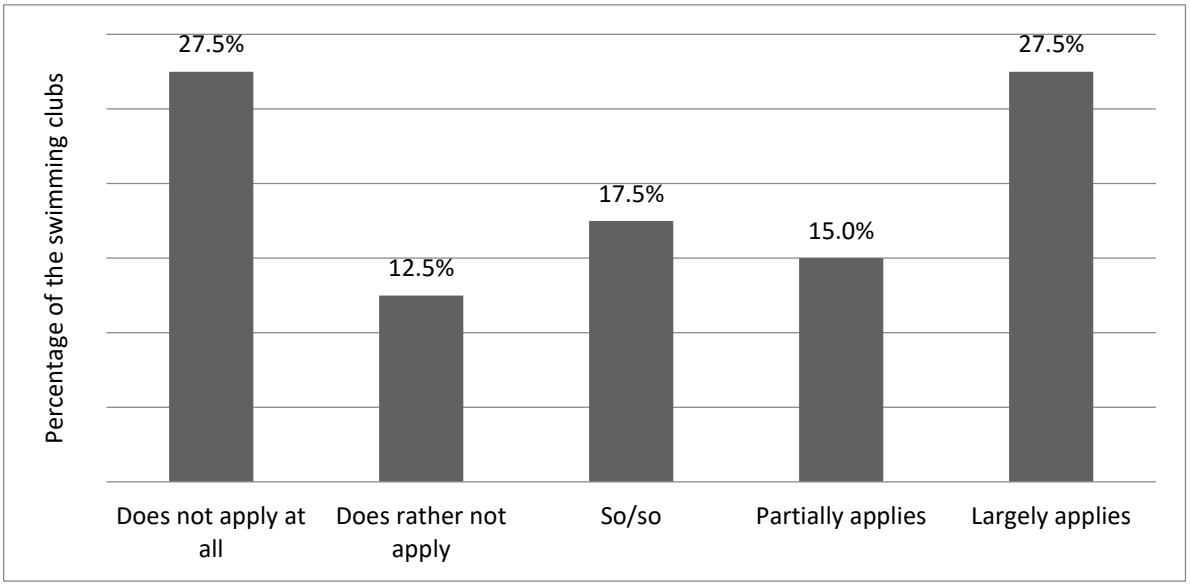

Figure 54 There is a master plan for talent development at the swimming clubs.

Based on the correlation matrix, there are strong positive correlations between this studied variable and the following variables:

01. Systematic planning is taking place (planning, process), (r =.654, p<.05).

02. Training is sufficiently documented (implementations, process), (r =.650, p<.05).

03. There are very concrete goals (goals, structure), (r =.743, p<.05).

04. The goals are defined in writing (goals, structure), (r =.659, p<.05).

05. Laws and regulations play a large role in TD (obligations, structure), (r =.641, p<.05).

Accordingly, having a master plan for talent development at swimming clubs has strong positive correlations with all variables representing the goals, which are having concrete goals for talent development, and having the goals of talent development in a written form at the club. Additionally, it has a strong positive correlation with having systematic planning for talent identification at the club. However, the variable has no strong or very strong positive correlations with any variable representing the outcome.

5.3.18. Laws and regulations (e.g. of the association and the feds) play a large role in talent development

The biggest number of swimming clubs of the sample (67.5 %) has totally or partly negated the large role of laws and regulations regarding talent development at their clubs. Nonetheless, a modest portion of the sample (7.5 %) stated that laws and regulations play a partial role in talent development at their club, and only another 5 % confirmed such a role of the laws and regulation at their clubs. The rest of the clubs gave neutral responses regarding this point, as presented in (Figure 55).

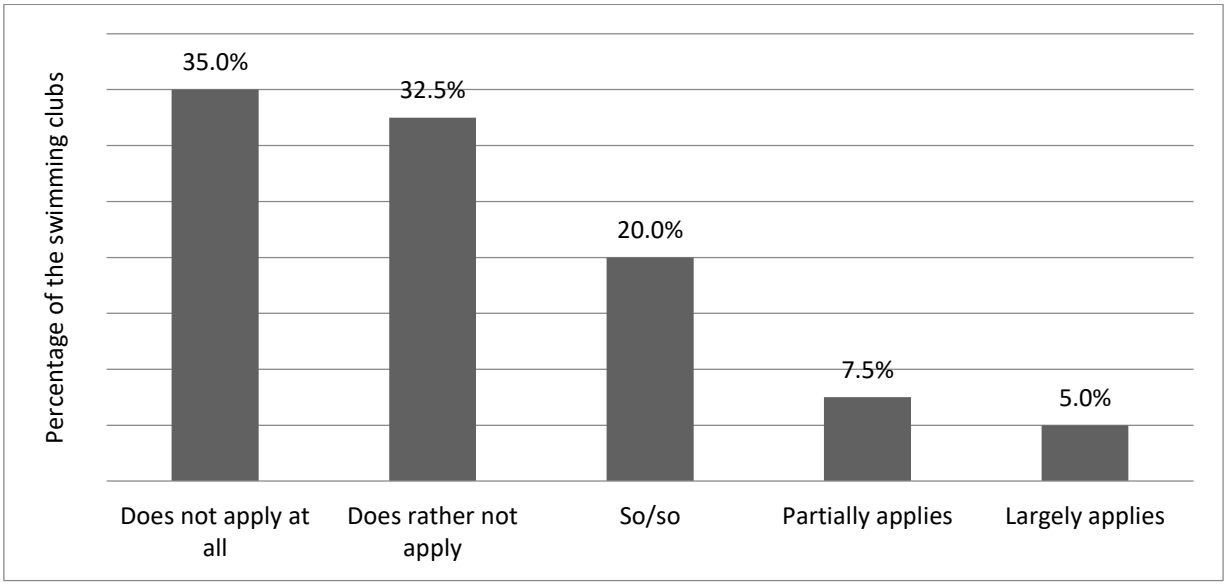

Figure 55 Laws and regulations play a large role in TD.

The correlation matrix revealed that there are strong positive correlations between the discussed variable and the following variables:

01. Fulfilment of talent development targets (outcome), (r =.604, p<.05).

02. Orienteering through the “Elite Sport Concept” regarding TD (obligations, process), (r =.750, p<.05).

03. New scientific insights are being taken into consideration (implementations, process), (r =.737 p<.05).

04. There are very concrete goals (goals, structure), (r =.653, p<.05).

05. Master plans are taken into consideration as a basis for training (planning, process), (r =.641, p<.05).

Therefore, laws and regulations playing a large role has a strong positive correlation with fulfilling the goals of talent development at the club, with considering the new scientific insights, and with orienteering through the "Elite Sport Concept" when developing talents. Additionally, it is strongly positively correlated with having concrete goals and a master plan for talent development at the swimming club.

5.3.19. There is good support from schools for talent development

The majority of the swimming clubs (92.5 %) have partly or fully negated the presence of good support from schools for talent development. However, only 2.5 % confirmed a partial support from schools for talent development at their clubs, as presented in (Figure 56).

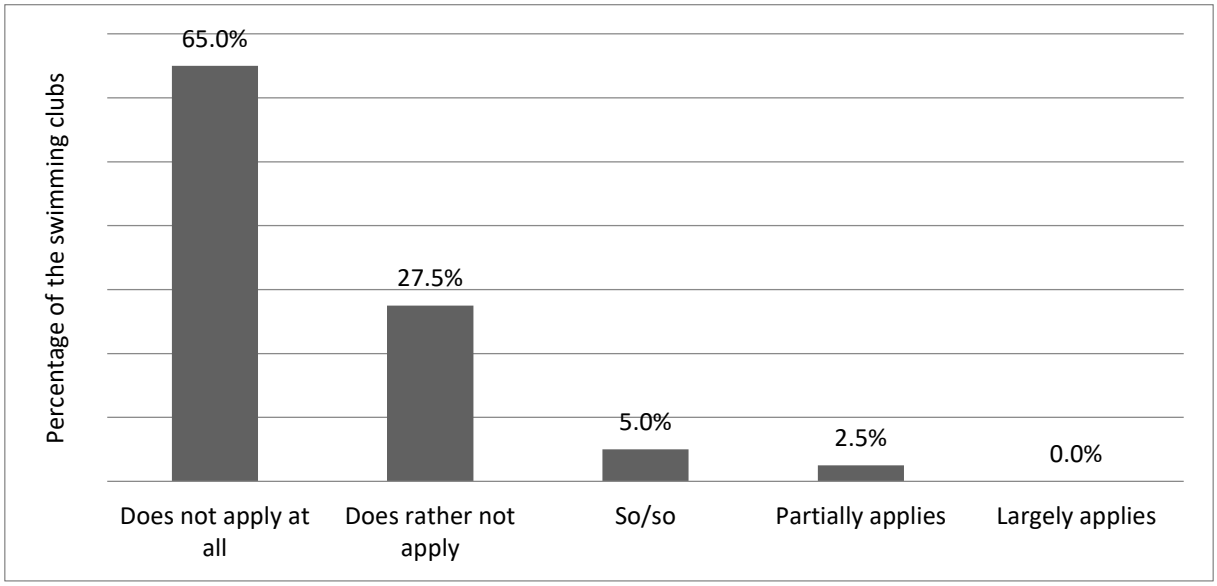

Figure 56 There is good support from schools for talent development.

There are no strong or very strong positive correlations between the mentioned variable with any other variable in the correlation matrix.

5.3.20. There is good support from parents for talent development

A part of the swimming clubs (37.5 %) have partly or totally negated the good support from parents for talent development at their clubs. Nonetheless, 20 % partially stated the presence of good support from parents, and another (7.5 %) totally confirmed this support, as illustrated in (Figure 57).

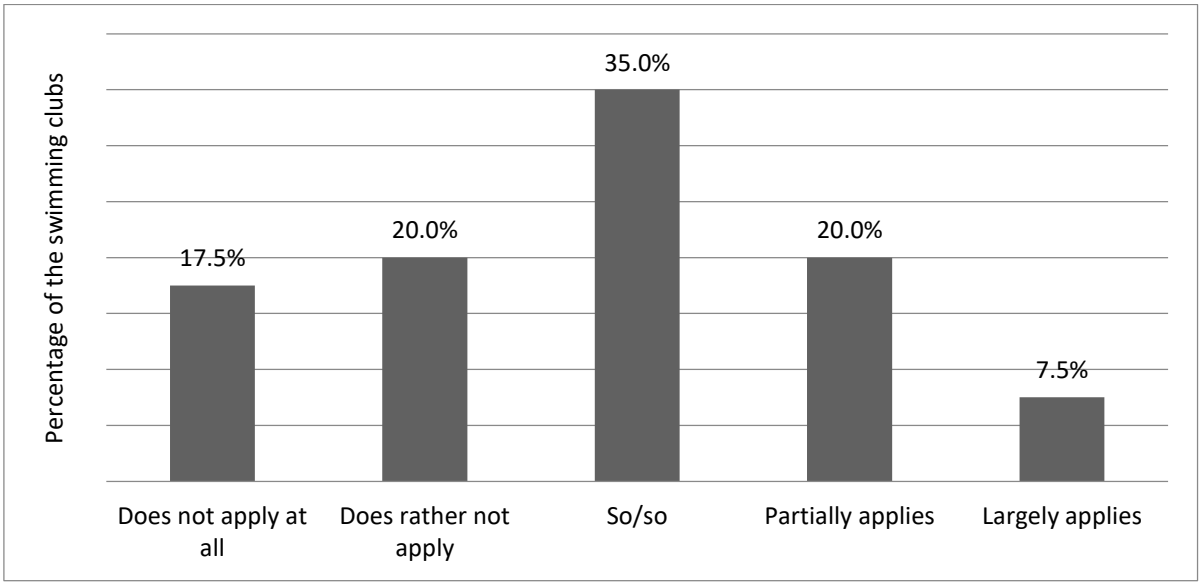

Figure 57 There is good support from parents for talent development.

According to the correlation matrix, there are strong positive correlations between the studied variable and the following variables:

01. Enough talent is developed (outcome), (r =.664, p<.05).

02. The talent pools is sufficient for talent development (resources, structure), (r =.611, p<.05).

So the good support from parents for talent development at the swimming club has a strong positive correlation with developing enough talents at the swimming club, in addition to having sufficient talent pools for talent development.

5.3.21. Talent pool is sufficient for talent development

A very minor number of the sample (2.5 %) stated a total satisfaction with the talent pool and its ability to providing the swimming club with needed talents to develop, and another

20 % of the sample are partially satisfied of the talent pools surrounding them. However, 45 % submitted negative responses regarding their satisfaction, as shown in (Figure 58).

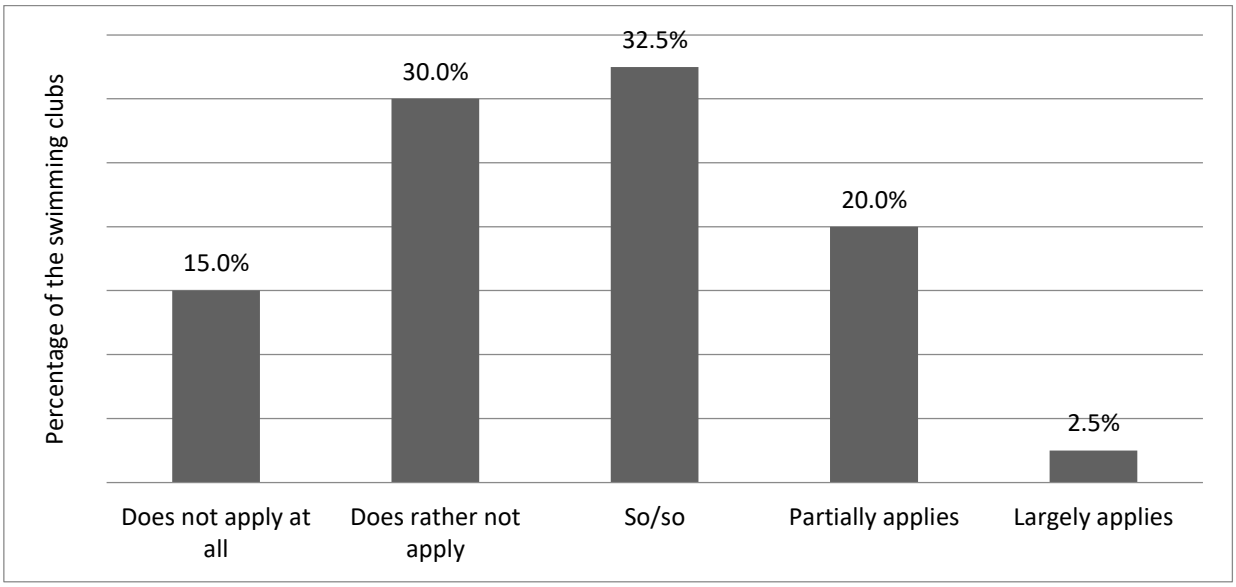

Figure 58 Talent pool is sufficient for talent development.

Based on the correlation matrix, there are strong positive correlations between the variable "Talent pool is sufficient for talent development" and the following variables:

01. Much success is achieved in competitions through TD (outcome), (r =.684, p<.05).

02. Enough talent is developed (outcome), (r =.650, p<.05).

03. Orienteering through the "Elite Sport Concept" of the fed regarding TD (obligations, structure), (r =.654, p<.05).

04. New scientific insights are being taken into consideration (implementations, process), (r =.625, p<.05).

05. There is good support from parents for talent development (resources, structure), (r =.611, p<.05).

Based on the past results, the talent pool's sufficiency for talent development has a strong positive correlation with the success in the competition through talent development, and to developing enough talents at the club. In addition, the variable has strong positive correlations with the support from talents' parents and families, with considering scientific

insights when developing talents and finally with orienteering through the “Elite Sport Concept” of the federation regarding talent development.

5.4. Coaches at swimming clubs

5.4.1. Qualification level of the swimming coaches:

The study shows that 87.5 % of the sample have no coaches with a diploma, and only 10% have one coach, and a minor group (2.5 %) have two coaches with this qualification. Regarding the coaches with an A-License, the majority of swimming clubs of the sample (72.5 %) have no swimming coaches with this qualification at all, and 25 % have only one swimming coach, and another 2.5 % of the sample have two coaches with such a qualification. However, there are more coaches with a B-License at the swimming clubs of the sample, as the study shows. The number of coaches with this qualification ranged between zero (for 42.5 % of the sample) and seven for 2.5 %. Regarding the coaches with a C-License, the number of active coaches within the swimming clubs of the sample have even a bigger range, which is between zero (for 12.5 % of the sample) and 14 (for 2.5 % of the sample). Furthermore, the number of the certified trainers working within the swimming clubs of the sample have an even wider range. It starts with zero as well for 17.5 % of the sample and ends with 32 for 2.5 % of the sample. On the other hand, many swimming clubs of the sample possess trainers with no license at all. The number is almost similar to that of certified trainers. The research shows that the number of those trainers within the swimming clubs of the sample has a range between zero (for 27.5 % of the sample) and 35 (for 2.5 % of the sample).

Accordingly, a comparison between the mean numbers of different types of active coaches, who work in the swimming clubs of the sample, showed that the highest number of the coaching staff at the swimming clubs contains the trainers with a mean of 5.9, then come the trainers with no license with a mean of 5.8. Later come coaches with a C-License with a

mean of 2. Then come coaches with a B-License (mean 1.25), then coaches with an A-License (mean 0.3) and finally coaches with a diploma (mean 0.15), as shown in (Figure 59).

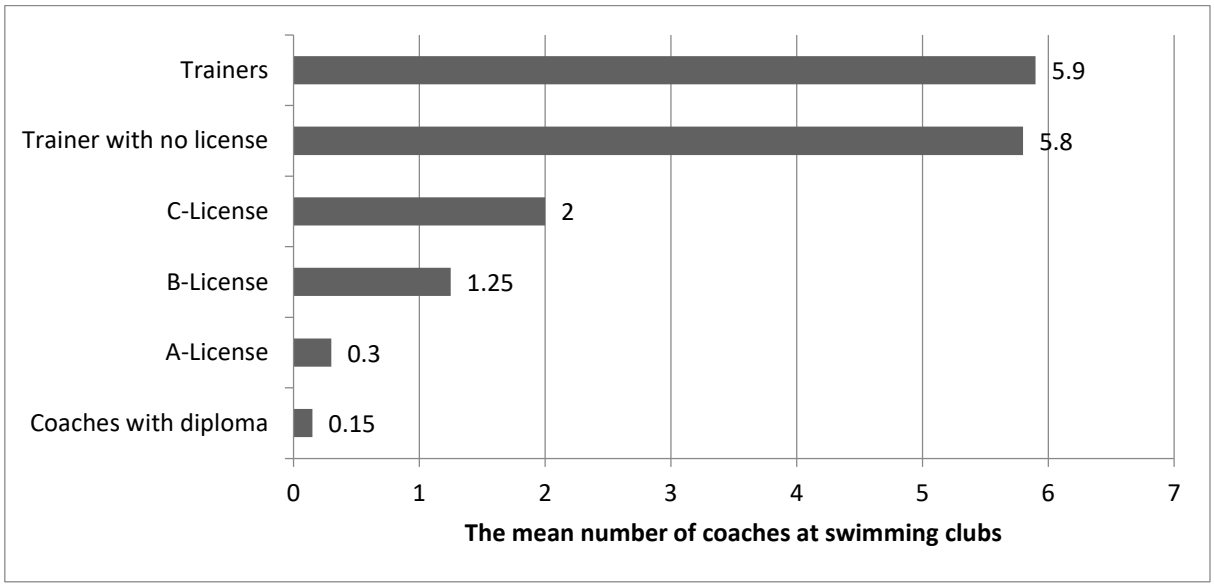

Figure 59 Mean comparison between the different types of coaches at the swimming clubs.

5.4.2. Employment type for the coaches at the swimming clubs

The majority of swimming clubs in the sample (70 %) have no coaches with full-time jobs. Only a small part of the sample (27.5 %) possess one coach, and (2.5 %) possess two coaches with a full-time job. Most of the swimming clubs of the sample rely on coaches with a part-time job, as the study shows. The number of coaches and trainers with a part-time job at the swimming clubs of the sample, have a range between zero (for 57.5 % of the sample) and 37 (2.5 % of the sample). The study exposed that swimming clubs rely at most on volunteer coaches and trainers. The number of volunteer trainers and coaches at the swimming clubs have a range between zero (for 17.5 % of the sample) and 46 (for 2.5 % of the sample).

For a better understanding of the coaches with the different employment types, a comparison between the means of employment types of the coaches is performed. Accordingly, the highest number of coaches and trainers at the swimming clubs are the volunteer coaches with a mean of 10.23. In the second place come the part-time coaches with a mean of 3.55. Finally the coaches with a full-time job with a mean of 0.33, as illustrated in (Figure 60).

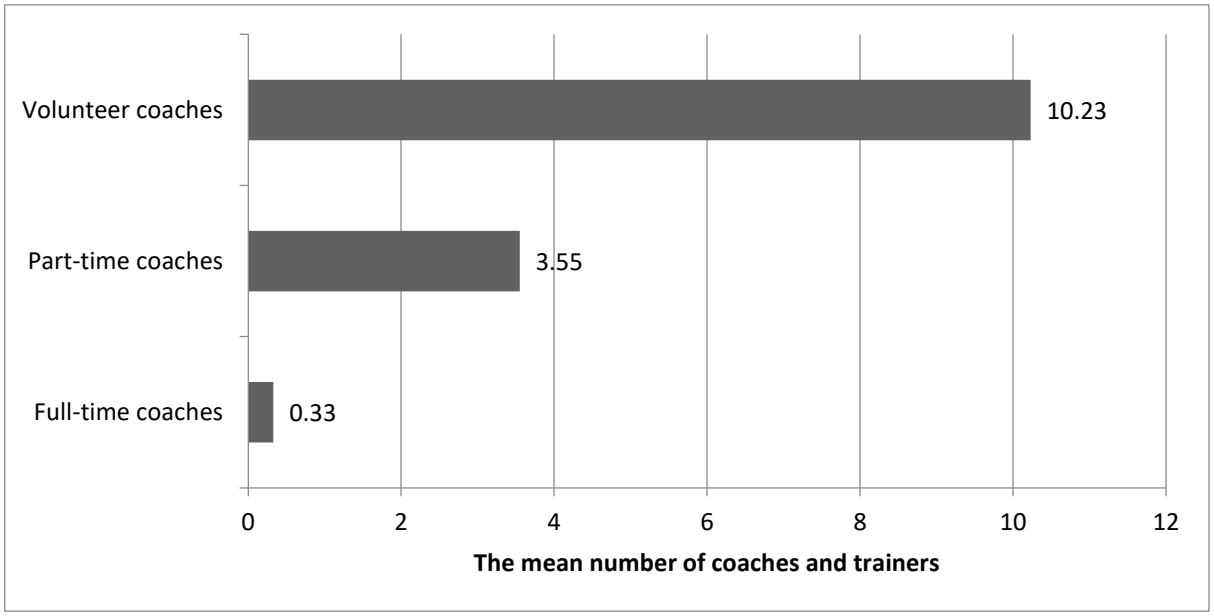

Figure 60 Mean comparison between the coaches with different employment types at swimming clubs.

5.4.3. Cooperation of swimming clubs with regional or state swimming coaches

The study shows that 25 % of the sample cooperate with regional or state coaches regarding developing their talents. However, the percentage is much smaller when it comes to the activity of regional or state coaches within the swimming club of the sample. Only 2.5 % of the swimming clubs have such coaches operating within their swimming clubs.

5.5. Cooperation of the swimming clubs

The study revealed that 62.5 % of the swimming clubs cooperate with the *Regional Confederation*. However, the cooperation of the swimming clubs with the *umbrella organisation - Spitzenverband* is so low, and only 5 % of the sample have such a cooperation. In a similar low percentage, 2.5 % of the sample cooperate with *Regional Committees - Landesausschuss*. Additionally, a few swimming clubs (7.5 %) of the sample cooperate with the *Olympic Support Centres*, and 5 % cooperate with the *NADA*. Even regarding *scientific and research institutions*, there is a lack of cooperation, and only 2.5 % of the swimming clubs

cooperate with universities and research centres. However, regarding *sponsorship*, a bigger portion of the swimming clubs in the sample (25 %) confirmed having this kind of cooperation.

Based on the cooperation results, a comparison is made between the means of the different cooperations of the swimming clubs in the sample, and it shows that the strongest cooperation occurs between swimming clubs and the *State Confederation*, then with *sponsors*, with *Oylmpic Support Centres*, and finally come the rest of the cooperations as shown in (Figure 61).

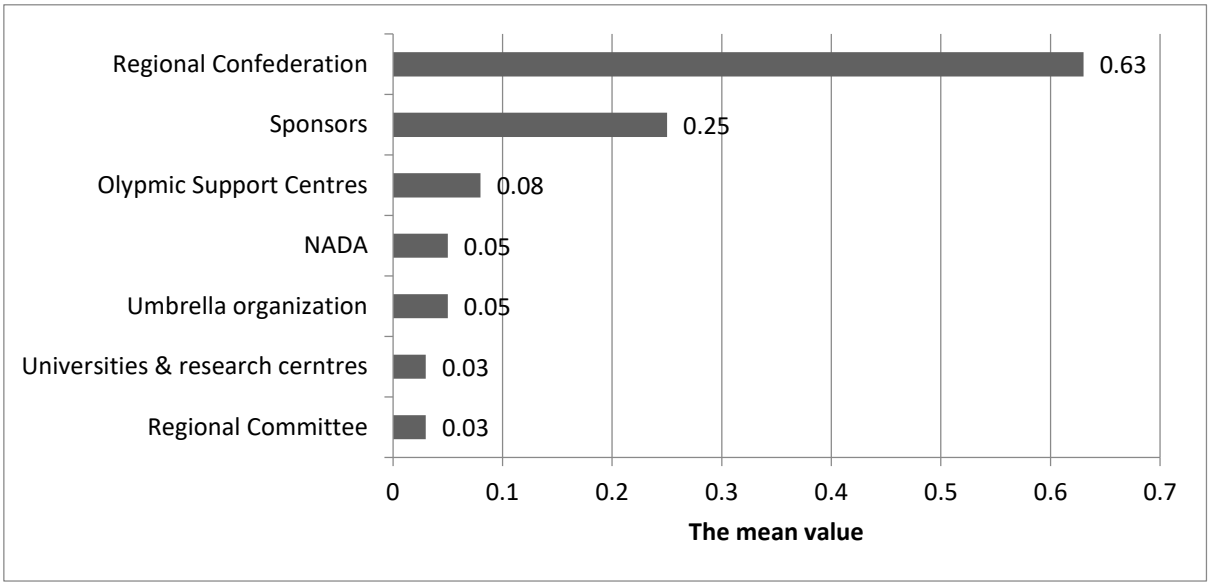

Figure 61 Mean comparison between the different cooperation with the swimming clubs.

Summary

Swimming clubs of the sample have different levels regarding talent identification and development, which indicates that they belong to a decentralized sport system that gives swimming clubs the freedom to choose their own strategies and plans.

Regarding talent identification and development, only a small portion of the sample based their success in swimming competition on the methods of talent identification and development they use at their swimming clubs.

The cooperation between swimming clubs and schools system regarding talent identification and development, and the support from schools for competitive sport are weak. Additionally, the role of physical education teachers at schools is marginalised regarding identifying and developing elite young swimmers.

The support from umbrella sport organization regarding talent identification and development is not equal to all swimming clubs in the sample. Some swimming clubs receive a good support, but the majority do not. Additionally, there is a lack of cooperation between swimming clubs on one side and universities and research institutions on the other side.

Regarding talent identification, the most used method by the majority of the swimming clubs is the “Sport clubs’ competitions” which indicates to the fact that, the systematic and scientific methods of identifying talents are not the most used methods by the majority of the sample.

Regarding coaches and trainers at the swimming clubs, the biggest number of the employed coaches and trainers in the sample are trainers and coaches with no licence, and the majority of the coaches and trainers at the swimming clubs work voluntarily.

Chapter VI - Discussion

6.1. Discussion related to the literature review

Regarding the definitions of the basic terms and processes of talent identification and development, there are different definitions for the talent identification and development main elements, mainly between Krasilshchikov (2013) and Mevaloo et al. (2008). Krasilshchikov (2013) defined the term *talent detection* in the same way as Mevaloo et al. (2008) defined the term *talent identification*. Additionally, different researchers presented different components of the main processes of the TID, which refers to a lack of a consensus regarding the mentioned concepts connected to talent identification and development in sport.

6.2. Discussion related to the comparison study

The following discussion is concerned with the comparison study of Germany and Australia regarding the talent identification and development systems. This part aims at discussing the main similarities and differences between the sport organisations in general and the talent identification and development systems in particular, in Germany and in Australia. Accordingly, the discussion could help answering the second research question.

6.2.1. QUESTION 2. What are the main differences and similarities between talent identification and development systems in Germany and Australia, and what are the important factors for success in TID systems at macro level?

The differences and similarities are to be discussed according to different perspectives.

1. An organisational perspective
2. Technical talent identification perspective
3. Technical talent development perspective

An organisational perspective

The results achieved by the Australian swimmers in the Olympics might be an outcome of the extra focused support from the Australian sport organisations on swimming, in addition to some other individual and team sport disciplines in order to achieve the best results in the international championships. On the other side, Germany is doing the same but for other sport disciplines such as football among some other team sport disciplines, and they are achieving good results in this sport on the international level.

In Germany, sport is administrated through organisations that belong to two different levels, which are the regional and the federal government. In Australia on the other side, in addition to the past two levels, the local level participates in administrating sport in the country. That might be an indicator for a more decentralised administration system of sport in Australia than in Germany. However, the Federal government in Australia is called the Commonwealth government and it takes the lead for running sport in the country, the same as the federal government in Germany. Nonetheless, regarding elite sport administration, there are a few differences between the two countries. In Germany, elite sport is managed through two main umbrella organisations, the first one is the *Federal Ministry of the Interior*, which is a governmental organisation; and through the *division of elite sport of the DOSB*, which is a non-governmental organisation. On the other hand, the Australian run their elite sport through two main umbrella organisations. The first one is through the *Minister for Sport* who belongs to the Commonwealth government, and through the *Australian Sport Commission* (ASC), which is a governmental organisation as well. Which means, in Germany elite sport is led by governmental and non-governmental umbrella organisations, but in Australia only governmental organisations lead the elite sport of the country, although the two countries have similar elite sport systems.

The DOSB in Germany (non-governmental organisation) has the reputation that it has the main role regarding leading elite sport in the country, but the reality is that the federal government carries a greater support for the German elite athletes through its Federal Ministry of the Interior. However, the Australian ASC has the reputation and it is the main leader of the Australian elite sport. As a result, in Germany and in Australia, elite sport development is run by governmental organisations despite the presence of the DOSB in Germany as a non-governmental organisation that participate in leading the elite sport development.

Additionally, there is another difference between the systems in the two countries, which is represented by the international dimension of the Australian Sport Organisation (ASC) through its training centre *European training centre* in Italy. This centre was created to overcome the negative effect of the far distances that isolate Australia from other countries and continents. This centre has a low altitude, accordingly it provides the Australian swimmers and athletes with the opportunities to join training camps. Moreover, such a low-altitude training camp has a positive physiological effect on elite swimmers (Truijens et al., 2002). Additionally, the training centre provides the elite athletes with the chance to meet and to train with other athletes, who belong to other nationalities under different climate conditions. Furthermore, this centre has another benefit for winter sport athletes, since it is located in the north of Italy in an area close to the Alps, where many winter sport training opportunities and events are available. However, Germany does not need to establish such a centre due to its location in the middle of Europe, where many competitions take place, and where it is possible to experience the four seasons, making it possible for the German athletes to train and compete in all kinds of sports without the need to travel extreme distances. What adds to the fact is that Europe is not even far away from Asia where many international competitions take place.

Regarding swimming administration in Germany, swimming and other water sports, such as water polo, diving, and synchronised swimming are run through one organisation known as the *German Swimming Federation* (DSV). However, In Australia, each of the water

sport disciplines is run by their own organisation, and the *Swimming Australia Ltd.* only runs swimming (short and long distances), but the other water sport organisations are affiliated to it. This might reflect the fact that water sports get more attention in Australia than in Germany, because they are run by organisations that are more specialised in the sport discipline. However, the system used to run swimming and other water sports in Australia might lack efficiency due to the decentralised administration of water sports, which might demand a higher level of coordination and communication between the shareholder organisations, in addition to the presence of some other organisations such as the *Swimmer Commission*, which have the right to participate in decision-making related to swimming in Australia. Such a problem was not mentioned about the *German Swimming Administration* (DSV) in Germany.

Regarding the financial support for swimming, Australia receives a remarkable support for swimming from different private organisations, who tend to support the whole swimming sport in Australia, such as Georgina Hope Foundation, which even provides a yearly swimming competition on the national level. On the other side, German swimming receives modest local support from local foundations and organisations such as banks.

Another point should be mentioned regarding the strategies of the umbrella sport organisations in the country. Based on the results of the study, Germany concentrates on public sports more than on performance sport in general, especially for some sport disciplines. However, Australian umbrella sport organisations do the opposite as a strategy. Swimming for Germany is considered as a part of the public sport sector, but the Australian sport strategy emphasises at most the individual sports, such as swimming and rowing, as a mean to collect medals in the international competitions. On the other hand, Germany's strategy regarding gaining international success in sport is directed to some other sport disciplines, such as soccer and handball, which receive a high attention and support from the umbrella sport organisations and from private sponsors.

In Germany, there are no problems regarding the availability of the appropriate training centres for talent development. On the other hand, in Australia, there are much less training centres and the distribution of these centres in the country poses a problem. Two out of five states and two territories in Australia have no Olympic training centres, and some other states have more than one. Additionally, the study shows that the distribution of the swimming pools in the different areas of the country is an issue, and there is a lack of available Olympic-size swimming pools in Australia, because most of those swimming pools belong to private schools. This problem hinders the swimming coaches from training their swimmers in those swimming pools in case they are not registered in those private schools. Nonetheless, no problem of this kind was mentioned about the German swimming, which means the presence of adequate swimming pools available in Germany. Accordingly, the administration of training facilities and training centres for swimming in Germany is more efficient than in Australia.

When we look at swimming clubs in both countries, it is easy to notice that there is a lack of information about swimming clubs in Australia, and most of the documents mention the role of the umbrella sport organisations regarding talent identification and development. That might be indicative of the centralised nature of the system used to manage talent identification and development for the Australian swimming. Adding to that, it could be an indicator for the weak role of the swimming clubs regarding talent identification and development administration. However, the situation in Germany is reversed. The German swimming clubs have wide margins of freedom to take decisions and to choose their own procedures regarding talent identification and development.

Technical perspective regarding talent identification

The main methods used in Australia to identify or select talented swimmers are based on the scientific selection tests. Adding to that, the Australian method of TI relies on assessing the movement of the performer in the water in order to identify and select talented swimmers.

However, the main method used by the German TI system is the performance of the athletes in the competitions, hence they rely on the results of the performers to determine if they are talented or not. This might make the Australian TI system advantageous, since the performance results are not a sufficient tool to identify talents because of many reasons, as mentioned before.

One of the advantages Australia has over Germany regarding talent identification in general is the sporting schools system. In Australia, there are around 6000 sporting schools, which afford sport programmes, which are run by the different sport federations in the country. These sport programmes do not provide a high development level for the children, but it gives the coaches and the trainers the chance to scan a big number of children in different sport disciplines. However, there are only around 145 sporting schools in the whole of Germany and they focus on providing the children with a high training level rather than identifying talented children. That also refers to the strategy each country uses regarding talent identification and development. The Australians place the most emphasis on talent identification and provide a good training atmosphere only for the best athletes in the country. Nonetheless, Germany focuses on talent development and tries to provide training opportunity for a big number of athletes in the country, without focusing much on identifying the athletes who might have the talent.

Another point should be mentioned because of the effect that it could carry. In Australia the main object of talent identification programmes are schools, which allow searching for talents in different sports at one time, and it gives the chance to identify talents in a sport discipline even if they have not tried it or practiced it before. However, Germany's main field of talent identification is sport clubs, so this method misses to scan a big number of children who do not practice the sport discipline, but they might have the potential to achieve good results in this sport.

Technical perspective regarding talent development

As shown in the results of the long-term talent development plans for the two countries, there are some differences in the main physical elements each country focuses on when developing the talented swimmers and regarding the appropriate ages for each element. Additionally, the Australian long-term plan included the training element "skill mastering" that was not mentioned in the German's long-term plan. This element could play a positive role regarding the Australian success in the Olympics, because it indicates to the skill's perfection. Plus, another point could have a positive effect on the final results of the development plan, which is the children's age of engagement, whether in terms of joining the systematic development, or starting each of the different elements of the plan. In Germany, the long-term training plan shows that children could start doing the sport at the age of five for both genders, but the systematic development starts at the age of eight for boys and at the age of six for girls. Accordingly, the long-term training plan does not include the first years of doing the sport, which might point to an under-estimation of the early years of children's training life, and not planning them appropriately. That, in its turn, could have a negative effect on the athletes' future performance level. On the other hand, the Australian systematic training plan starts at the age of five for both genders, and children are being systematically developed starting from this age. However, Farstad (2017) stated that the early organized intensive and specialised training could have harmful consequences on the mental and physical development of the young athletes.

6.3. Discussion related to the survey

This part is concerned mainly with discussing the results of the survey study, which is presented in the fifth chapter. This survey embeds the answer of the third research question:

6.3.1. QUESTION 3. What is the level of quality of the TID system in German swimming clubs, and what are the important factors for success in TID at a mezzo level?

Based on the results that the swimming clubs are evenly distributed between the three geographical organisational sections of the studied area. Additionally, the result confirms that 62 % of the swimming clubs are located in rural and sub-urban areas, it could be acceptable to conclude that the swimming clubs of the sample are distributed fairly in the studied area, in order to make swimming available for the biggest number of people. Furthermore, another result support this conclusion, which says that most of the swimming clubs (55 %) in the sample belong to areas with a population between 20,000 and 100,000, which represents big villages and small cities.

Reading the changes between the new entries and the dropouts of the swimming clubs of the sample could be a good method to judge the development of swimming in Germany. Since the mean of the new entries was 48.28 and the mean of the dropouts was 29.13 in 2015, the difference between the two means indicates to a prospering phase of swimming in Germany.

In regard to the classification of swimming as a sport discipline in Germany, the results show that the majority of the swimming clubs in the sample (72.5 %) do not have swimmers who train with regional or national squads. That might point to the lack of attention the umbrella sport organisations pay to elite swimming organisation, which could support the idea that swimming in Germany is considered as a public sport rather than an elite sport.

Talent identification and selection

The self-evaluation of the swimming clubs regarding their achievements in talent identification and the selection field shows that most of the swimming clubs in the sample are not satisfied. However, about one third of the sample stated that they are partly satisfied of their level in TI, and only 2.5 % confirmed being totally satisfied. Another part of the research shows that for most of the swimming clubs, talent identification and selection is not efficient, because

only 27 % of the sample (partly and totally) related their success in swimming competitions to the talent identification and selection methods they used within their swimming clubs. Additionally, another result shows that and only 22.5 % of swimming clubs confirmed that the TI methods used at their clubs provide the club with the needed swimmers. Accordingly, the above-mentioned results point to one or more of the following:

- Different swimming clubs have different TI procedures and plans. This result refers to a decentralised system, to which sport clubs belong. This system gives the freedom to sport clubs regarding the decisions and procedures of TI within their clubs. For that reason, some clubs use successful procedures and others do not.
- Coaches or the personnel responsible for TI at the swimming clubs have big differences in the experience and the technical level regarding identifying and selecting talented swimmers. That means the clubs successful in TI might be the ones who have the most experienced coaches and personnel. Houlihan & Green (2008, p. 8) support this fact when they said that high-quality coaching service is an essential part of the successful elite development system.

One of the survey's results affirms that most of the swimming clubs of the sample stated that they could not reach the goals they set regarding talent identification and selection within their clubs. That leads to conclude that the planned goals for TI at the swimming club are hard to achieve and does not match the swimming club's potential, which means, in turn, the personnel responsible for setting the goals of TI for the club are not qualified enough to do this job, or they are not aware enough of the club's abilities and potentials to achieve a specific level of success. This scenario might refer to the presence of a communication problem between the club's administration staff. However, from another point of view, the problem might be a result of the level of coaches and personnel, responsible for identifying the talents "implementation unit", who are not qualified enough to achieve the goals of TI.

As long as the majority of the swimming clubs who participated in the study have a lack of systematic planning related to identifying and selecting talents within their clubs and only a minor part of the sample plans their TI processes systematically. That confirms that swimming clubs in the sample belong to a decentralised system which allows them to choose their methods and procedures regarding identifying and selecting talents within their clubs. The reason behind the lack of systematic planning might be a result of the lack of professional skills of the administration, at least regarding TI at the club. Another result supports the idea of the decentralised system, which is the usage of the "Elite Sport Concept" of the DOSB. The majority of the swimming clubs do not use the "Elite Sport Concept" as an orientation method regarding TI processes they run at their clubs, which confirms that swimming clubs belong to a decentralised system, or the umbrella sport organisations are not active enough in providing the clubs with the main information and guidelines with reference to TI.

Another problem that could have an effect on TI level at the clubs was shown in the results which is the lack of using new scientific insights regarding TI at the swimming clubs. This could be a serious problem, since science support services are an important aspect for elite sport systems (Houlihan & Green, 2008, p. 8). This problem might be a result of one or more of the following reasons:

- The lack of cooperation between universities and research centres on one side, and sport clubs and the swimming federation on the other side.
- Swimming might be underestimated when it is compared to other sport disciplines, accordingly, that might negatively affect its budget, which in turn affects the quantity and the quality of researches relevant to it.
- The lack of contact between swimming clubs on one side and umbrella sport organisations on the other side, because the main cooperation should take place

between research centres and umbrella sport organisations, so that, the newest scientific insights regarding TI should be provided through the umbrella sport organisations.

The results of the study show that only 15 % of the swimming clubs confirmed that the implementations of TI at the swimming clubs are well-organized, and the majority of the sample reported negative answers regarding this point. Adding to the fact is that only 5 % of the sample partially document the results of their TI tests which they run at their clubs. Moreover, regarding the presence of concrete goals for the TI at the club, only 15 % of the sample confirmed having or partly having such goals. Besides that, the goals of TI are available in a written form only for 15 % of the sample, which makes knowing these goals inaccessible for many members and workers of the club. Accordingly, the previously mentioned facts and results refer to an obvious lack of the organizing level of TI procedures and processes within the swimming clubs, and the reason behind such a problem might be one or more of the following:

- The lack of professional administrational skills of the staff responsible for managing and running the TI procedures and events at the swimming clubs.
- A lack of perception regarding the importance of TI as an important part of the TD process and of the elite sport development in general.
- Elite swimming development could be outside the club's main goals and interests.

In regard to the quality of the staff, which hold responsibilities in TI within the swimming club, the study shows that the majority of the swimming clubs do not see their coaches and trainers as personnel well-qualified for identifying and selecting talents within the swimming club. The reason behind this result might be based on the lack of training and knowledge provided to the trainers during the preparation or further development courses for coaches. This might be a result of an underestimation of the role of TI in elite sports, or because of relying mostly on coaches and trainers with no license. Moreover, regarding the role of sport teachers at schools in TI, the study shows that they do not play a positive role for the swimming

clubs. The absence of the sport teachers' role might have a negative effect on the overall outcome of TI at swimming clubs, because sport teachers are in daily contact with children belonging to the optimal age for TI. This problem could be a result of one or more of the following reasons:

- A lack of connection or cooperation between schools and swimming clubs.
- The lack of experience of sport teachers at schools regarding TI in swimming, except for some individual cases, when a sport teacher is personally involved in this sport.

Adding to that, the research revealed another essential problem regarding TI at the swimming clubs. The problem is related to a shortage in TI processes and procedures. For the majority of the swimming clubs in the sample, there is a lack of TI tests organized and implemented by the swimming clubs. The reason behind such a problem could be one or more of the following:

- Underestimating the importance of TI as a main pillar of elite sport and of TD.
- A shortage of the role and the support of the umbrella sport organisations regarding providing the swimming clubs with basic guidelines for TI at swimming clubs, or because of the lack of communication between umbrella sport organisations and swimming clubs.
- The decentralised system sport clubs belong to allows each swimming club to have its own methods in TI. As a result, many of them do not use systematic TI procedures. Instead they use the skilled eye of the coaches and trainers to discover talents by coincidence or during swimming competitions.

In a similar way, the study shows that no TI tests take place within the schools, although schools are very rich talents pool. This problem could have a strong effect on the overall outcome of TI. The reason behind such a problem could be the lack of cooperation and

communication between umbrella sports organisations on one side, and the Federal Ministry of Education, which is responsible for the school system, on the other side.

Regarding the presence of predetermined procedures (by the feds and sport clubs) or regulations connected to the procedures used within the swimming clubs to identify and select talented swimmer. The study shows that the majority of the swimming clubs stated the lack of such a kind of predetermined procedures and regulations. Which indicates to one or more of the following possibilities:

- The umbrella sport organisations do not afford fair or full support for all swimming clubs regarding TI topic.
- A lack of communication between swimming clubs and the umbrella sport organisations.
- Some swimming clubs might show interest in receiving predetermined procedures of TI, and in getting insight of the regulations connected to it, more than other clubs, which drives them to ask the federation for such support.

By looking at the different methods and opportunities used by swimming clubs to detect and identify talented swimmers, it is clear that the method used most is finding talents through *sport club competitions*. This depends on the results of the swimmers in the different swimming competitions and it is done by choosing the swimmers with the best results. However, the skilled eye of the coaches and trainers is useful as well in this method and it opens wider opportunities to identify talents. The method used the second most by the swimming clubs is participating in the *federation's regional multi-faceted test*, which is based on the scientific selection method. In this method, the TI staff select and identify talents on the bases of their results in these tests, which includes different motoric, physical activities and fitness tests. Nonetheless, only half of the swimming clubs of the sample (52.5 %) are using this method. The method used the third most is the *trial course*, which is used by (45 %) of the sample, and

it relies on the skilled eye of the coaches and the trainers. According to the results, among the TI methods used by the sample, only two methods have a systematic design to identify and detect talents, which are *talent identification events* that usually take place at the swimming clubs (15 % of the sample use this method), and the participation in the *federal regional multi-faceted test* (52.5 % of the sample use this method). As a result, if the swimming clubs, which use the first method are totally different from those, which use the second one, the sum of swimming clubs that rely on systematically designed TI and scientific methods is only (67.5 %) of the sample, and this percentage might even be slighter in case some swimming clubs use both methods. That refers to the fact that there is an obvious lack of the usage of systematic and scientific talent identification programmes by the swimming clubs of the sample, which might affect the overall outcome of the TI.

Regarding the effect of the personnel responsible for identifying and selecting talented swimmers, the study shows that *swimming coaches* have the most effective role. However, only 60 % of the swimming clubs in the study have totally or partially confirmed this positive effect of the swimming coaches. That points to a problem that a big number of the swimming coaches at the swimming clubs do not obtain the skilled eye, which allows them to identify the potential future elite swimmers. The second effective role in doing this job is for *talent scouts***,** but it is hard to describe it with “effective”, because only 2.5 % of the sample have partially confirmed their positive role. However, when looking at a previously mentioned result, which states that "sport competition" is the event used the most by swimming clubs to identify and select talents, it is somewhat contradictory, since talent scouts are usually the ones who attend sport competitions to find and recruit talents. In this case, the job of talents scouts might be taken and done by other personnel, such as swimming coaches and trainers or team officials, who usually attend the competition as well. Regarding *school teachers*, the study shows that they do not play any positive role in identifying and selecting talents, which indicates the lack of coordination and communication between schools and swimming clubs, or that sport teachers

are not qualified to identify and select talented swimmers. However, that makes sense, since sport teachers are not usually trained at universities and physical education institutions to be qualified to do such a specific job, except for some exceptional situations, when schools teachers are personally involved in the sport as a former swimmer or as a swimming coach.

Talent development

The general self-evaluation of the swimming clubs regarding their level in talent development refers to a problem. Only 2.5 % of the sample stated that they have a very good level, and another 27.5 % stated having a good level. However, the majority of the sample stated having an intermediate level.

With reference to the goals of the swimming club regarding talent development at their clubs, the study shows that only a small part of the sample have partially achieved their goals, which points to one or more of the following:

- The goals set for TD at the swimming club are too high, which means, the personnel responsible for planning the goals of TD are not qualified enough to do this job, or that they are not aware enough of the club's potential to achieve a specific level of success.
- The level of the coaches' and trainers' "implementation unit" is not good enough to achieve the goals.
- There is a lack of the club's facilities and equipment necessary to develop successful swimmers.

The study shows that a part of the swimming clubs does not plan the processes and procedures of talent development within their clubs systematically, and another part of the sample does that. That supports the concept that swimming clubs in Germany belong to a decentralised sport system, and they have a high level of freedom regarding managing and running the processes of TD within their clubs. The problem regarding the lack of systematic

planning for most of the swimming clubs might be because of the lack of professional and experienced swimming coaches and trainers, who are usually responsible for planning and implementing the training sessions for the talented swimmers, which might, in turn, play a negative role in talent development, since a high-quality training system is essential for a successful elite development system (Houlihan & Green, 2008, p. 8).

Regarding orienteering through the “Elite Sport Concept” of the DOSB, the results of the study here are similar to the ones mentioned before in the TI section. Only a small group of the sample benefits from the “Elite Sport Concept” as a method of guidance regarding talent development, and the majority do not. That refers again to the decentralised sport system the sport clubs in Germany belong to, and to the level of freedom they have regarding talent development at their clubs.

Concerning the use of the new scientific insights when developing talents, the study shows that the results are similar to using the new scientific insights regarding identifying and selecting talents which makes sense. Accordingly, the reasons for such a problem are the same ones mentioned before in this chapter.

According to the analysis, different swimming clubs have different levels of organisation regarding the processes and procedures of TD at their clubs. A group of swimming clubs (40 %) stated that talent development is well-organized at their clubs, but the rest of the sample stated different levels of organisation of TD processes. That also refers to the decentralized sport system, to which swimming clubs belong, and to the high level of freedom the swimming clubs have regarding TD at their clubs.

Additionally, the study shows a deficiency in three organisational variables related to talent development at sport clubs. Most of the swimming clubs in the sample have a shortage regarding the documentation of the training for talents, regarding having concrete goals for talent development of the club, and finally regarding having these goals and the targets defined in a written form. These shortages occur regarding talent identification as well. Accordingly,

the reasons behind them are the same ones mentioned before in this chapter. Furthermore, another shortage was exposed by the study, which is the lack of training facilities for most of the swimming clubs in the sample. This problem might refer to an underestimation of this sport discipline, which might be represented by a reduced budget or a reduced attention by the umbrella sport organisations.

Regarding the level of the swimming coaches in talent development, a part of the sample (44 %) are not satisfied with the level of their coaches. The reason behind this problem might be a shortage of the coaches' preparation and further development courses, which should provide more information and experiences regarding dealing with the talented swimmers and developing them, or it might be the case that some swimming coaches and trainers are not licensed, and they are not professionally prepared for doing this job.

Regarding the cooperation between school systems and the swimming clubs, only a minor part of the sample (10 %) confirmed the presence of a partial or a total cooperation, which also refers to the level of freedom and independency, swimming clubs have regarding decision-making in respect of the talent development processes and procedures at their swimming clubs. Additionally, there is a shortage of schools' support for the competitive sports, which might also refer to the lack of cooperation between schools and swimming clubs. However, since 10 % of the sample confirmed the support of schools for competitive sport, schools could provide such a support if they were asked to, or if they got the basic guidelines to do it. That might point to a lack of cooperation between the umbrella sport organisations on one side and the umbrella organisations responsible for running the school system on the other side. Additionally, this problem could be due to the swimming clubs themselves, since many swimming clubs might not aim at performance swimming, and they limit their activities only to enclose public sport.

The majority of the swimming clubs in the study stated that laws and regulations do not play a large role in talent development at the swimming clubs. Still, a minor group of the sample

(12.5 %) have partially or totally confirmed this role. The reason behind the contradicting responses might be one or more of the following:

- Swimming federations or the umbrella sport organisations do not afford fair support for all swimming clubs, at least regarding TD field.
- The lack of connection between sport clubs and the umbrella sport organisations.
- Some swimming clubs are more interested in receiving support regarding TD, which drives them to ask the umbrella organisations for such support.
- Some swimming clubs do not have elite swimmers. That might be as sufficient reason not to receive support regarding TD from the umbrella sport organisations.

The support from schools for talent development at swimming clubs is missed for the majority of the swimming clubs, except for 2.5 % of the sample who confirmed a partial presence of schools' support. That approves the possibility for schools to support talent development at swimming clubs if they are willing to do so, on one side, and if the swimming clubs provided the opportunity for such a support on the other side. That refers to the lack of regulations that direct schools to provide the appropriate support for the swimming clubs, and set the basic guidelines for such a cooperation.

Another problem might affect the outcome of TD at the swimming club, which is the limited talent pools. The majority of the swimming clubs are not satisfied with the talent pools surrounding their clubs, and only 22.5 % are partly or very satisfied with their talent pools. These results refer to one or more of the following:

- Some swimming clubs do not provide appropriate TI programmes and procedures, which results in less ability to identify talents.

- The lack of popularity of swimming in the community, when compared to many other sport disciplines, which might drive children who have a talent in swimming to join other sport disciplines over swimming.

Coaches and trainers at the swimming clubs

Swimming clubs included in the study showed differences in their coaches and trainers regarding the level of the qualifications the coaches have. Coaches and trainers with no license are the ones most recruited by the swimming clubs, and the higher the coaches' qualification, the less are recruited by the swimming clubs of the sample. The reason behind that might be financial, because the highly qualified coaches are usually professional and they have higher financial demands, which drives the swimming clubs to increase the budget of coaches and trainers. However, less qualified coaches could have a negative effect on the overall level of talent identification and development of the swimming club. Additionally, for the majority of the sample (70 %), the active coaches and trainers are working in part-time jobs.

The cooperation of the swimming clubs regarding TID

Swimming clubs cooperate with different organisations and associations regarding talent identification and development at their clubs. In the first place, they cooperate with regional confederations with a remarkable percentage of the sample. Then comes the cooperation with sponsors. However, minor groups of the sample confirmed, as well, their cooperation with the umbrella organisations, regional committee, and some others. Anyhow, the presence of those cooperations for some swimming clubs might refer to the fact that those cooperations are possible and they mostly take place upon the clubs' request. Accordingly, the lack of cooperation between swimming clubs and the other organisations might be because swimming clubs are not active enough in networking, or it might be because of the lack of guidelines and support from the umbrella sport organisations, which should lead to such a

cooperation. Besides, the results show the lack of cooperation between the swimming clubs on one side, and the universities and research centres on the other side, which might explain why swimming clubs do not consider the scientific insights when identifying, selecting or developing talented swimmers at their clubs. Likewise, the obvious lack of cooperation with sponsors should have some attention. The reason behind might be, as mentioned before, the lack of popularity of the sport when compared to other sport disciplines, meaning it fails to attract the sponsors' attention.

Suggestions

Swimming federations, confederations and/or the DOSB should provide all swimming clubs with the basic guidelines and regulations for the talent identification and development, regardless of the swimming clubs' level. In case some swimming clubs ask for further information and instruction, then it should be provided, but the basic guidelines and regulations should be provided to all swimming clubs equally.

6.3.2. QUESTION 1. What are the critical aspects of quality in systems of talent identification and development in swimming?

To answer this question, it is important to specify the success factors of the TID systems used within the swimming clubs of the sample. That could be done by analysing the correlations between the outcome variables on one side, and the variables representing the structure and the processes on the other side. In this way it could be possible to isolate the variables which have a remarkable positive correlation with the outcome of the system.

Talent identification system

The correlations of the three variables representing the outcome of TI are as follows: The first outcome variable refers to fulfilling the official goals of TI at the swimming club. This variable has very strong positive correlations with the systematic planning regarding TI, and

the well-organized TI processes. Plus, it has strong positive correlations with the presence of concrete goals for TI, having the goals in a written form, the presence of selection tests at the swimming clubs, and finally, with the documentation of the results of TI at the club. The second outcome variable refers to the success of the swimming club in the competition through the TI system it uses, which has strong positive correlations, as well, with the systematic planning of the TI, the well-organized TI processes and procedures, and with the presence of concrete goals regarding TI. Finally, the outcome variable refers to the ability of a TI system to provide the club with its needs of talents to develop, which has a strong positive correlation with the well-organized processes and procedures of TI, and with the presence of very concrete goals for TI. Accordingly, the TI outcome has a strong and very strong positive correlation to the following variables: (1) Systematic planning of TI, (2) Well-organized processes of TI, (3) Presence of concrete goals regarding TI, (4) Having the goals in a written form, (5) Having TI tests at the clubs, and finally (6) Documenting the results of TI which take place at the club.

Talent development system

The outcomes of talent development system have three variables as well, and those variables have the following remarkable correlations. The first variable refers to the success of the swimming club in competitions through its talent development system, and it has a strong positive correlation with the variable referring to the sufficiency of the talent pool for talent development, and with the variable referring to the well-organized training for talents. The second outcome variable “enough talent is developed” has a strong positive correlation with the presence of concrete goals and having them defined in a written form, systematic planning is taking place and implementing the training in a well-organized way. Additionally, it is correlated with the presence of a sufficient talent pool and the presence of good support from parents for talent development. The last variable representing the outcome of TD is “the fulfilment of talent development targets”. This variable has a very strong positive correlation

with the systematic planning of TD. Moreover, it has strong positive correlations with the presence of concrete goals of TD and defining them in a written form, and finally "orienteering through the "Elite Sport Concept" regarding TD. According to the past mentioned correlations, the TD outcome has a strong or very strong positive correlation with the following variables: (1) There are very concrete goals, (2) The goals are defined in written from, (3) Orienteering through the "Elite Sport Concept" regarding TD, (4) Laws and regulations play a large role in TD, (5)There is good support from parents for TD, (6) Talent pool is sufficient for talent development, (7) Systematic planning is taking place regarding TD, and finally (8) Training for talents is well organized.

According to the outcome's correlations of talent identification and development system, some variables, which represent the process and structure, have strong or very strong positive correlations with the variables representing the outcome of TI and/or TD. Accordingly, Table 29 summarizes the variables, which have strong or very strong correlations with the outcome of TID.

Table 29 The positive correlation of outcome variables to the other variables in the study

	TALENT IDENTIFICATION	TALENT DEVELOPMENT
THE VARIABLES CORRELATED WITH THE TID OUTCOME	1. Systematic planning is taking place (planning, processes). 2. TI processes and the training for talents are well organized. (implementation, processes). 3. There are very concrete goals for talent identification and development (goals, structure). 4. The goals of talent identification and development are defined in writing (goals, structure).	
	5. There are selection tests at sport clubs (opportunities, structure). 6. The results of talent identification and selection tests are documented (implementation, processes). 7. The identification and selection procedures are provided (implementation, processes).	
		5.Talent pool is sufficient for talent development (resources, structure) 6. There is good support from parents for talent development (resources, structure). 7. Orienteering through the "Elite Sport Concept" of the federation regarding talent development (obligation, structure). 8. Laws and regulations (from feds) play a large role in talent development (obligation, structure).

Accordingly, it is possible to answer the first question of the research.

Q1. What are the critical aspects of quality in systems of talent identification and development in swimming?

Regarding talent identification systems: this question could be answered by highlighting the success factors of TI systems used within the sport clubs of the sample. Accordingly, a successful TI system used at a swimming club should have some specific characteristics. Some of those characteristics are of an internal, and others are of an external nature. The internal characteristics of the organisation are the ones reflecting the organisations' structure and processes. However, the external characteristics or variables are related to the effect of the external environment, which could affect the performance of the system, such as the effect of other organisations and the effect of the coordination with these organisations. Subsequently, a successful TI system at a swimming club should have concrete goals and the goals are supposed to be provided in a written form, in order to be available and clear for everyone included in the organisation. Additionally, the processes and procedures of the club's TI should be systematically planned and implemented in a well-organized way. Furthermore, the swimming club should implement talent identification and selection tests at the club, and it should document the results of those tests. However, regarding the external variables, there is only one factor, the study showed its importance, which is receiving the procedures of talent identification from other umbrella sport organisation, such as the sport club, the swimming federation, etc. Nonetheless, the presence of this character might reflect the weakness of the swimming clubs regarding this point, and their needs for support and guidance from more experienced sport organisations.

Regarding the talent development system at the swimming club, as discussed before in talent identification, for a successful TD system at swimming club, the system should possess some characteristics. The same as the TI system regarding the internal characteristics, the TD

system should consider the systematic planning for the training of the talents, and the training should be implemented in a well-organized way. Regarding the goals, the TD system should have concrete goals regarding TD and they should be provided in a written form, which allows everyone to know them. In reference to the external characteristics of the system, the TD system should have a sufficient talent pool to provide the swimming club with the needed talents to develop, additionally, they should receive support of talents' families for their children to train at the club, which might, in turn, point to the lack of support for talent development from the umbrella sport organisations. Finally, the successful system is correlated with the presence of laws and regulations from the umbrella organisation regarding TD, and correlated to the usage of the "Elite Sport Concept" as an orienteering programme to develop the talented swimmers, which might also point to a shortage of the swimming clubs' ability regarding self-regulation in this field.

Summary

The comparison study

The main structure of sport organisations in Germany and Australia is similar, but the swimming administration in Australia, the *Swimming Australia Ltd.,* is more specialised than the German swimming administration, because it only runs the swimming sport, but the German swimming federation runs all water sports. Furthermore, the Australian sport system has an international dimension due to having one of their centres in Europe. However, this dimension does not exist within the German sport system.

Regarding talent identification, the main talent pool for the Australians are the schools. Whereas the main talent pool in Germany are the swimming clubs. Additionally, identifying talents in Australia is done under the supervision of the umbrella sport organisations and it is done on national level. Nonetheless, talent identification in German is managed and done by the different swimming clubs in the country, which allows to conclude that the German sport

system regarding talent identification for swimming is decentralised and the German swimming clubs have a wide range of freedom, when compared to the their peers in Australia.

Regarding swimming, Germany focuses on providing many talent development centres and facilities to cover the whole of Germany and to make swimming available for a large number of people. However, in Australia, there are less development centres, and swimming pools are not available for everyone. However, to overcome this problem, the Australians focus much on talent identification programmes to make sure that only the best talents will receive the good support and professional training. Accordingly, swimming in Germany could be considered as a public sport and it is considered as an elite sport in Australia.

Success factors of TID systems

For a TID system to be successful, it should have concrete goals regarding the talent identification and development processes and procedures, and should clarify those goals in written form. Adding to that, the processes and procedures of TID should be systematically planned, and should be implemented in a well-organized way.

Regarding the TI systems, there are some additional prerequisite to the previously mentioned ones. It is helpful for the system to receive the predetermined TI procedures and processes from other higher organisations such as sport clubs, or other umbrella organisations such as the Swimming Federation, which have more experience in this field. Furthermore, the swimming club should have talent identification and selection tests at the club and its results should be documented.

Finally, for a successful TD system, some additional prerequisites are needed. The sport club should have a sufficient talent pool and good support from the talents' families. Furthermore, the system should rely on the guidance from umbrella sport organisation regarding TD, adding to that, the laws and regulations from umbrella organisations are helpful for a better outcome of the system. *talent development*

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Appendix

Appendix 1. Questionnaire of talent identification and development in swimming clubs.

Fragebogen zur Talentsuche, -erkennung und -entwicklung in Schwimmvereinen

Herzlich willkommen zur Befragung zur Talentsuche, -erkennung und -entwicklung in Schwimmvereinen. Ihre Antworten sind für unsere Befragung und einer Weiterentwicklung des Schwimmsports in Württemberg wichtig. Wir möchten Sie bitten alle nachfolgenden Fragen zu beantworten. Dies wird etwa 20 Minuten Zeit beanspruchen.

Die Befragung bezieht sich, wenn nicht ausdrücklich anders angegeben, nur auf die Disziplin Schwimmen. Aus Gründen der Einfachheit werden im Fragebogen sowohl Schwimmabteilungen innerhalb eines Mehrspartenvereins als auch reine Schwimmsportvereine als „Schwimmabteilung / Schwimmverein“ bezeichnet.

Bei den meisten Fragen sind bereits Antwortmöglichkeiten vorgegeben. Bitte klicken Sie die für Ihre Schwimmabteilung / Ihren Schwimmverein zutreffende Antwort an. Bei einigen Fragen haben Sie die Möglichkeit in einem offenen Feld eine eigene Antwort zu formulieren oder eine Zahl einzugeben. Wenn nicht anders angegeben beziehen sich alle Fragen nur auf Ihre Schwimmabteilung / Ihren Schwimmverein.

Wir versichern Ihnen, dass alle Daten vertraulich behandelt werden. Die Auswertung der Befragung erfolgt anonymisiert durch Mitarbeiter des Karlsruher Instituts für Technologie (KIT), so dass keine Rückschlüsse auf Ihre Person oder auf Ihren Verein zu ziehen sind.

Mit freundlichen Grüßen

Ihr Team vom Schwimmverband Württemberg und dem Karlsruher Institut für Technologie

1. Funktionsbezogene Daten

1.1 Bitte geben Sie die genaue Bezeichnung Ihrer jetzigen Funktion im Verein an (z. B. Vorstand, Abteilungsleiter, Trainer, Mitglied).

Funktion: _____

1.2 Wie lange sind Sie in der Funktion bereits tätig?

Bitte geben Sie die Anzahl der Jahre in Ziffern an (z. B. 8).

Anzahl der Jahre: ____

2. Angaben zu Ihrem Verein (alle Sparten umfassend)

2.1. Wann wurde Ihr Verein gegründet (alle Sparten)?

Bitte geben Sie eine aus vier Ziffern bestehende Jahreszahl ein (z. B. 1970).

Gründungsjahr Ihres Vereines: ____

2.2 Wie hoch ist die Anzahl aller Abteilungen (Sparten) in Ihrem Verein?

Bitte geben Sie die Zahl in Ziffern an. Falls es sich bei Ihnen um einen reinen Schwimmverein handelt geben Sie „1“ an.

Anzahl aller Abteilungen im Verein: ___

2.3. Wie viele Mitglieder hat Ihr Verein (alle Sparten umfassend)?

Bitte geben Sie die Zahl in Ziffern an.

derzeitige Mitgliederzahl: ____

2.4 In welchem der nachfolgenden Gebiete liegt ihr Verein?

☐ ländliches Gebiet
☐ Randlage eines städtischen Gebietes
☐ zentrale Stadtlage

2.5 Wie viele Einwohner hat die Stadt / Gemeinde, in der Ihr Verein ansässig ist?

☐ bis 1.000 Einwohner ☐ bis 50.000 Einwohner
☐ bis 2.000 Einwohner ☐ bis 100.000 Einwohner
☐ bis 5.000 Einwohner ☐ bis 250.000 Einwohner
☐ bis 10.000 Einwohner ☐ bis 500.000 Einwohner
☐ bis 20.000 Einwohner ☐ über 500.000 Einwohner

2.6 In welchem Bezirk des SVW liegt Ihr Verein?

☐ Bezirk Mittlerer Neckar
☐ Bezirk Ostwürttemberg
☐ Bezirk Südwürttemberg

3. Angaben zu Ihrer Schwimmabteilung / Ihrem Schwimmverein

3.1 Wie viele Mitglieder hat Ihre Schwimmabteilung / Ihr Schwimmverein?

Bitte geben Sie zunächst die Gesamtzahl an, danach die Zahl aller Kinder und Jugendlicher bis einschließlich 17 Jahren.

derzeitige Mitgliederzahl insgesamt: ____ davon Kinder und Jugendliche: ____

3.2 Wie viele Mitglieder Ihrer Schwimmabteilung / Ihres Schwimmvereins sind derzeit in einem Bundes- oder Landeskader?

Anzahl der Kaderathleten: ____

3.3 Wie viele Kinder und Jugendliche (bis 17 Jahre) sind 2015 in Ihre Abteilung / Ihren Verein eingetreten?

Anzahl der Abteilungseintritte: ____ Wie viele der eingetretenen Kinder sind unter 11 Jahren: ____

3.4 Wie viele Kinder und Jugendliche (bis 17 Jahre) sind 2015 aus Ihrer Abteilung/ Ihrem Verein ausgetreten?

Anzahl der Abteilungsaustritte: _____

4. Talentsuche und -erkennung

4.1 Wie würden Sie die Talentsuche und -erkennung in Ihrer Schwimmabteilung / Ihrem Schwimmverein im Allgemeinen einschätzen?

☐ sehr schlecht

☐ schlecht

☐ mittelmäßig

☐ gut

☐ sehr gut

4.2 Wenn Sie nun an die Talentsuche und -erkennung in Ihrer Schwimmabteilung / Ihrem Schwimmverein denken, wie würden Sie die folgenden Aussagen beurteilen?

Geben Sie jeweils an, inwieweit die folgenden Aussagen Ihrer Meinung nach zutreffen bzw. nicht zutreffen:

In meiner Schwimmabteilung / meinem Schwimmverein...	trifft gar nicht zu	trifft eher nicht zu	teils / teils	trifft eher zu	trifft völlig zu	weiß nicht
… sind wir durch die Talentsuche und -erkennung im Wettkampf erfolgreich. (e)	☐	☐	☐	☐	☐	☐
…werden viele Athleten durch die Talentsuche und -erkennung der Talentförderung zugeführt. (e)	☐	☐	☐	☐	☐	☐
… werden die offiziell gesetzten Ziele der Talentsuche und -erkennung erreicht. (e)	☐	☐	☐	☐	☐	☐
... wird die Talentsuche und -erkennung systematisch geplant. (pp)	☐	☐	☐	☐	☐	☐
… orientieren wir uns in der Talentsuche und -erkennung am leistungssportlichen Konzept des Landesverbandes (pp)	☐	☐	☐	☐	☐	☐
... werden neue wissenschaftliche Erkenntnisse zur Talentsuche und -erkennung berücksichtigt. (pd)	☐	☐	☐	☐	☐	☐
… ist die Durchführung der Talentsuche und -erkennung gut organisiert. (pd)	☐	☐	☐	☐	☐	☐

… werden die Ergebnisse der Talentsuche und -erkennung dokumentiert. (pe)	☐	☐	☐	☐	☐	☐
… gibt es ganz konkrete Ziele der Talentsuche und -erkennung. (sz)	☐	☐	☐	☐	☐	☐
…sind die Ziele der Talentsuche und -erkennung schriftlich festgelegt. (sz)	☐	☐	☐	☐	☐	☐
... sind die Lehrer in der Schule für die Talentsuche und -erkennung ausreichend qualifiziert. (smi)	☐	☐	☐	☐	☐	☐
... sind die Trainer im Verein für die Talentsuche und -erkennung ausreichend qualifiziert. (smi)	☐	☐	☐	☐	☐	☐
... gibt es Sichtungstests in der Schule. (smi)	☐	☐	☐	☐	☐	☐
… gibt es Sichtungstests im Verein. (smi)	☐	☐	☐	☐	☐	☐
… sind die Sichtungs- und -erkennungsverfahren vorgegeben. (sv)	☐	☐	☐	☐	☐	☐
… gibt es viele Vorschriften / Vorgaben (vom Verband oder Verein) zur Talentsuche und -erkennung. (sv)	☐	☐	☐	☐	☐	☐
… ist die Unterstützung der Schulen in der Talentsuche und -erkennung gut. (smö)	☐	☐	☐	☐	☐	☐
… gibt es viele Talente. (smö)	☐	☐	☐	☐	☐	☐

4.3 In welchen Bereichen der Talentsuche und -erkennung kooperieren Sie mit Schulen?

Bitte geben Sie an, in welchen der folgenden Bereiche eine Kooperation stattfindet.

	ja	nein	weiß nicht
Sportunterricht	☐	☐	☐
Schulsportfeste	☐	☐	☐
Schularbeitsgemeinschaften	☐	☐	☐
Unterstützung Ganztagesschule	☐	☐	☐
Bundesjugendspiele	☐	☐	☐
Jugend trainiert für Olympia	☐	☐	☐
Kein(e) Kontakt(e) zu Schule/	☐	☐	☐

4.4 Welche Maßnahmen ergreifen Sie im Bereich der Talentsuche und -erkennung?

Bitte geben Sie an, welche der folgenden Maßnahmen Sie durchführen.

	ja	nein	weiß nicht
Schnupperkurse	☐	☐	☐
Talentiaden	☐	☐	☐
Vereinswettkämpfe	☐	☐	☐
Kindersportschule (KISS)	☐	☐	☐
Präsentationsveranstaltungen	☐	☐	☐
Ferienfreizeiten der Stadt	☐	☐	☐
Sport- und Spielfeste	☐	☐	☐
Talentsichtungsveranstaltungen	☐	☐	☐
Schwimmunterricht an Schulen	☐	☐	☐
Teilnahme an Landesvielseitigkeitstest des Verbandes	☐	☐	☐

4.5 Haben Sie sonstige Maßnahmen in der Talentsuche und -erkennung ergriffen?

Bitte beschreiben Sie in nachfolgendem Textfeld kurz die von Ihnen ergriffenen sonstigen Maßnahmen.

4.6 Wer nimmt für Ihre Abteilung / Ihren Verein die Talentsichtung vor?

Bitten geben Sie an, in welchem Maße dies für nachfolgende Personengruppen zutrifft.

	trifft gar nicht zu	trifft eher nicht zu	teils / teils	trifft eher zu	trifft völlig zu	weiß nicht
Sportlehrer in der Schule	☐	☐	☐	☐	☐	☐
Trainer / Übungsleiter im Verein	☐	☐	☐	☐	☐	☐
Talentscouts	☐	☐	☐	☐	☐	☐

4.7 Wie viele Eintritte wurden im Jahr 2015 durch die Talentsuche und -erkennung erzielt?

Bitte geben Sie Ihre Antwort in Form einer Zahl an. Wenn Ihnen keine konkrete Zahl vorliegt, schätzen sie diese bitte.

Anzahl der Eintritte 2015: ____

5. Talententwicklung

5.1 Wie würden Sie die Talententwicklung in Ihrer Schwimmabteilung / Ihrem Schwimmverein im Allgemeinen einschätzen?

☐ sehr schlecht

☐ schlecht

☐ mittelmäßig

☐ gut

☐ sehr gut

5.2 Wenn Sie nun an die Talententwicklung in Ihrer Schwimmabteilung / Ihrem Schwimmverein denken, wie würden Sie die folgenden Aussagen beurteilen?

Geben Sie jeweils an, inwieweit die folgenden Aussagen Ihrer Meinung nach zutreffen bzw. nicht zutreffen:

In meiner Schwimmabteilung / meinem Schwimmverein...	trifft gar nicht zu	trifft eher nicht zu	teils / teils	trifft eher zu	trifft völlig zu	weiß nicht
… sind wir durch die Talententwicklung im Wettkampf erfolgreich. (e)	☐	☐	☐	☐	☐	☐
…werden genügend Talente gefördert. (e)	☐	☐	☐	☐	☐	☐
… werden die offiziell gesetzten Ziele der Talententwicklung erreicht. (e)	☐	☐	☐	☐	☐	☐
... wird die Talententwicklung systematisch geplant. (pp)	☐	☐	☐	☐	☐	☐
… orientieren wir uns in der Talententwicklung am leistungssportlichen Konzept des Landesverbandes (pp)	☐	☐	☐	☐	☐	☐
... werden neue wissenschaftliche Erkenntnisse zur Talententwicklung berücksichtigt. (pd)	☐	☐	☐	☐	☐	☐
… ist das Training für Talente gut organisiert. (pd)	☐	☐	☐	☐	☐	☐
… wird das Training ausreichend dokumentiert. (pe)	☐	☐	☐	☐	☐	☐

… gibt es ganz konkrete Ziele der Talententwicklung. (sz)	☐	☐	☐	☐	☐	☐
… sind die Ziele der Talententwicklung schriftlich festgelegt. (sz)	☐	☐	☐	☐	☐	☐
... gibt es genügend Trainingsstätten, die wir nutzen können. (smi)	☐	☐	☐	☐	☐	☐
... sind die Trainer im Verein für die Talententwicklung ausreichend qualifiziert. (smi)	☐	☐	☐	☐	☐	☐
... gibt es in der Talententwicklung genügend Kooperation zwischen Schulen und Sportvereinen. (smi)	☐	☐	☐	☐	☐	☐
… gibt es genügend Unterstützung für den Leistungssport in der Schule. (smi)	☐	☐	☐	☐	☐	☐
… gibt es einen Rahmentrainingsplan. (sv)	☐	☐	☐	☐	☐	☐
… gibt es viele Vorschriften / Vorgaben (vom Verband oder Verein) zur Talententwicklung. (sv)	☐	☐	☐	☐	☐	☐
… ist die Unterstützung durch die Schulen in der Talententwicklung gut. (smö)	☐	☐	☐	☐	☐	☐
… ist die Unterstützung durch die Eltern in der Talententwicklung gut. (smö)	☐	☐	☐	☐	☐	☐
… gibt es ausreichend Talente für die Entwicklung. (smö)	☐	☐	☐	☐	☐	☐

6. Angaben zur Trainersituation in Ihrer Schwimmabteilung / Ihrem Schwimmverein

6.1 Anzahl der Trainer / Übungsleiter

Bitte geben Sie die Anzahl der in Ihrer Schwimmabteilung / Ihrem Schwimmverein tätigen Trainer / Übungsleiter entsprechend Ihrer Qualifikation in Zahlen an.

A-Lizenz ____
B-Lizenz ____
C-Lizenz ____
Übungsleiter ____
keine Lizenz -____
Diplomtrainer ____

6.2 Hauptberufliche, nebenberufliche und ehrenamtliche Trainer / Übungsleiter in Ihrer Schwimmabteilung / Ihrem Schwimmverein

Bitte geben Sie in Zahlen an, wie viele der oben genannten Trainer haupt-, nebenberuflich oder ehrenamtlich tätig sind.

hauptberuflich____ nebenberuflich____ ehrenamtlich____

6.3 Erfolgt in Ihrer Schwimmabteilung / Ihrem Schwimmverein eine Zusammenarbeit mit Landes- und/oder Bundestrainern?

☐ Ja
☐ Nein

6.4 Sind in Ihrer Schwimmabteilung / Ihrem Schwimmverein Landes- oder Bundestrainer tätig?

☐ Ja
☐ Nein

7. Zusammenarbeit mit anderen Institutionen im Bereich der Talentsichtung und -entwicklung

7.1 Bitte kreuzen Sie nachfolgend die Institutionen an, mit denen eine Zusammenarbeit besteht.

☐ Landesverband
☐ Spitzenverband
☐ Landesausschuss
☐ Olympiastützpunkt
☐ NADA
☐ Universität / Hochschulen
☐ Unternehmen / Sponsoren

7.2 Zusammenarbeit mit sonstigen Institutionen

Bitte geben Sie in nachfolgendem Textfeld kurz sonstige Institutionen an, mit denen Sie zusammenarbeiten.

8.1 Hiermit sind Sie am Ende des Fragebogens angelangt. Falls Sie noch etwas anmerken möchten, haben Sie die hier Möglichkeit dies in nachfolgendem Textfeld zu tun.

8.2 Möchten Sie die Ergebnisse dieser Studie zugesandt bekommen?

Wenn ja, geben Sie bitte Ihre Email-Adresse in das nachfolgende Textfeld ein. Ihre Email-Adresse wird vertraulich behandelt und lediglich zur Versendung der Ergebnisse verwendet.

Email-Adresse: _____

Vielen Dank für Ihre Unterstützung!