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Ecology of Dual Careers Work Package 2 Report

Table of Contents

Executive Summary	1
Introduction and Background	2
Dual Career Development Environment Case Study Outline and Methods.....	6
Dual Career Development Environment Case Study Results – Belgium	10
Dual Career Development Environment Case Study Results – Denmark	38
Dual Career Development Environment Case Study Results – Finland	63
Dual Career Development Environment Case Study Results – Slovenia	79
Dual Career Development Environment Case Study Results – Spain.....	93
Dual Career Development Environment Case Study Results – Sweden	110
Dual Career Development Environment Case Study Results – United Kingdom.....	151
Factors Contributing to Effectiveness and Efficiency of Dual Career Development Environments Outline and Methods	168
Factors Contributing to Effectiveness and Efficiency of Dual Career Development Environments Results.....	174
Conclusion	189
References.....	190

Executive Summary

This report provides a summary of work package 2 of the Ecology of Dual Career ERASMUS+ project, which aims to: identify factors contributing to the effectiveness and efficiency of dual career development environments (DCDEs) through the exploration of selected DCDEs in participating countries by exploration of their structure, dual career arrangements, organizational culture, and the role of dual career service providers.

First, the report outlines the seven case studies that were conducted to explore successful dual career development environments. These case studies each develop two models: (1) an environment model, that outlines the key structures of the case study's micro and macro environment, including the national culture; and (2) an environment success factors model, that outlines the features and daily processes that lead to the environment's success.

Second, the project team analyzed the features that were common to all seven successful environments, including dedicated dual career (DC) support team, integration of efforts across the whole environment, a clear understanding of DC issues and support from across the environment, role models and mentorship, access to expert support a whole person approach, an empowerment approach, flexible DC solutions, care of DC athlete's mental health and wellbeing, and an open and proactive approach to the development of the environment. These dual career development environment success factors are outlined in this report, along with real world examples.

Introduction and Background

Over the past 30 years, there has been an increase in the focus of research which has looked to understand the development pathway for athletes. This literature (e.g., Henriksen, Stambulova, & Roessler, 2011; Morris, Tod, & Eubank, 2016; Torregrosa, Ramis, Pallarés, Azocar & Selva, 2015) has identified that in order to become successful, elite athletes need to spend a significant amount of time investing in their sport, potentially making sacrifices in other spheres of their lives. While there are benefits to making some sacrifices (e.g., potential elite performance), research has also identified that there are a number of pitfalls to this. For example, previous literature (e.g., Park, Lavalley, & Tod, 2013) has identified that athletes may suffer from identity foreclosure (i.e., commitment to an identity before exploring other options, such as career exploration, talent development, or joining social clubs or interest groups), deterioration of relationships with family members, burnout, and difficulties planning ones future when preparing for retirement from sport (Cecić Erpič, Wylleman, & Zupančič, 2004; Sorkkila, Aunola & Ryba, 2017). Athletes may suffer negative consequences as a result of these challenges, such as poor mental health, difficult adjustment to life outside of their sport, and potential negative behaviors (e.g., drug and alcohol abuse). In order to try and prevent such difficulties and support athletic and personal development, a number of initiatives have been implemented, including facilitation and development of support programs for dual career athletes. According to the recent ‘Dual Career Development and Transitions’ special issue in *Psychology of Sport and Exercise* and the papers contained within (e.g., Debois, Ledon & Wylleman, 2015; Tekavc, Wylleman, & Cecić Erpič, 2015) and guidelines on dual career provision (e.g., EU Guidelines on Dual Careers of Athletes; European Commission, 2012) athletes who take part in a dual career (i.e., combining elite sport competition with education or work) may receive many benefits of doing so, including a more balanced lifestyle, enhanced employment prospects, and better career/retirement planning.

Research (e.g., Stambulova & Ryba, 2013; Wylleman & Reints, 2010), however, has also indicated that this combination of high-level sport and education or work is one of the main challenges facing talented and elite athletes in the Member States in Europe because it involves athletes balancing a number of domains of their life and needing to give appropriate attention to each of these areas to be successful. To conceptualize further, Wylleman, Reints and De

Knop (2013) indicated that the dual career ‘education and sport’ pathway is not uniform and consistent, but actually consists of a series of different stages and transitions (see Figure 1). Within each developmental stage and transition, athletes will experience several demands and challenges that may hinder athletic and personal development (Morris, Tod, & Oliver, 2016). From a holistic perspective, research has indicated that dual career athletes may not only be faced with challenges at academic and athletic level, but throughout their dual career, including at psychological, psychosocial, and financial levels (Wylleman et al., 2013).

Considering these potential challenges of undertaking a dual career, greater academic focus on understanding this process has aimed at helping to facilitate and develop better dual career provision for high-level athletes who are combining their career with education or a vocation (e.g., Baron-Thiene & Alfermann, 2015; Sorkkila et al., 2017). Over the past 10 years there has also been a significant focus by the European Union on supporting and developing athletes who are considered to be undertaking a dual career. This has been emphasized by the development and implementation of European Union (EU) Guidelines on Dual Careers of Athletes (European Commission, 2012), which highlighted the need for cross collaboration and an inter-ministerial approach to supporting talented dual career athletes across Europe. In addition, there have been a number of ERASMUS+ projects (e.g., Gold in Education and Elite Sport, Study on Minimum Quality Requirements for Dual Career Services, and Be a Winner in Elite Sport and Employment Before and After Athletic Retirement) which have focused on understanding dual career athletes’ experiences of combining their sport with their academic / vocational pursuits.

Although providing a solid basis to study dual careers, previous and current ERASMUS projects and current research in the area of dual career athletes has primarily focused on understanding, promoting, and developing the key individual competencies (i.e., knowledge, skills, experience, and attitudes) required by dual career athletes to succeed in both their education / vocation and (post-)athletic career. It has been suggested, via the holistic ecological approach (HEA) to talent development (Henriksen & Stambulova, 2017; Henriksen et al., 2011), that the environment athletes are in can also have an effect on their development. The links and dialogue taking place within these environments can be fundamental to athletic

development (Henriksen et al., 2011). This research has also suggests that some talent development environments are better than others in helping the athletes negotiate the demands of an athletic career and manage the transitions they encounter, providing appropriate cultures, social support, and facilities to aid athletes as they develop. This research indicates that, independent of athletes having the pre-requisite key competencies to be successful, they may encounter challenges with the environment which they cannot control. Indeed, it has been highlighted that coaches and practitioners working with elite athletes need to be sensitive to and analyze the overall strategies they use to develop talent, and not just focus on individual athletes and the development of their key skills (Larsen, Alfermann, Henriksen, & Christensen, 2013). As a result, to advance current knowledge and supplement the work which has already been carried out, the mission of the current Ecology of Dual Career project is to (1) develop a comprehensive understanding of the DCDEs across Europe, and (2) provide guidelines for the development and optimization of DCDEs supporting talented and elite athletes' in their pursuit of sporting and academic excellence.

To achieve the Project mission, there are four aims:

1. To identify and classify different types of DCDEs across Europe and define criteria of their effectiveness and efficiency.
2. To identify factors contributing to the effectiveness and efficiency of DCDEs through exploration of selected DCDEs in participating countries by exploration of their structure, dual career arrangements, organizational culture, and the role of dual career service providers.
3. To develop and test a DCDE monitoring tool (DCDEM) aimed at assisting stakeholders when checking the current status of their DCDE in relation to their structure, dual career arrangements, organizational culture, and the role of dual career service providers and helping them develop strategies to optimize their environments.
4. To disseminate the project findings and provide implementation guidelines to national governing bodies, DCDE stakeholders, dual career service providers, and dual career researchers on the development and optimization of the DCDEs.



This report provides a summary of work package 2 which covers aim 2 of current project - To identify factors contributing to the effectiveness and efficiency of DCDEs through exploration of selected DCDEs in participating countries by exploration of their structure, dual career arrangements, organizational culture, and the role of dual career service providers. The report provides a summary of the aims of the work package, outlines the approach taken to data collection and analysis, and highlights the key findings to emerge from the data. For the purpose of the project, a DCDE was defined as - a purposefully developed system that aims to facilitate athletes' investment in combining their competitive sporting career with education or work.

Dual Career Development Environment Case Study Outline and Methods

To identify factors that contribute to the effectiveness and efficiency of DCDEs, the Eco-DC project team conducted case studies based upon the guidelines provided by the holistic ecologic approach (Henriksen & Stambulova, 2017). This approach centers around two working models as frameworks for describing environments: (1) an environment working model and (2) an environment success factors working model. The first stage in the research process was to develop two working models that specifically relate to dual career development environments.

Holistic Ecological Approach

The Dual Career Development Environment Model (Figure 1), functions to describe the key structures and their functions within an environment. The center of the model is the dual career athlete, other components are separated into two levels (micro- and macro-) and three domains (athletic, academic, and private life). The micro-level refers to the aspects of the environment that the prospective dual career athletes spend most of their daily life and is characterized by real communication and interactions. The macro-level refers to social settings, which affect but do not contain the athletes, as well as to the values and customs of the cultures to which the dual career athletes belong. The athletic domain covers the part of the athletes' environment that is directly related to sport, the academic domain represents the aspects that are related to their education, whereas the private-life domain presents all the other spheres of the athletes' lives.

The Environment Success Factors Working Model (Figure 2), outlines the preconditions, daily routines and philosophies that impact the effectiveness of the environment to support dual career athletes in their development. The Environment Success Factors Working Model therefore predicts the environment's success. The two working models provide the framework of the analysis of this study.

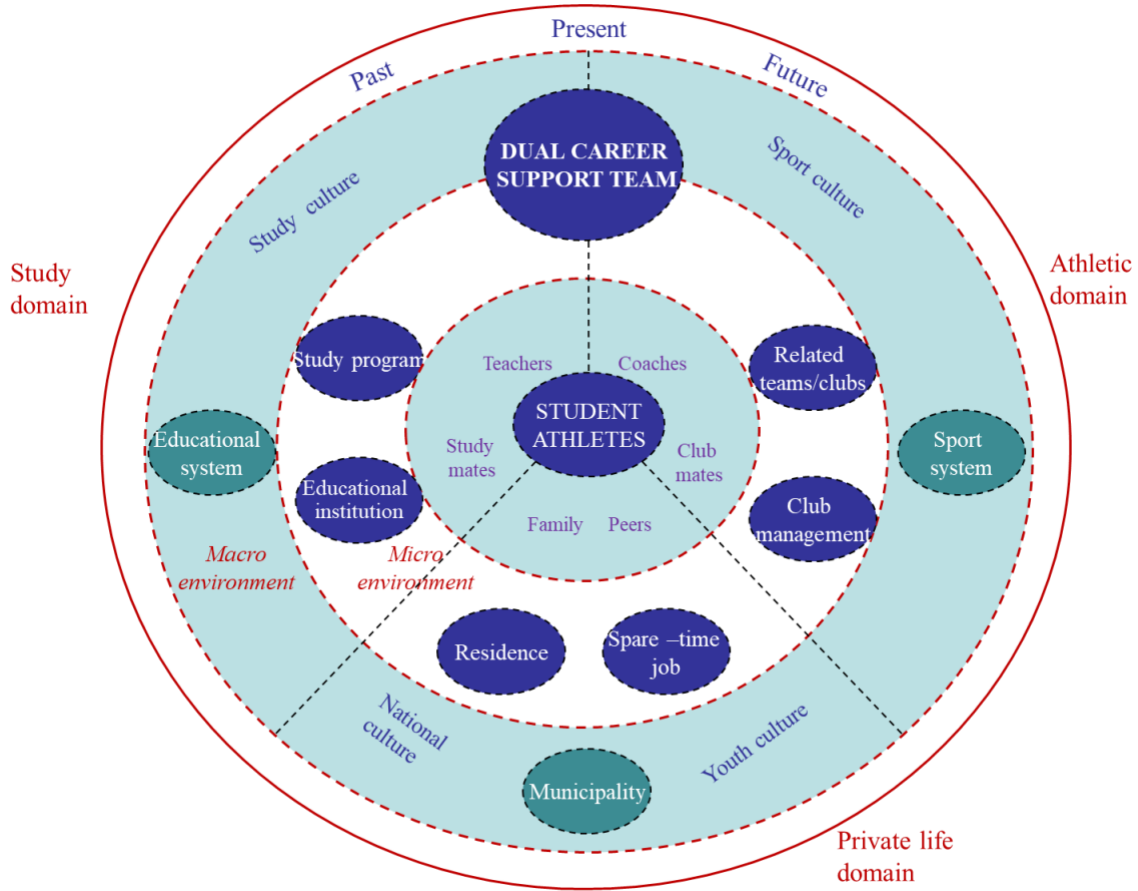


Figure 1: Dual Career Development Environment Working Model

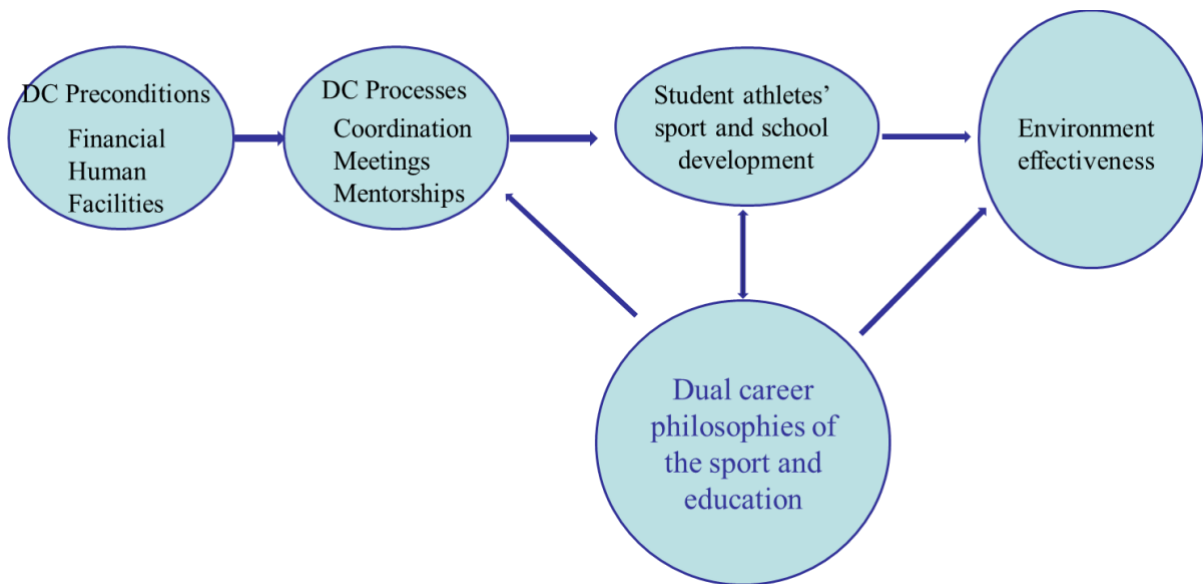


Figure 2: Environment Success Factors Working Model

Eco-DC Case studies

Seven European countries (Belgium, Denmark, Finland, Slovenia, Spain, Sweden, and United Kingdom) were involved in this study to ensure that there was appropriate representation of the different types of environments present across Europe. In each participating country, one environment was selected based on the current national approach to dual career support. Expert researchers and practitioner in the dual career area were involved in helping to identify and recruit the required participants for this study.

Case study environments:

National partner	DCDE type
Belgium	Elite Sport School
Denmark	Sport-friendly University
Finland	Sport-friendly University
Slovenia	Private and/or Professional Sports Club Programs
Spain	Private and/or Professional Sports Club Programs
Sweden	Sport-friendly University
United Kingdom	Sport-friendly University

Across the participating countries, we had a spread of different types of environments highlighted in WP1, including elite sports schools, sports-friendly universities, and national sports programs. A researcher from each country collected data using on-site observations, interviews with student-athletes and stakeholders involved, and analysis of the documents (e.g., meeting minutes) available on the DCDEs. Interview guides were developed to be specified for the different actors in the environment, including student-athletes, teachers, coaches, parents, administrators, and dual career service providers.

The qualitative data collected from the different sources was then thematically analyzed, using the dual career development environment working models (see figures 1 and 2 below) and Schein's (2004) set of categories to analyze and describe organizational culture, including (a)



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the organization and its surroundings; (b) the nature of human nature and activity; (c) the nature of reality and truth; (d) the nature of time; and (e) the nature of social relations. As a result of the analysis, detailed descriptions of each of the environments in foci are provided.

A detailed outline of the data collection process and results of each case study analysis are outlined below.

Dual Career Development Environment Case Study Results – Belgium

Description of the case and target group

The studied DC environment was the secondary elite sport school for Belgian promising and elite gymnastics in Ghent, East Flanders, Belgium. Since 1998, promising and elite gymnasts are able to combine their studies with elite sport in a structured way. The elite sport structure gives around 60 talented gymnasts the opportunity to complete a number of training hours within their school curriculum under the guidance of a team of 17 coaches. More specific, the elite sport structure allows 12 – to -18 years old student-athletes to train more by exempting them weekly from 12 hours of education. This implies that their weekly presence at school is obliged for only 20 hours of education instead of 32 hours for regular students. The DC environment consists of three centralized pillars, namely the elite sport school, the sport accommodation which is known for having one of the best gymnastics hall in Europe and the boarding school. Transport between the school and the sport infrastructure is provided via a school bus. All gymnasts are obliged to stay at the boarding school during the week. A typical day of a student-athlete in this DC-environment is very structured and looks as follows:

1. Student-athletes are awakened by the educators of the boarding school and have breakfast;
2. Student-athletes consequently go to a morning training. It is only a 2-minute walk from the boarding school to the gymnastics hall;
3. A school bus picks the student-athletes up directly outside the gymnastics hall to drop them off at the school where they follow 4 hours of education. It is a 10-minute ride from the gymnastics hall to the school;
4. The school bus picks them up again to drop them back off at the training facilities where a second training is completed;
5. Student-athletes go to the boarding school, which is situated next to the gymnastics hall, to eat, study and sleep.

Methods

Data collection

We collected data via semi-structured interviews, observations and relevant documents. Four observations took place in every pillar of the DC environment, namely the elite sport school, the sports federation (i.e., gymnastics hall) and the boarding school. Meetings, courses, trainings and competition events were observed during two whole days and two half days. Furthermore, a total of 23 actors (30% male, 70% female) within the DC-environment were questioned face-to-face throughout semi-structured interviews. Participants included medical staff (n=2), student-athletes (n=5), coordinators (n=2), educators (n=3), coaches (n=3), governmental staff (n=2), teachers (n=2), directors (n=2) and parents (n=2). All participants were audiotaped for between 20 and 90 minutes, resulting in 314 transcribed pages. Questions included information on participants' background, impressions of the environment, roles and functions of components of the environment, and relationships or collaborations. Finally, we collected relevant documents, such as course material, webpage information and specific bundles for student-athletes, to be able to get a better picture of the whole DC environment.

Procedure

After the DC environment was selected, information letters and informed consents were sent to the coordinators of the three pillars (i.e., elite sport school, boarding school, sports federation). The information letters and informed consents outlined the aim of the study, the confidentiality of information and the voluntary nature of participation. The coordinators coordinated the spread of the documents to all actors within the DC environment (e.g., teachers, student-athletes, parents, coaches, etc.). Additionally, every interviewee also received, read and signed an informed consent. Interview - and observation moments were selected on the basis of two formal meetings with the coordinator of the sports federations and the elite sport school. All interviews took place at a location of the interviewee's choice (e.g., school, gymnastics hall, sports federation building).

Analysis

Interviews and observations were all transcribed and coded, using a deductive – inductive approach. First, categories were built based on the ESF and DCDE working models (deductive). Secondly, new categories emerged (inductive).

Dual Career Development Environment Model - GymFed, Belgium

The following section outlines the Dual Career Development Environment model (Figure 3) for the Gymfed, Belgian case study.

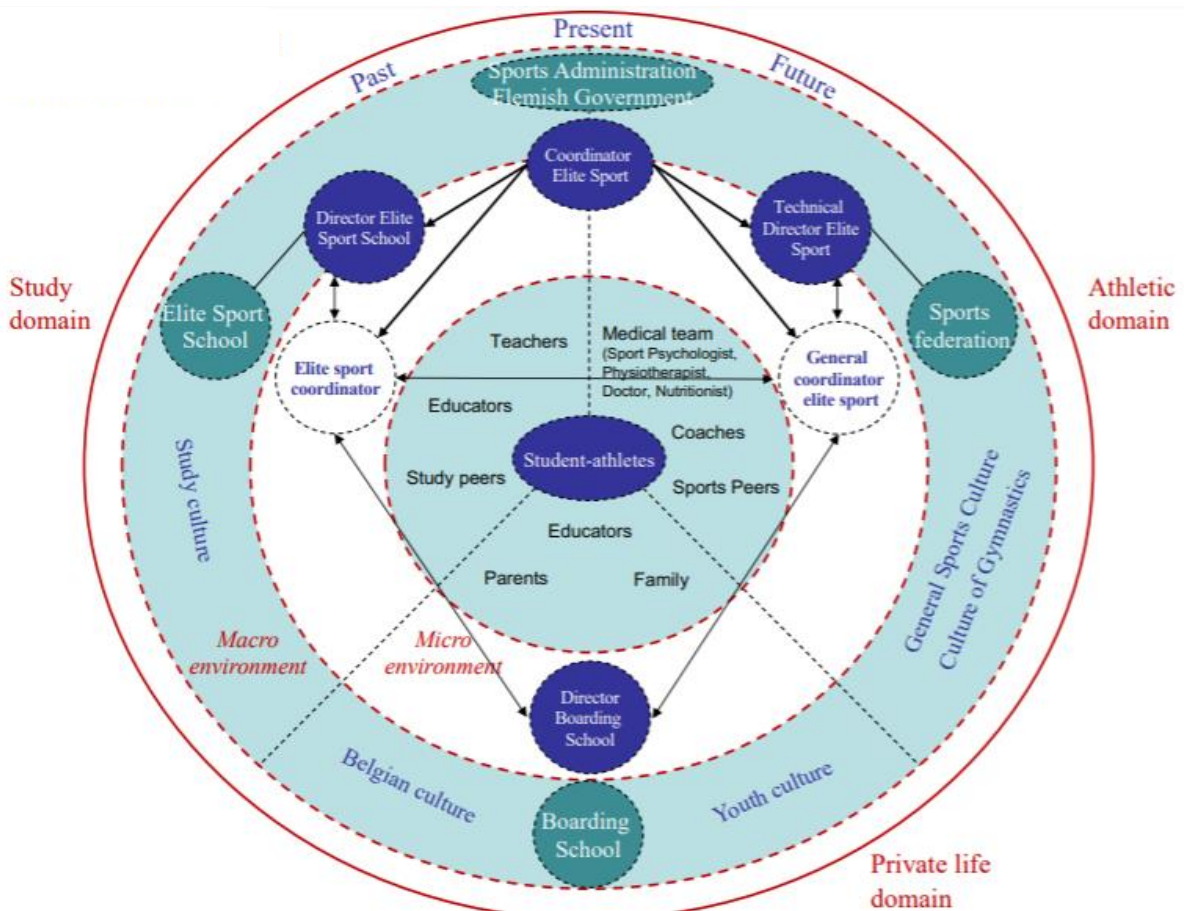


Figure 3: Dual Career Development Environment Model - GymFed, Belgium

Macro-level Environment

“Everyone is very aware of the goal that those student-athletes have and tries to do everything so they can achieve their goals.” (Sport Governing Body, P.16).

The macro-environment consists of four different actors: (1) The sports administration of the Flemish government, (2) the sports federation, (3) the elite sport school, and (4) the boarding school. Those actors are respectively managed and controlled by the coordinator elite sport, the technical director elite sport, the director of the elite sport school and the director of the boarding school. Excluding the sports administration of the Flemish government, all of the actors also provide a representation at the micro level to coordinate the main tasks of their specific domain: (1) The elite sport coordinator for the elite sport school, (2) the general coordinator elite sport for the sports federation, and (3) the director of the boarding school for the boarding school. Next to their coordinating tasks on a micro-level, they provide structural and operational feedback to their macro-level managers and engage with each other on the micro-level through formal meetings (e.g., class councils) and ad-hoc informal communication (e.g., telephone, e-mail) when problems occur: “They used to know a bit about that at school and it was also passed on to the trainers and the boarding school, so I think they work well together” (Student-athlete, P. 4).

Sports administration of the Flemish government. The sports administration of the Flemish Government is responsible for the design and implementation of the dual career policy in the Flemish elite sport schools. One full-time staff, the coordinator elite sport, outlines the policy which allows student-athletes to combine secondary education and gymnastics on a top level. Student-athletes are on a weekly basis exempt from 12 class hours in order to be able to train more.

To facilitate a student-athlete’s graduation from secondary education as much as possible, they are actually daily exempted from school during a number of hours.

In practice, it comes down to 20 lessons of general education instead of 32 hours.

(Sport Governing Body, P. 16).

Within this structure, student-athletes are typically faced with the challenge to reach the same learning outcomes as regular students in less contact hours. In order to support the school to counter this challenge, the policy provides extra ‘teacher hours’ per recognized student-athlete. This enables the school to work in smaller class groups and thus gives them the opportunity to obtain a more individual approach.

The schools receive more support, because they get more teacher hours per student with an elite sport status. And on the other hand, due to the fact that they get more teacher hours, the schools are able to make smaller class groups so that actually more individual guidance is possible. (Sport Governing Body, P. 16)

A barrier within the DC policy concerns the limited number of possible study directions. The sports administration of the Flemish government tries to, in collaboration with the governmental educational pillar, address this barrier via educational reforms normally introduced on 1 September 2019.

I think there are very few options for school. You only have two choices, and I find that very regrettable. I did not know that. They have told us a lot about the first two years, but hardly said anything about the following years, and I thought they just had different choices and actually it is just general secondary education or technical secondary education. (Parent Gymnast, P. 21)

In order to implement and outline the DC policy successfully, the sports administration of the Flemish government engages in different collaboration initiatives on different domains. Minimum once a year, an overarching steering committee consisting of representatives of the sports federation (i.e., Technical Director Elite Sport) and the elite sport school (i.e., Director, Elite Sport Coordinator) is held. Furthermore, on an educational level, an advisory committee is organised once a year to discuss strategical matters. Finally, on a sports level, sport specific issues are discussed during an elite sport committee. This committee comes together minimum three times a year.

Sports federation. The sports federation plays a key role in the athletic domain of student-athletes as they create a motivational climate with a whole team behind every single student-athlete: “When I came in for the first time, it was: ‘You must perform, you, you!’ . And now it is: ‘We must perform’ . So, it is no longer: ‘It is your fault’”. (Coach, P. 12). The federation succeeded in creating a center of excellence with a new high-quality sport infrastructure and high-qualified, foreign coaches, illustrated by Coach, P. 13: “If you look at it practically, we have a very good gymnastics hall, one of the best in Europe”. The federation supports student-athletes in planning their career in gymnastics (e.g., helping them with setting goals),

organizing their training hours, rest periods and facilities (e.g., transport from and to school), and organizing the selections for national and international competitions: “Basically, everything is well organised towards the athletes. Even if the student-athletes have to go to school, there is a bus that picks them up in the parking lot and drops them back off at the parking lot” (Coach, P. 13). As the sport federation has an accessible, transparent and clear policy, stated by Sport Governing Body, P. 14 as follows: “It is also transparent and clear, the sports federation. It is very clear who is part of the operation and who is not, who is responsible for what.”, collaborations are typically clear, good and fluid. Collaborations are characterized by informal ad hoc communication via telephone, e-mail or face to face when problems occur (e.g., student-athletes encountering difficulties to combine study and training) and by weekly formal meetings on sport specific matters such as student-athletes’ performance and the inflow of new athletes. Some actors, however, express a wish for less last-minute communication, such as for example the announcement of the competition schedule: “It is better, but the communication is, we know everything at the last minute.” (Student-athlete, P.3)

Elite sport school. School provides student-athletes a necessary safeguard, since gymnasts retire from their sport at a relatively young age (i.e., +- 23 years old) and since in Belgium gymnastics does not offer athletes the possibility to make a living out of their sport. In order to be successful as an elite sport school, it is necessary that the school director shows a lot of goodwill towards elite sport: “I think it is important to encourage the student-athletes, that we have recognition that they indeed are doing things very differently than the average students. So, I think we should support them in this.” (Director School, P. 17). Although the director shows a lot of goodwill, his specific tasks towards guiding student-athletes is very limited: “If I have direct contact with the student-athletes, it is mostly due to great sporting achievements” (Director School, P. 17). The workload in guiding student-athletes in their DC is namely processed by the director’s personnel. As the director has great confidence in his personnel, a smooth cooperation between them is established. The key figure in ensuring student-athletes’ possibility to combine elite sport and study is the elite sport coordinator.

I actually see my role as paving the way as well as possible for the student-athletes to be able to complete their school career very well and to pursue their sports dream as much as possible. But always keep both of them in balance. So, that is

communication with the sports federation on the one hand on student-athletes' planning, and on the other hand that is looking for ways to ensure that they can process the course material at school. (Elite Sport Coordinator School, P. 6)

As it is very clear that the elite sport coordinator is the contact point between school and the sports federation, the communication between the different actors runs smoothly.

Boarding school. The boarding school is responsible for housing the student-athletes. Student-athletes in gymnastics are obliged to stay at the boarding school during the week. In order to make it as comfortable as possible for the student-athletes, the director and educators of the boarding school strive at creating a homely atmosphere, as illustrated by Director Boarding School, P. 18: "It is true that I still consider the boarding school as a home for the children. They are allowed to forget their elite sport here, because they are already there from morning till night." However, homesickness still is a great barrier and challenge for student-athletes:

Missing the home front is really, I miss my mom, or I miss my dad, or I miss my dog, or I miss my brothers or sisters. That family, that is, yes, I think that is one of the biggest misses. (Director Boarding School, P. 18)

The educators and peers are shown to be a great support in overcoming homesickness. Close friendships with peers are formed throughout student-athletes' DC pathway: "There are many student-athletes who form very close friendships here, and that really solves a lot." (Director Boarding School, P. 18). Educators counteract homesickness by creating a supportive environment in the boarding school by being good listeners, kind and accessible, as illustrated by Student-athlete, P.4 and Educator Boarding School, P.7: "That psychological aspect is also a part of it of course, and also motivate the student-athletes." "For example, [name educator], an educator, with who you can make jokes and then □name educator□, a more serious educator, who is accessible if you feel bad."

Macro-level Culture

Sports culture. The typical mindset dominating the Belgian sports culture is that Belgian athletes are not able to perform at the highest elite sport level because of the fact that Belgium is a small country. The coaches in gymnastics tried to counteract this mindset by creating a

sports culture in which student-athletes and their DC environment strive for an ‘everything is possible’ mentality: “Being a small country does not mean you are not able to perform at the highest level.” (Medical Team Member, P. 1)

Culture of gymnastics. The DC environment is influenced by the specific culture of gymnastics, as this sport is typically characterized by a great amount of training hours and a minimum of rest periods. Gymnastics thus requires a high level of discipline, as illustrated by Sport Federation Member, P.10 and Parent Gymnast, P. 21: “If you have a look, once senior, they have more than 30 hours of training per week.” “Lack of general rest, lack of rest after injury, yes. In school, for example, some teachers give tasks when they should not do it.”

Study culture. The study culture in Belgium is considered as influencing student-athletes’ DC as school is often seen as priority. This may impose extra pressure on athletes in pursuing their DC pathway. Furthermore, the importance attached to a diploma can hinder the sporting career.

I think in general in Belgium it is indeed: ‘You have to do your studies’. But I think that sometimes it is also an obstacle for the rest of your sporting career. When you are 18 years old, sometimes you have to be able to say: ‘Okay, I will put everything on the sport’. And then you let your studies go for a while. Therefore, I think that the study culture also hinders some sporting careers. (Medical Team Member, P. 1)

Belgian culture. The sense of national pride within Belgium is limited. Still, performing for the national team remains student-athletes’ ultimate goal. Furthermore, Belgian elite sport is encountered by a lot of negativity: “I think there is still a lot of negativity in Belgium. Elite sport is not healthy and a Belgian is a Burgundian, a Belgian is a bon vivant.” (Coach, P.13). However, thanks to the Belgian solution-oriented mindset, the DC environment is capable to limit the influence of this Belgian culture on the student-athletes.

For example, in the Netherlands the elite sport culture is much larger. Teachers would be even more willing to make efforts for student-athletes. However, this is pretty good now in Belgium too and why is that pretty good? Because I think that we are solution-oriented, that we learned to compromise and a combination of elite sport and study would not, no compromises should be made, because that actually

does not fit with elite sport, but still it is sometimes required in a student-athlete's DC. (Sport Governing Body, P. 14)

Youth culture. The youth culture is characterized by young people having the ability to explore everything, have a rich social life, get to know the nightlife etc.: “The youth should be able to explore everything, have a rich social life, go out etc., which conflicts a bit with the gymnast requirements” (Director Boarding School, P. 18). Although the youth culture highly conflicts with the requirements of gymnastics, the influence of it is limited because of the strict regime in which the student-athletes live. Gymnasts are typically not that influenceable and have a great awareness of their required lifestyle in order to reach their sporting goals: “I also think they have enough discipline to know what is possible and what is not.” (Coach, P. 13).

Micro-level Environment

“It is the chain of all persons that is crucial, if one goes away, it can collapse (or other will have to solve it)” (Educator Boarding School, P. 23).

Student-athletes. The student-athletes are placed in the centre of the DC-environment as they are both an athlete affiliated to the sports federation and a student of the elite sport school. Furthermore, all student-athletes in gymnastics are linked to the boarding school as they are obliged to stay at the boarding school during the weeks. Although the multiple roles of the student-athletes, elite sport is shown to be the priority: “The sport actually offers you a framework on which you can organise everything. And I think that is it a bit for us. You get a framework and try to fit some things into it.” (Elite Sport Coordinator School, P. 6). “Yes, it is, everything is about the sport. You can almost say that everything is in function of the sport.” (Parent Gymnast, P. 19). Usually, sports and study peers are the same people who are shown to be very important and encouraging for student-athletes, as illustrated by Student-athletes, P. 3, 4 and 5: “On training, my friends often support me and also on school it is mainly my friends who say that it does not matter that much if I have bad grades, that next time I should just concentrate better.” “For example, on training, if an exercise goes well, then I get applause from other gymnasts and that I really like.” “I can mainly talk to [name student-athlete], and that really helps that you can share that burden with someone, because she also does not find it always easy.” Sometimes, however, jealousy may occur between student-athletes as they all

strive for the same goal and they all have the same dream: “It is not always easy, because we all have the same dream and it is only four gymnasts who can come along. So, there is a lot of jealousy.” (Student-athlete, P. 3). Nevertheless, Teacher, P.15 illustrated that student-athletes are very grateful for the opportunities they get within this supportive DC environment: “Those gymnasts are enormously grateful. All the efforts the environment makes for them, it is fantastic. They cannot be in a better place, I think.”

Athletic Domain

In order to function properly and to enable student-athletes to pursue their sports dream, a good relationship among all actors within the athletic domain is required. Intercommunication between all actors therefore takes place regularly on a formal (e.g., via weekly meetings) and informal basis (e.g., via telephone, e-mail). Next to the intercommunication between all those actors, they are all in close contact with the student-athletes.

General coordinator elite sport. The coordinator is responsible for the planning of student-athletes’ national and international competitions based on their performances. Furthermore, she is a key figure in creating a whole supportive team after every single student-athlete. In doing so, she has a role in organising and attending fixed formal meetings with the sports federation on policy matters, with the coaches on sport specific matters and the inflow of new athletes and sport technical meetings. There also is a good ad-hoc communication between the coaches and the coordinator, for example during training hours. Furthermore, the coordinator provides sometimes general feedback to the student-athletes on their performances on competitions.

Coaches. The closest relationships the student-athletes have, besides the peers, is with the coaches. The student-athletes spend a lot of time with the coaches due to the extensive training hours. In line with the needed discipline within the gymnastics culture, trainings are in general characterized by a strict regime and a directive and instructive coaching style with, however, room for encouragement and individual one-on-one feedback. If possible, coaches even support student-athletes in their study progress by planning study moments during training camps and by showing interest in their grades and tasks: “Coaches think that study is important. They are open to study moments if it is needed.” (Teacher, P.15). Yes, they [coaches] ask after an exam whether it was good or not and then they ask the grades. And if we have bad grades, they are

not so happy” (Student-athlete, P. 3). Coaches communicate with each other via weekly meetings on specific athletes, organisation, and planning. Furthermore, there is room for constructive criticism among coaches: “We say to each other how some things need to be handled, and if someone is not happy with an approach. So, that is also a very open communication, but constructively.” (Coach, P.13). Coaches do only have contact with the boarding school occasionally, most of the time in case of problems. There is, however, no direct contact between the coaches and the elite sport school, as stated by Coach, P. 13: “I sometimes contact the boarding school myself when something is really urgent. But I will never call the school, never.”

Medical team. Whenever student-athletes are in need of expert services, such as the physiotherapist, doctor, and sports psychologist, they are able to visit them on fixed moments during and after training moments. Sometimes, however, gymnasts fear to report certain issues as for example an injury. Multidisciplinary meetings with the medical team and the sports federation are organised every two months to follow-up on injuries and training schedules. The team of three physiotherapists is responsible for diagnosis of injuries together with the doctor and for appropriate revalidation of injured student-athletes. The required and most appropriate treatment is always discussed during fixed, weekly meetings between the coaches, the physiotherapists and the doctor. Ad hoc, informal communication (e.g., WhatsApp) may occur if a certain follow-up is needed. The sport psychologist is responsible for providing mental guidance to student-athletes via individual and group sessions once a month. The focus of this guidance is mainly their sport: “If I look purely at the conversation, I think that, let's just say, 70% is about sporting performance and then 30% is about study and/or private issues.” (Medical Team Member, P.9).

Study Domain

The school environment is characterized by a good and close cooperation between the teachers, the educator and the elite sport coordinator. The elite sport coordinator and the educator effectuate a good division of roles. The teachers always go the extra mile for the student-athletes. Furthermore, the school is in close contact with the boarding school via telephone or e-mail: “Yes, if student-athletes are sick, the boarding school immediately send an e-mail. Also, if problems occur.” (Educator School, P. 22). Within the school team, there is an open, close

and confidential relationship between the elite sport coordinator, teachers, educators and student-athletes. The personnel communicate formally via structural meetings (e.g., staff meeting, class councils, working groups) and informally via ad hoc meetings, e-mail and telephone.

There are fixed meetings, but really only among the elite sport classes. The elite sport coordinator organises three or four times a year an elite sport meeting. But of course, we also have staff meetings all together. And then we have our class councils. And if there is something about a certain class group, there are special meetings. Maybe three times a year. (Teacher, P. 20).

However, last-minute communication from the sports federation sometimes makes it difficult to organise properly student-athletes' study activities, as illustrated by Educator Boarding School, P. 7 and Educator School, P. 22: "The sports federation is always late in everything. For example, we have a training camp next week and the school did not know that. So, now the school has to arrange everything differently." "We often know very late when students are away and that is sometimes difficult. And then they do not come to school, while we expected them. So, that is a stumbling block."

Elite sport coordinator. The elite sport coordinator from the elite sport school is the pivotal figure between the sports-, study- and private domain of the student-athletes. In close collaboration with the educator of the school, she coordinates student-athletes' planning and study guidance. To do this properly, close contact between her and the school team, the student-athletes, the general coordinator of the sports federation, the coaches and the director of the boarding school is required.

The coordinating role that I have is needed to keep everything manageable, to steer it in the right direction, and also to create the time to develop new things, such as a digital platform where all the material then is bundled together. It is also really necessary to have meetings with the federation. (Elite Sport Coordinator School, P. 6)

Student-athletes do regularly have informal meetings with the elite sport coordinator to see how everything goes and to catch up for school after being absent for a competition. Furthermore, fixed moments are planned for meetings between the elite sport coordinator and the sports federation. On a regular basis, the elite sport coordinator also meets with elite sport coordinators from other elite sport schools, as illustrated by Elite Sport Coordinator School, P. 6: “I try to meet with all coordinators in that role on a regular basis.” Next to formal meetings, informal phone calls and a lot of e-mails between the school and sports federation find place: “We also often call when necessary. And many e-mails, many, many e-mails, lots of e-mails.” (Elite Sport Coordinator School, P. 6).

Teachers. Teachers are key figures in creating a supportive DC environment for student-athletes. Teachers teaching in the elite sport school need to deal with the fact that the study domain is adapted to the sports domain and thus high flexibility is required: “It is always a puzzle to get everything in it.” (Elite Sport Coordinator School, P. 6). Although it is a puzzle, teachers most of the time are able to manage to give additional explanation or extra courses if requested or needed by the student-athletes. Teachers’ daily contact with the student-athletes in small class groups allow them to provide a very individual approach and to create a very close relationship with the student-athletes. This close relationship makes student-athletes feel that they can access the teachers also in case of problems (e.g., difficulties with the coach): “The teachers help us. Not only with our studies, but also when they see that things are not going well. It is handy that they also listen to you.” (Student-athlete, P. 4). Moreover, student-athletes are always able to indicate when it is not possible for them to study for a test or to finish a task. Teachers do not get in direct contact with the sport domain.

Educator. The educator’s general tasks are to monitor student-athletes’ absences, sanctions and study planning.

I follow up on absences because they are naturally gone a lot for their sport. When they are kicked out of class, they also come to me, then I punish them if needed. I am also involved in study planning for student-athletes who are struggling.” (Educator School, P. 22).

As the educator of the school is the same person for four years long, student-athletes know they can rely on her for a variety of things.

I am fairly strict, but if needed, they can come to me and they also do that. Or often they send messages, I am always available, so they know that I am here. Even student-athletes who have problems at home. For example, divorces.” (Educator School, P.22).

So, next to her general tasks, the educator also functions as a listening ear for student-athletes: “Student-athletes also often come to me with their problems, so I am also a confidant and listening ear.” (Educator School, P. 22). Via an online learning platform (i.e., SmartSchool), the educator connects with student-athletes’ parents.

I insist that they use it. Because their school diary is also there, they can see their child’s grades, they can follow-up when they did not behave in class. Most of the student-athletes are in boarding school, so SmartSchool makes it possible to follow up a bit on their child.” (Educator School, P. 22).

Finally, there exists a close and advisory relationship between the educator and the teachers: “The relation between us, the teachers, and the educator is very good. She even became a friend. Teachers can always go to the educator for advice on how should I approach the student-athletes or on a specific situation?” (Teacher, P.15). The educator does not have direct contact with the actors of the sports federation. Contact only occurs occasionally via e-mail.

Private Domain

Director of the boarding school. The director functions as the voice of the boarding school and is shown to be a very capable leader. As the director is the voice of the boarding school, communication with the school and the sport mainly goes through her via steering group committees. Although a shift to more informal contact between the different stakeholders would be good, specific interference with school or coaches only occurs if structural or deep problems occur, as illustrated by Director Boarding School, P.18: “If we think the problem is a bit too big or expanding, the we will definitely communicate with the school or the coaches or with the elite sport coordinator of the sports federation.”. Otherwise, the contact takes place

with student-athletes and the boarding school tries to put things in perspective: “So, if they had a difficult day, we are more likely to say: ‘Yes, listen to me, you know the coaches are also under pressure.’” (Director Boarding School, P.18).

Educators. The educators of the boarding school try to help student-athletes in finding a balance between multiple life domains (i.e., study, sport and private life) by safeguarding their rest periods, study time and free time: “My role is mainly that they [student-athletes] have enough sleep, enough rest, enough relaxation. That they do not neglect their study. And I also take care of the entertainment here on the boarding school” (Educator Boarding School, P. 23). The relationship between educators and student-athletes is accessible, motivational and supportive. Student-athletes are always able to ventilate against the educators if difficulties or problems occur, as illustrated by Student-athlete, P. 4: “For example, [name educator], an educator, with who you can make jokes and then [name educator], a more serious educator, who is accessible if you feel bad.” The boarding school is characterized by great leadership of the director, who supervises a group of very passionate educators. The educators successfully induce a great atmosphere in the boarding school, and all have the same vision. This facilitates not only the communication between the educators, but also with the director.

The director tries very hard to solve any conflicts immediately. And I think that is very good. Sometimes, I do not need that and then she says: ‘You have to, because otherwise you will stay frustrated and that frustration must go’, and that is something, I think that is her strong point. So, the communication with the director is very good.” (Educator Boarding School, P.23).

Furthermore, there is a great cooperation between all the educators in the boarding school via direct communication, telephone and via an online system: “We have a very good team. We think it is very important that we communicate openly with each other and thus also tell each other what we think.” (Educator Boarding School, P.23).

Parents/family. Parents’ support is shown to be critical for student-athletes’ DC. Parents are mostly a student-athlete’s biggest source of support: “If it is harder for a day, she will help. I tell my mom everything, so that is easier.” (Student-athlete, P.3). Parents may however also be a restrictive source as they may impose extra pressure, by for example pointing out the great

importance of a diploma: “My mom always says that school is more important than gymnastics.” (Student-athlete, P. 11). Therefore, parents are also shown to be very helpful when it comes to their children’s their school work, as illustrated by Student-athlete, P. 11: “Yes, sometimes I am tired of it. But my mom helps me then. If I do not understand something, she helps me and explains it.”. Parents are always able to contact either the school or the sports federation if problems occur or if they have questions. Teachers, educators, coaches, and coordinators are happy to answer parents’ questions and to provide feedback on their children via for example parent contacts on school. However, the contact between the boarding school and the parents is limited, as the boarding school strives for privacy. The boarding school provides yearly two evaluation moments and one contact moment with the parents. Sometimes the fact that parents need to leave their children for a whole week and thus need to trust the educators imposes difficulties: “If one of the student-athletes encounter difficulties, they call their parents. And then we really have to teach a parent to really trust us.” (Director Boarding School, P.18). Contact between the parents and coaches typically intensifies with the duration and level the student-athletes reach.

The further your child gets, the closer the contact between the parents and coaches becomes. Mostly on what they [student-athlete] actually can do. When they arrive here at the age of twelve, there is also contact with the coaches, but it is different. Then everything still is far away, now everything becomes more concrete.” (Parent Gymnast, P.19)

A student-athletes’ DC has been shown to have a great impact on the family as well. For example, holidays need to be scheduled and/or adapted to the gymnast’s planning: “But it is very tough, both for the student-athletes and for the rest of the family. Only at the end of June we will know when she will be on holiday in July and August. It is kind of absurd.” (Parent Gymnast, P.21).

Environment Success Factors Model – GymFed, Belgium

The following section outlines the Environment Success Factors model for the GymFed case study (Figure 4).

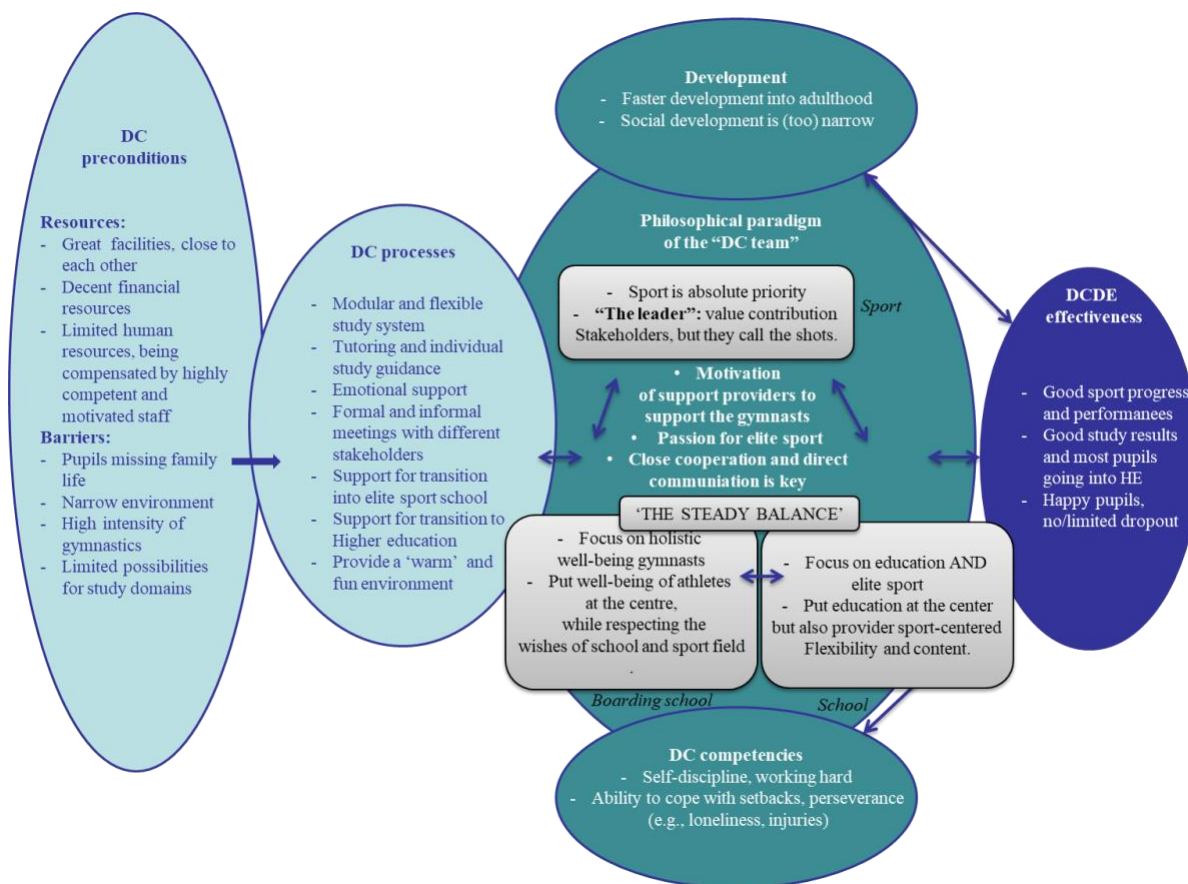


Figure 4: Environment Success Factors Model - GymFed, Belgium

Dual Career Preconditions

Resources.

Great centralised facilities. The student-athletes can use very modern, contemporary facilities in their centralised DC environment. The sport infrastructure is modern and very decent, consisting of a new gymnasium, fitness room and recovery room. This is highly appreciated by the gymnasts.

We have a brand-new gymnasium, it is one of the best in Europe. So, this is really an advantage for us, because we also have two standing podia and on games these podia are there as well. As such, this is really good for us. (student-athlete, P. 11)

Furthermore, the boarding school where all gymnasts are obliged to sleep during the week, is completely new as well. One of the main improvements is that each gymnast has a private room now.

With two or with four in a room, that was a disaster. In the beginning of the year, they stayed with four gymnasts in one room, that was not feasible, a complete disaster. Then she has no rest. The rooms alone are fantastic now, and she thinks so too. (Parent Gymnast, P. 21)

As part of the new boarding school, a new arrangement was negotiated with the sport governing body Sport Vlaanderen, which means that the food in the boarding school is completely in line with the needs of the gymnasts since this year.

Finally, the facilities of the school environment are acceptable at this point already, but a completely new building will be used for the student-athletes very soon. This does not only mean that the infrastructure (e.g., blackboards, digital material etc.) will be top-notch, but also means that all facilities will be at one place from then on. Until now, the school was approximately 2 kilometres from the sport environment and boarding school (these are at the same place already), but the new school building will be directly next to the boarding school and gymnasium.

Decent financial resources. Most of the stakeholders do recognize that the financial resources could be worse, but in their ambition to reach the best possible support for the athletes, also stipulate that financial resources could be better as well. The coordinators of the school, sport federation and boarding school play(ed) an important role in advocating for the rights of the student-athletes by ensuring enough financial support from third parties (e.g., Sport governing bodies, school society, the government). To facilitate this process of gaining financial resources, the sportive success is an important facilitator. The good results of the Belgian gymnasts the past decade were really important in this regard.

Despite the sport successes, financial resources are still not spectacular from the perspective of the gymnasts and their parents themselves. In comparison with other sports (e.g., football), the revenue from being a gymnast is rather low. Furthermore, parents pay a lot to make it possible for the gymnasts to combine their elite sport with education, as the boarding school and elite sport school are quite expensive.

Limited (but strong) human resources. In all subdomains of the DC environment, stakeholders agree that more staff members would contribute to a better support for the student-athletes. They all agree that the current number of employees is too low, requiring the staff to do more than their actual job responsibilities to make sure the support for the student-athletes is adequate.

The tutoring we provide is actually not part of our responsibilities. Actually, all teachers need to look up all tasks for the student-athletes before, look up what they will give them as a task, put that in the system, follow-up on this, correct this, ... And especially for the tutoring, the additional lessons we provide for gymnasts that were absent. All of this is not taken into account. (Teacher, p. 20)

However, the staff that is available can be considered as very competent and motivated. Furthermore, the cooperation within the different organisations (i.e. federation, boarding school, elite sport school) and between the different organisations (through the coordinators) is strong and direct.

The boarding school coordinator, boarding school educators, the teachers, the school, the principal, they all know what gymnastics is, how hard it is. So, yes, and we need people who are very quick in their communication and are forceful. That is important as well. (Sport Federation Member, P. 10)

Barriers.

Student-athletes missing family life. One of the main barriers is that all gymnasts need to leave home and stay in the boarding school during the week. Furthermore, they only have four times five days of holidays each year. So, if student-athletes drop out from their DC, it often has to do with the student-athletes missing their family and vice versa.

Homesickness, for some it is a huge problem. We have student-athletes here that cry a lot of tears the first few months at the boarding school, and for those student-athletes sometimes the parents come by on Wednesdays to 'break' the week (...) she started here, and I think, the first three months she cried every single day. (Educator Boarding School, P. 7)

The loneliness at the boarding school and the student-athletes having a very heavy schedule all year does not only impact the student-athletes themselves, but also the family. The schedule of the student-athlete is always crucial, and impacts the schedule of the whole family, and also impacts when and how the family can go on a holiday.

But it is very hard, both for the children and the rest of the family. By the end of June, we will know when she can go on a holiday in July and August. It is a little absurd. (Parent Gymnast, P. 21)

So, [name] told it has been a long time since we went on a holiday with the five of us. So, we planned to go on a holiday during the Eastern holidays, and this worked out finally. And then suddenly she had to participate in the European Championships, so we had to cancel the holiday and we went to the European championship in Poland with the five of us. (Parent gymnast, P. 19)

Especially in the first months, the impact on the parents (which indirectly impacts the children) is not to be underestimated. As such, it is crucial that parents gain trust in the boarding school.

I think especially in the beginning, if parents arrive here, parents have a really difficult time to leave their children at the boarding school. I remember situations, where on Sunday, when we are open, all educators are here then, and then you see that the parents have a hard time saying goodbye, while it would be easier to just leave them. But then the parents start to cry, the children start to cry as well and then you get really difficult situations (Educator Boarding School, P23).

Narrow environment. Student-athletes develop in a ‘narrow’ environment, as they have a limited number of social opportunities and are basically only meeting peers in elite sport, mainly their gymnast friends. In the boarding school, they sometimes meet people of other sports, but those contact moments are limited. Also, in school and boarding school, the educators remain the same for the full length of their stay in the elite sport school setting (for many of them 4 years), which can help to build a connection, but at the other hand could become a problem if there is no match between the gymnast and educators. The new school,

directly next to the boarding school and gymnastics hall could (in the future) additionally bring this barrier to the forefront.

We will not see the other student-athletes anymore. We will always see the same persons, and it will always be boarding school, training, school, school, training, boarding school, always in a triangle. (Student-athlete, P. 3)

High intensity of gymnastics. Training and competing in gymnastics requires the student-athletes to work really hard for their sport, from a very young age already. On average, they train 30 hours/week, which in combination with the educational requirements and need for rest, makes it impossible to do many other things. Furthermore, due to the high intensity and heavy training needs, tiredness and injuries are part of the existence of a gymnast.

Limited possibilities for study domains. Within the elite sport context of Belgium, this elite sport school is the only option for gymnasts. Furthermore, within the specific school, there are only 3 types of education they can choose, which can compromise the possibility to follow the courses of their interests (for example they cannot follow a many hours of mathematics).

Dual career processes.

Modular and flexible study system. The elite sport school system is structured to make it possible for the gymnasts to combine their elite sport with education. The system of evaluation is organised in a modular way, meaning they do not have all exams clustered at the end of the first and second trimester, but that the tests and exams are more spread out throughout the year. This is to avoid that important periods in sport (e.g., big tournaments abroad) conflict with their exam period. Next to the general structure, the micro-structure and stakeholders also allow for flexibility. Teachers and educators will take into account difficult periods or stays abroad when putting deadlines or scheduling specific tests. Furthermore, when the educators of the boarding school or the coaches notice that exceptional circumstances have taken place (e.g., extreme conflict situations), they will communicate this with the school. The school generally takes these circumstances into account and shows its flexibility (e.g., by postponing a test).

Tutoring and individual study guidance. Because the gymnasts are often abroad and miss many lessons, a lot of additional tutoring is provided. Moreover, the student-athletes have the

opportunity to have additional lessons on for example mathematics to compensate for the limited number of hours they can have (see barrier ‘limited possibilities for study domains’). Also, additional Dutch classes are provided, to overcome possible language barriers for French speaking student-athletes.

At the boarding school they also have a fixed ‘study moment’ in the evenings, where they can study individually, ask question to each other and/or the educators. This is organized in an informal and positive atmosphere, which enhances the social contacts between the gymnasts and with the educators.

The educators of the boarding school are at a fixed spot in the corridor. There is a good mix of freedom (student-athletes can move freely in the corridor), student-athletes come and ask questions to the tutors, have fun sometimes, but are all focused on what they need to do. There is a good balance between structure, informal fun, cooperating, helping each other, and focus on studying (reflection based on observations boarding school).

If student-athletes have bad grades or difficulties to catch up, an even more individual approach is provided by the school. Furthermore, the educators of the boarding school and coaches are also notified of difficulties and these student-athletes receive ‘additional support’ during study moments when required.

Emotional support. Although not a specific requirement, both the school and boarding school stakeholders try to provide emotional support to the gymnasts. The sport environment also provides this support, but to a lesser extent as this environment is more goal-oriented. The combination of missing the family, regular injuries, heavy sport requirements and educational requirements makes it necessary for gymnasts to receive such kind of support in the school and boarding school setting.

That is the challenge, can I distract them? Sometimes with a joke and doing something foolish, sometimes with a serious conversation, some other times by ‘fighting’ with the guys. (Educator Boarding School, P23)

Formal and informal meetings with different stakeholders. To discuss the progress with the different stakeholders of the boarding school, school and sport field, several structural meetings are scheduled during the year. In the past, more inter-organisational meetings were organised, but because coordination between the organisations has ameliorated, less formal meetings are arranged nowadays. Informal meetings in response to specific problems or situations still do take place, with a close and direct communication between the stakeholders:

In the beginning, that was all very formal, all the heavy topics still needed to be discussed, everything still needed to be developed. Twenty hours, which lessons, which lessons needed to be dropped, how will it go with the examinations etc. (...)
But the whole system evolved, making it possible that there are more informal meetings than formal meetings. (Director Boarding School, P. 18)

Support for transition into and out of elite sport school. Before potential student-athletes go to the elite sport school they can gain information through information sessions. Furthermore, they get an intake where a lot of the information is provided and where they are prepared for the different challenges that might occur. Also, they can follow a kind of internship to get to know the coaches and training environment before they start in the elite sport school. Finally, in the first months at the elite sport school, they receive additional attention from the educators at the boarding school, teachers and peers.

In the fifth and sixth year of secondary education, student-athletes are also prepared for higher education by a study counsellor of Sport Vlaanderen. They receive information sessions and workshops during those years, and there are individual career guidance meetings with career counsellors for student-athletes who are about to graduate from secondary education. Furthermore, student-athletes can stay in the boarding school in the first year(s) of higher education, to help them to cope with the transition to higher education.

Provide a warm and fun environment. Although this support process is more informal in nature, it is a crucial feature of the DC support environment of the gymnasts. In the sport environment, requirements are tough (long trainings etc.) and coaching is often directive due to the perfectionist nature of gymnastics. Despite of this, coaches and support staff (e.g., sport psychologist) try to install positive communication habits.

At school, the student-athletes often get their lessons in small classes. Although the pressure is also there (they need to gain insight in the learning material in fewer hours than regular student-athletes'), the small classes allow for a more personal, warm approach during the lessons. Especially during tutoring moments or additional lessons, the atmosphere is relaxed, personal and often humoristic.

The tutoring was provided in a very relaxed, personal atmosphere. The teachers use a lot of humor and try their very best to get the student-athletes involved, empower them. Despite the fact that the tutoring often takes place during the break at noon, the student-athletes seem to enjoy it (reflections based on observations school).

Finally, especially in the boarding school, the educators and director create a warm and fun environment. They do this in several ways, with fun activities, humor and warmth in daily interactions, and by providing an environment where they can feel home, and their privacy is respected.

The distance between the children and the educators is very small. They actually create a familiar, homely atmosphere. (Parent Gymnast, P. 19)

Student-athlete development.

Faster development into adulthood. In comparison to student-athletes from other sports (e.g., football, cycling) and to other scholars in general, gymnasts become mature in their attitudes and behaviour a lot sooner. They develop more self-discipline, planning, and maturity in light of the requirements they need to cope with. The fact that the elite level of gymnastics comes earlier than in many other sports, also plays a role in this process.

Those children develop into maturity and adulthood way sooner (...) So, the nonchalant teenager life is not possible. She will not really go into puberty, she does not have a chance to become a moody teenager (laughs). (Parent Gymnast, P. 21)

Social and cultural development is (too) narrow. Although they develop into adulthood very soon on a psychological level, their psychosocial development is often less rich. As mentioned in the barriers, their social environment is very narrow. As a consequence, they hardly interact with peers outside of the elite sport context and do not develop broad social and cultural

interests. At first sight, the international nature of their competitions could provide them some social and cultural advantages. In reality, they fly for example to Doha, leave the airport, go to the hotel and just move between the hotel and the gymnasium from then on.

Dual career competencies.

Self-discipline, working hard. If all gymnasts in the DC context have one thing in common, then it is their self-discipline and dedication to work hard in their DC. Educators, parents, and teachers all confirm that the gymnasts are the most hard-working and self-disciplined student-athletes. Although this is remarkable, it does not mean that the gymnasts are perfectly prepared for higher education. Their self-discipline and hard work takes place in a well-structured environment. However, when transitioning to higher education, the importance of planning in a less structured environment comes to the foreground, something which not all athletes can cope with.

Ability to cope with setbacks, perseverance (e.g., loneliness, injuries). During the years in the elite sport school, the student-athletes cope with the requirements of gymnastics in combination with the educational requirements, injuries, and being away from home. Throughout this process, almost all gymnasts develop resilience and perseverance. Their ability to overcome setbacks is remarkable but develops over time. Both parents and student-athletes confirm that their passion to go for their sport made them go into the elite sport school but stress out that they ‘rolled into it’, without really knowing what the sacrifices and hardness would be. Once they are in the situation however, they just keep on going for it and keep showing resilience to keep on going for their passion.

It is actually a step-by-step process you roll into, that is why you keep on doing it. You do not really realise the impact it has on your life. I think this is the case for the children as well. It is always a bit more, step by step, and in the end, they do not know any better. If you go to any child of 16 years, and say you have to do this a full week, they will never do it, because it is getting up early, doing gymnastics, going to school and learn things on a really short notice, getting back from school, doing gymnastics again, getting back at the boarding school at 7PM, then they still

have to eat, take a shower, get ready and prepare for the day after, and then there is no time left, except for studying. (Parent Gymnast, P. 19)

Environment philosophy.

Philosophy: common features. The DCDE has some common features in their philosophy, which have an important impact on the success of the DCDE.

Motivation of support providers to support the gymnasts in the best possible way. Common in all settings, is that the support stakeholders go the extra mile to support the athlete to an optimal extent. The focus of their support is different, but they all have the dedication to do this in the best way that would benefit the gymnast in the direction they think is best. All stakeholders agree that the support should be athlete-centered and tailor-made and act upon this by doing additional efforts (next to their responsibilities).

Passion for elite sport. A passion for elite sport is relatively normal within the elite sport federation, but is more surprising in the domain of the boarding school and elite sport school. Nevertheless, the observations and interviews with the stakeholders show that the stakeholders in these contexts share a passion for elite sport and high performances. Without idolizing their student-athletes, they show a lot of respect and interest for their achievements, and actively follow their sport results. Both in the boarding school and the elite sport school, almost all stakeholders show a big interest and pride for elite sport. Exemplar of this, is how proudly almost all stakeholders are talking about the gymnasts. A lot of these stakeholders go to watch gym events live and at least follow the results of the gymnasts. In the school context, they often refer to the elite sport context when using examples in their lessons and even tailor some lessons to elite sport.

Close cooperation and communication are key. The different stakeholders share the vision that close cooperation and communication are key features for the environment to be successful. Both the support and performances need to be at the absolute top, and as such, it is crucial that potential conflicts or problems are solved promptly. The communication line between the coordinators of the three settings is very close, meaning that when problems occur, direct actions will be discussed and followed-up. The same direct communication approach is also

highly valued within the specific contexts, for example in communication between colleagues within school and within the boarding school.

Philosophy: context-specific features. Next to the common features, each specific setting has its own specific philosophy and way of thinking.

Sport federation. Within the sport federation, the elite sport mission is absolute priority. This does not mean that they do not support the educational or personal development. They support these developments in a more indirect way (e.g., following the grades, asking how school goes), but do not prioritize school in their communication with the student-athletes.

In the cooperation with the other fields, the prioritization of elite sport is also reflected. Exemplar of this, is that all support stakeholders from the school and boarding school would be willing to meet the coaches (more), but that this is less of a requirement or will for the coaches themselves. The sport federation expects the school and boarding school to play their role in supporting the sport pathway while enabling them to combine this with education. Although they value the contributions of these stakeholders, they are critical as well if they feel that the school or boarding school is not strict enough in the follow-up or if they do not provide enough flexibilities. In the end, it is often the sport federation that calls the shots.

School. At school, education is priority, but the efforts and contributions of the coordinator (but also the educator and teachers) reflect that sport is equally important. The school shows a big flexibility to allow the student-athletes to fulfil the expectations of the sport environment. The flexibility of both the coordinator and teachers show that they fully support the sport pathway of the student-athletes. They do this without compromising the educational pathway, but rather by putting in additional efforts to support the student-athletes (e.g., tutoring, individual study guidance). One could say that the school's support is athlete-centered, adapting the support to their needs, and taking into account the feedback of both the boarding school and especially the sport federation.

Boarding school. At the boarding school, the holistic well-being of the student-athletes is absolute priority. They want to keep sure that the student-athletes have a warm environment where they can feel home and have their privacy. If this is not compromised, the second main

mission is to keep the school and sport environment happy, and thus support both the educational pathway and sporting pathway in accordance to the vision of the sport federation and school. The school and boarding school are the steady balance of the DCDE. Although they have their own vision and priorities, they are aware of the high needs of the gymnast environment with regard to training load and flexibilities. As such, they accept the need to be flexible and supporting towards the athletes and the sport federation. Furthermore, they cooperate closely together to support each other's missions: the boarding school supports the educational pathway where possible (e.g., in study moments), and the school accepts input from the boarding school to protect the holistic well-being of the student-athletes (e.g., reschedule a test in exceptional circumstances).

Dual career development environment effectiveness.

Good sport performances and progress. The DCDE is famous for its successful sport results. They have had many sport successes and are known to bring the gymnasts to a world class level. Not only the results of the best gymnasts, but also the progress that most of the athletes make is widely praised.

Good study results and most student-athletes going into higher education. Study results of the gymnasts are good, certainly when you take into account the intense sport program compromising their possibilities to study and/or rest. Furthermore, the success of the DCDE with regard to the educational field is not only limited to good grades in secondary education, but is also reflected by the fact that almost all gymnasts continue their educational pathway into higher education.

Happy student-athletes and limited dropout. Despite the heavy circumstances, student-athletes generally are happy in the DCDE. They encounter a lot of physical and emotional adversity but seem to grow as persons in the supportive environment of the DCDE, generally being reflected in the fact that most student-athletes in the fourth, fifth and sixth year seem to feel good and happy. Of course, emotions and happiness fluctuate heavily with the sport results, but the warm and supportive environment seem to make up for this in the long term. This is also visible in the limited number of dropouts. The most difficult period is actually the first months, when they often suffer from homesickness.

Dual Career Development Environment Case Study Results – Denmark

In the following we will present the results of the case study of a dual career support unit at a Danish sports friendly university. First, we provide a context description and case description; second, we provide a description of the most important components, and the structure of the environment; finally, we provide an explanation of the factors that contribute to the effectiveness of the environment such as preconditions and philosophies underpinning the everyday life practices.

Table 1

Empirical material for Danish case study.

Observations	Time	Place
AU Elite Sport	20 hours	Office University buildings
<ul style="list-style-type: none"> • Supervision of student-athletes • Meetings • Everyday interactions 		
Elite Sport Center	2 hours	
<ul style="list-style-type: none"> • Office • Training 		
Aarhus International Sailing center	2 hours	
<ul style="list-style-type: none"> • Office • Training 		
Meeting with the former Dean, “Originator”	1 hour	
Semi-structured interviews	Time	Place
Head of Dual-career	3 hours	Office
Dual-career consultant	85 minutes	Office
Student-athlete, sailing	45 minutes	Skype
Student-athlete, handball	55 minutes	University
National team coach, orienteering	65 minutes	Elite sport center
Head of talent development, sailing	90 minutes	Aarhus International Sailing center
Teacher, Odontology	38 minutes	Office
Pro-rector	20 minutes	Office
Documents		
Brochures		
Webpage		
Facebook page		
Individual study plans		

Methods

The case study is based on 9 semi-structured interviews (duration from 20-180 minutes) and around 30 hours of observations within the environment, and various available documents. The empirical material is displayed in Table 1.

The context: Denmark and Danish Sports and Educational Systems.

In Denmark dual-career is in general highly accepted and valued as a part of the good life as an elite sport athlete. The combination of sport and education is in general not considered to be a barrier for sporting achievements. At the Olympics 2016 12 out of 15 medals was won by student-athletes. 120 Danish athletes participated, 46 of them were student-athletes (IDAN report).

The most typical dual career environments in Denmark are the sports friendly schools. This ranges from the age of 13 in 7th to 9th grade in public schools/ state schools, to age of 15-19 at sports friendly high schools/ upper secondary schools, and until early adulthood at sports friendly higher education such as universities. Thus, in general the dual career environments are embedded in the regular educational system in Denmark and in most cases it is a flexible version of the set-up that everybody else is enrolled in.

Denmark has 8 public universities not all of them provides specific support for elite athletes. Danish education aims to ensure that all people acquire knowledge and competencies which will qualify them to take active part in the knowledge society and contribute to its further development. Education is open to all and generally free of charge. During the last five years the education system in Denmark has been reformed. Especially one focus has been on progress in the education (studiefremdriftsreformen). The goal has been that more students are completing their education faster.

Introduction to the Environment

The dual career support unit “AU elite sport”. AU elite sport is a unit at Aarhus University providing support services for elite level student-athletes from multiple sports and educations. The unit has existed since 2011. In 2011 65 student-athletes were enrolled and 14 of them where athletes at the highest level supported by Team Denmark. The recent statement from December 2018 counts 290 student-athletes and 56 of the them are supported by Team

Denmark. Currently most athletes come from handball, sailing, football, orienteering and track and field. And the most frequent studies are medicine, business economics, law, engineering, and sports science. Thus, the support service is targeting student-athletes from multiple sports and higher educations.

In the beginning the unit was decentralized at the sports science department the University. It started as ‘Active Institute’ and was founded by a passionate dean involved in elite sport himself. The current manager has been part of the set-up since the beginning. A landmark event in the development of the legitimacy of the set-up was in 2016 where AU elite sport became a permanent unit, and a part of the central study administration at the university.

Athletes must be at the highest national and international elite level to become a part of this support environment. The athletes need to spend “a substantial amount of time”:

“An elite athlete is a student having a training amount above 20 hours a week. However, we have from the beginning also included the criteria of competition at the highest national and international level, because you can also be a recreational athlete with high training loads” (Head of AU elite sport).

These criteria are operationalized differently from sports to sports, and AU elite sport involves the coaches in their assessment of the athletes’ applications.

The dual career support service consists of a 3 persons teams (including the manager) providing support for the student-elite athletes – one is a split position partly providing support for student-athletes and partly student-entrepreneurs. The DCDE also contains the strong relationships to other units within the university system and to the local and national sports systems. The main task for this group of people is to provide support for student-athletes planning their everyday life. This support involves communication with study boards/committees (studienævn) that are responsible for the study programmes at the various departments. Furthermore, the DC team provide supervision and advice so the student-athletes can combine any sport with any study in an efficient way. The team consists of people with experience from elite sport and having a relevant education (psychology, social science, sports science).

The environment is bounded virtually since it is not situated in one specific location. Instead, the student-athletes enrolled are a part of a coherent community of narratives. However, supervision mainly takes point of departure from two offices at the university.

Dual Career Development Environment Model – AU elite sport, Denmark

The following section outlines the Dual Career Development Environment model (Figure 5) for the AU elite sport, Danish case study.

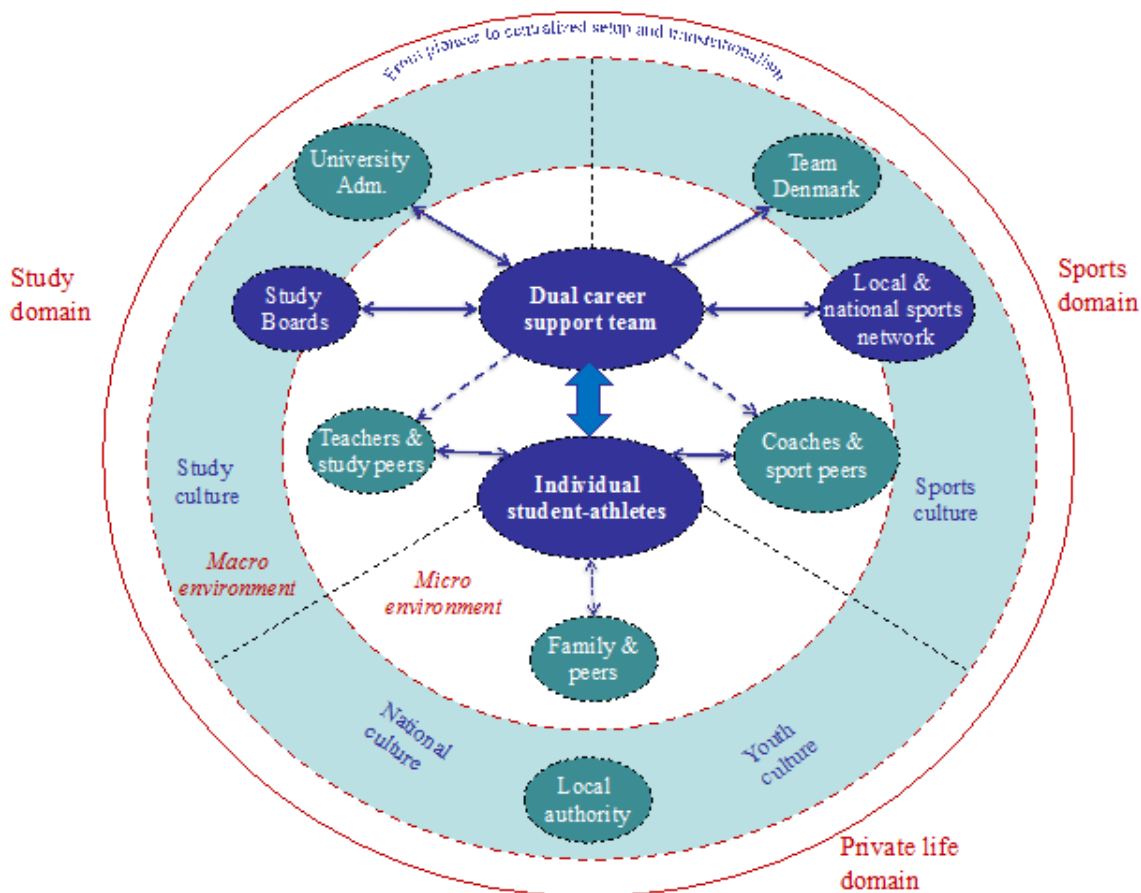


Figure 5: Dual Career Development Environment Model – AU Elite Sport, Denmark

Micro-Environment

The target group in this study comprises student-athletes enrolled at Aarhus University that are supported by AU elite sport. The environment centers around a strong relationship between the student-athletes and the dual career support team. This is the core. The environment and particularly the role and function of the DC support team is influential in a way so the student-

athletes would not have managed to combining elite sport and higher education: “jeg ville I hvert fald ikke haft mulighed for at køre det her program som jeg kører mellem min sport og min uddannelse, hvis ikke jeg havde fået den hjælp derudefra” (student-athlete). “I would have given up on my education if I was not supported” (student-athlete).

The environment is centered around the strong and personal interconnection between the student-athletes and the DC support team, and this relationship functions as a connection between the sports and study domains.

“I write to the DC support team if I cannot attend an examination or if I need support from him in the talk with my lectures, For example if a lecturer don’t want the lecture videotaped. Then the DC team talk to him or her, which helps me. The DC support team is good at finding solutions. For example, I had a written exam that I could not attend. Normally, I would then attend the re-exam, but I could not either, because of the world championships. Then an extraordinary oral exam was arranged on a date which I selected myself” (student-athlete).

The DC support team build relationships with every single individual athlete, and the significance of the personal context is clear because, when we asked for material, brochures and written information they gave new applicants. The answer was – we don’t have such material because we help the athletes in so many different ways I would not know what to write. The AU elite sport had two old brochures that were not up to date, which reflects on the one hand how individualized the programme actually is, and on the other hand it reflects the preference for personal communication and the personal and strong relationships with each individual student-athlete. The micro-environment was characterized by many personal relationships, and the communication was often also personal. Either they met in person or if that was not possible they talked by telephone.

[The role and function of the dual career support team.](#)

Dual career support team. The DC support team is a key component of the dual career environment. Its major roles and functions were to make the combination of elite sport and higher education possible and/or easier. The DC support team’s main function was to pay attention to how it is possible for the individual student-athlete to combine any sport with any

kind of education. In this effort they build and maintain good relationships inside the university to the administration, and particularly the pro rector and other study support functions. They also maintained good relationships with the various study boards at the various departments. They also build and maintain good relationships in the local and national sports systems. In all these relations, the DC team tells and keeps alive ‘the good narrative of successful dual careers’ whereby the team stimulates the people around to help them and thus maintain integrated efforts in the system. Another key function is to educate the student-athletes about the inner workings and logic of the university system and provide them with the feeling of being a part of a community of student-athletes. The supervision is often based on their experience with previous student-athletes.

The student-athletes are linked to the study boards and university administration via the DC support team. The team provides legal and other types of advice to the student-athlete when they create their individual study plan together, which means the study boards less often have to reject applications. And it helps the student-athletes to not waste their time trying to decipher the logic of the university systems rules and laws by themselves.

“There is a difference between the people the student-athletes meet themselves, and those they don’t meet with. However, they all meet with us (the DC support team) and we take care of the overall narrative about what you do in sport and what you do in studies.”. We are the link. (Head of AU elite sport)

The role and function of the DC support-team in relation to the individual student-athlete changes over time. There are three stages in the time as student-athlete: The *pre-study phase*, which covers the study selection. In the pre-study phase, the major role and function is to provide the information that elite sport and higher education is possible to combine. They attend local meetings at for example elite sport centers or upper secondary schools to inform the future student-athletes and sometimes their families. The *adaptation phase*, which is the first year as student-athlete, is the most critical phase, and the DC support team therefore takes a more proactive role, and they invite and engage with the enrolled student-athletes. For example, a student was at a meeting in the DC office, she was obviously overwhelmed by her study start, and felt it was difficult to find a foothold in the new situation. Before she left that

meeting, they already had arranged the next follow-up meeting based on the DC support providers initiative (observation notes). Finally, the *continuation phase* is a stabilized phase where the student-athletes have got a sense of belonging to the university and they identify themselves as dual career athlete. This phase is optimally characterized by well-being and satisfaction as student-athlete. In this phase the DC support team is more reactive.

The DC support team do also have important role and function in regard to the local and national sport networks. For example the manager attended an information meeting for national team members of orienteering where he was talking for 10 minutes about the practical possibilities; the dual career philosophies and previous experiences. The national team coach said when he reflected upon what he especially took as important messages.

It is crucial that the individual athlete creates his/her own study plan, thus they should not see themselves as similar to the other students, because they are not. But they do. He (the head of DC support) said that they should know from the beginning that they have to find their own way of studying. And not compare with their study peers (national team coach)

The DC team do also annually attend an education day for student counsellors (studievejledere) in order to make the university system aware that there is a support service for elite athletes.

The DC support team members have a truly large informal network of personal relationships, which benefits the student-athletes.

I did not experience a single time that the head of DC support had to introduce himself for the first time. He has a large network, which the student-athletes benefit from. Because within this network he is telling the stories of how it is to pursue a dual career. He builds personal relationship with those in the university administration, the student-athletes call him on his private phone, the coaches know him, and he knows them. His leader comes by to have a cup coffee on the couch in the office while they small talk. He took me for a guided tour in the central administration and he said hello to everybody by their names (observation notes).

On a daily basis the DC support team prefers to meet with people and solve the challenges face to face especially if they haven't meet before, when they are new or need a little more effort. If it is standard procedures, they send an email. If they need to confirm the athletic status of an applicant, they often call the specific coach. Thus, various types of communicational channels are used, the personal relationships are preferred.

“In the DC support team, we share our knowledge in an open space. The solution that we recommend or the variety of possibilities that we present to the student-athlete is often confirmed in the team before a meeting and sometimes also after a meeting. We enter a supervision with an idea of the landscape of possibilities based on the sum of our experiences” (head of DC support).

The primary role and function of the DC-support team is the supervision of the student-athletes. In addition, the head of DC support has an important function regarding disseminating ‘the good narratives of dual careers’ outside and inside the university.

The DC support team emphasized that they deliberately meet the student-athletes *as an athlete* first and foremost, because in the university system in general they are meet at students. The athletic identity is at strong presence at the DC offices even though that they are placed in the buildings of the University.

Micro-Environment

Study Domain

The micro-environment in the study domain involves teachers and study peers as components related to both the student athlete and the dual career support team.

The study peers and teachers - role, function and relationships. The micro environment included relationships between student-athletes and their teachers and study peers. The student-athlete are deliberately nurturing these relationships. The DC support team supported the relationship building, and sometimes they interreacted with teachers to help the understanding of what a dual career is and to help in specific situations typically related to exams.

Study peers. The study peers were important to the student-athletes because the education often involves study groups, projects and group work in the lessons. First of all, it was important for

the student-athletes that they achieved the study peers' understanding for their dual career. And student-athletes do often have high absenteeism. In most cases, the study-peers provided understanding and goodwill in regard to the student-athletes' situation. Apparently, because they have a good relationship and think the student-athlete contributed good when they are there (we haven't included study peers in the case study, so this is based on the words from student-athletes, DC team, teachers and coaches).

The student-athletes are advised to invest their time in a good start of the time as a student – also if it for a short time is on the expense of their sport, because they will benefit in the long run. This investment included building up relationships with teachers and study peers. The first year and the first semester is important in terms of building relationships with the study-peers and also in terms of getting a feeling of what it takes to study at the university. Therefore, the first semester was almost always studying at full time, which could become at the dispense of the sporting development and achievements. It required coordination between the coaches (sometimes also sports peers), individual student-athlete and the DC support team. In orienteering it was through the understanding of the study start having an impact on the development.

Som udgangspunkt så har vi sådan at det første år der er studiet egentlig mindst ligeså vigtig som deres sport, det er vigtigt at de kommer godt i gang. Det kan simpelthen ikke betale sig at droppe ud at studie, så det er vigtig at de kommer i godt gang og at de får nogle relationer til de andre, for det er noget som de kan bruge senere, både sådan rent studie og fagligt, det er godt at have nogle gode medstuderende der kan hjælpe en men også at de har noget socialt hvor de ligesom trives på studiet og selvfølgelig at de ligesom føler at de kommer godt i gang. (national team coach)

The study-peers support the student-athletes by taking notes, filming or audio recording lectures. Sharing their experiences and catching up on important information when the student-athletes are absent. One world class student-athlete, who has around 200 travelling days per year see her absenteeism as the biggest challenge:

“The biggest challenge for me is that I can’t attend all teaching where important information is given. However I would say my study peers have made it easy to me because they help by sharing video on facebook, then I can be in another country and watch it when it fits my schedule... you must not underestimate the value of good relationships with your study peers because they can help so much think it is difficult for those who do not prioritize to build these important relationships and networks” (student-athlete).

The study peers do also have a role which borders the private domain because they are the friends of the student-athletes. Seeing them as just who they are and not just as athletes.

”Sometimes, when I have performed poorly in a match the night before, and you come to classes and one of your study friends brought a cake of something. It is no longer all about the match. They are so nice and I really feel we take care of each other. It is really important for me to have this space in my study group to just be me and not the athlete.” (student-athlete)

The DC support team only interacts with the study peers of the student athletes when these peers are payed as student assistants for a student-athlete. But they play an important role in regard to encouraging the student-athletes to build the relationships with the study peers.

Teachers. The teachers role and function relates to the student-athletes’ continuous process of coordinating their efforts in sport and studies. The student-athletes informed their teachers about their dual career and aimed at a personal contact in order to coordinate their studies the best possible. For example, the student-athletes asked their teachers – “what are we up for next week because I am on a training camp and can’t be at present, therefore I need to what I can do to catch up”. Due to the student-athletes high absenteeism the teachers had to give some extra lectures or arrange another exam. And they are legally bounded, which one teacher and leader is aware of. She prepares the other teachers by sending out mails before an individual student-athlete is approaching them. She writes that there is a student-athlete with special needs who will not be able to attend mandatory lectures and they must find an alternative solution in collaboration with the student-athlete.

”Jeg ved godt at der er nogen der vil slå sig i tøjet og når de får at vide at sådan og sådan sådan, og hvor jeg så siger, jamen enten så må i jo acceptere at bare ikke får den undervisning og hvis i synes det er så forfærdeligt vigtigt at hun får det, så skal i yde det der ekstra ## Og der er nogen der vil slå sig i tøjer, så derfor det vigtigt at jeg kan sige, det er, i forpligtet til når sådan og sådan” (teacher)

The DC support team is also related to the teachers; however, it happens occasionally and in direct relation to a specific issue involving a single individual student-athlete.

“We take contact to teachers or other administrative employees to hear about if we could find a solution together regarding an exam. I experience that most are positive and willing to help” (DC councillor)

”Vi kan opfordre til at den studerende tager en snak med underviseren allerede nu. Du ved at det er i april det gør sig gældende, men er der noget du kan gøre for at komme det i forkøbet? Er der nogen andre hold du måske også kan følge, for at komme op på flere timer” (DC councillor)

Sports Domain.

The micro-environment in the sports domain involves coaches and sport peers.

The coaches and sport peers - role, function and relationships.

Coaches. The coaches’ role and function in the dual career is different from athlete to athlete; however, it is crucial. In sports with a strong local elite environment and a tradition for dual career the coaches are actively involved in the overall planning, which provides the student-athlete focus on development and performance. “He makes it possible because he adapt the plans so I for example can attend a training camp a day later if this is needed” (student-athlete);

Jeg tror at det præger mig at når jeg ligesom føler at jeg er tryk og at der er tillid, og at jeg har det godt, så kan jeg jo præstere når jeg så er til træning, eller til kamp. Interviewer: Ja, og har træneren den samme forståelse af det? J: Meget, altså det har ikke været sådan tidligere, men ham træneren jeg har i år har ligesom sådan forståelse for, at vi skal være hele mennesker. Og at det ikke dur at man bare laver

noget, så man bliver håndboldmaskiner, fordi de går kold på et tidspunkt (student-athlete)

The role and function as supportive towards dual career is general is very important to the athletes. However, it is only in the start phase of the dual career that studies are prioritized above sport. The coaches plan together with the individual athletes how the sports will evolve over the next years. Such talks and plans are point of departure for the dialogue between student-athlete and the DC support team. For some student-athlete the coaches participate in meetings at the DC teams' office. This regards federations/clubs/coaches having a strong sports environment in the municipality (e.g. sailing, orienteering).

Year plans and semester plans are built around the individual student-athletes needs and sporting activities. With most flexibility in the education, but also flexibility from the sports domain. The head of a talent development programme showed an overall plan that he just had made together with a student-athlete the day before I came. And the same did a teacher, before I meet with her, she had just had talk with a student-athlete based on previous years curriculums in order to plan and prioritize.

”It is decisive that we can call and ans about big things and little things, formally and informally. I feel the DC support team takes a real interest in our athletes and tell us of there are issues with their studies. We can speak freely and and I feel we are on the same side” (national team coach)

Det er meget afgørende, at vi kan ringe om små ting og store ting og også sådan lidt uformelle ting også spørger de jo sådan lidt om ham og hende de spørger om det der er det rigtige måde den her måske formuleret nogen ting i forhold til måske nogle ansøgninger. Så det er vigtigt at vi ligesom bare kan snakke rimelig frit om det. Men der er en god relation og vi er meget på den samme side kan man sige trænere og AU elitesport, det tror jeg er vigtigt. (national team coach)

The coaches' relations to the DC support team varies from a direct and active role engaged in meetings at the university towards a distant, but supportive role.

The DC support team do take contact to coaches to confirm the elite status of athletes before they are enrolled. And they also need approval of student-athletes' sports activities in specific situations where the study boards are involved in merits, dispensations and the like.

”Det sådan lidt mere ad-hoc eller specifik til situationen, at, at den bliver taget at der er et telefonopkald der lige skal, og det er ikke engang for at høre, kan vi finde den her løsning. De gange jeg har taget fat i træneren, så har det egentlig været for at få bekræftelse på specifikke forhold fx at udøveren er på træningslejr. Men jeg tager egentlig gerne den samtale fordi det er også rigtig godt lige at gøre træneren eller sportschefen opmærksom på at der er jo nogen ting for udøveren der lige skal gå op” (DC councillor)

The coaches do also play a role in promoting dual career as an opportunity for elite athletes. The local strong elite environments with a tradition of dual career invites the head of DC or a counselor from Team Denmark to meet the athletes and engage in dialogue with both athletes and their parents. This have been done the recent 10 year in the Sailing federation (head of talent development). In the orienteering federation they have held a meeting recently.

Sport peers. The sport peers roles and functions in regard to the student-athletes dual career differ from sports to sport and athlete to athlete. The role ranges from a co-partner in the dual career where everything needs to be a joint planning and prioritizing to merely a sports peers with a minimum of significance. In some sports dual career is accepted and valued, and in these cases the sport peers are student-athletes themselves, and therefor act as role models and sparring partners. In other sports the opposite might be the case, they see the dual ambition as a sign of a less ambitious sports enterprise.

“It is a topic that we can talk about, and we can study in the lounge (in the handball club), however I still experience that we are very different at our team. We are at different stages of life. So, the only thing we have in common is handball.”
(student-athlete)

Private Life Domain.

The family and peers are still important for the student-athletes even though they are adults. Their role in regard to the combination of sport and studies is limited; however, they are important as a secure base where they act as a release for a high pressure coming from elite sport and the dual career.

”Altså jeg vil sige, at der er virkelig ikke meget tid til at have fri. Men det bliver man jo også nødt til at tage sig en gang imellem. Et eksempel kunne være, at jeg havde troet, at jeg skulle gå op til eksamen her 3. Januar, og jeg kom hjem fra Australien to dage før jul, men fordi ens familie, kæreste og venner betyder så meget for en, og man også skal bruge noget tid med dem, jamen så valgte jeg så ikke at gå til eksamen her 3. Januar, for det alt for hyggeligt i julen, og så måtte jeg så bare udsætte det, så jeg afleverede i fredags i stedet for til reeksamen. Det er jo et eksempel på, at tingene ikke lige går efter planen. Det er meget vigtigt, at man holder et privatliv ved siden af. At man er hjemme i sin base en gang i mellem. Vi rejser jo så meget. Basen er vigtig at have med sig” (student-athlete).

”Jamen for mig er det også rigtig vigtigt at jeg har noget socialt liv, at jeg har tid til og, og være med til når der er arrangementerovre i studenterhuset, at jeg har tid til at gå med derover og være en del af det fællesskab, det er vigtigt for mig at jeg har tid til og tage hjem og spise hos mine forældre, at jeg har tid og, og være almindeligt menneske også, det tror jeg at jeg lærte lidt i gymnasiet, fordi der kørte jeg bare på, altså du ved, næsen i sporet, og derud af, og der var bare ikke flere timer i døgnnet, og det blev, det var jeg ikke glad, altså jeg var ikke glad på samme måde som jeg er nu” (student-athlete).

The parents might have an influential role in starting a dual career, because for many student-athletes they also move away from home at the same time as they start at the university. Therefore, dual career is a topic discussed in the family.

”På vejen ind til mig, der spiller familien en kæmpemæssig rolle. For det der valg det er også noget som man i den grad går hjem og snakker med familien om. Det handler også mange gange om, at man flytter hjemmefra familien, så at etablere sig

selv efter perioden med forældrene, det gør man med forældrene. Så forældrene spiller en kæmpe rolle i den tidlige fase. Men det jo ikke sådan, at de forsvinder. De bliver ved med at være en ressource, et støtteapparat eller en sparringspartner” (Head of DC support)

Macro-Environment

The role and function of the macro-cultures.

Study boards. The study boards are in the student-athletes macro-environment even though they are crucial to their dual career. They are the legal governing body. They can approve or decline a study plan or application for individual set-ups, which is a necessity for flexibility in the combination of sport and education. Therefore, they have a powerful role and function in this particular DC environment.

The dual career support team highlight the study boards at the various departments as having various procedures. Therefore, the knowledge and experience with various procedures are important for the DC team and a function with high implications for the student-athletes.

Team Denmark. Team Denmark is a part of the macro-environment. They provide economic support to the set-up and to AU elite sports individual student-athletes at the highest elite level. The relationship built between the DC support team and Team Denmark makes it an integrated effort, because the team can give supervision on various available possibilities.

A student-athlete have asked for a meeting because he wants to create a draft for a new study plan in the occasion that is selected for the national team. He has to apply Team Denmark for individual study support to extend his education. He comes to the office. The DC team is prepared for the meeting and have a former example of a similar application, which is showed the student-athlete. The head of DC team is honest and talk with him about his performance level, which might not be high enough to receive the financial support. However he gives him legal advice, support the change of the study plan, and is clear about what steps to take in order not to waste time for people in the system, and give the student-athlete a realistic picture of possible scenarios. The student-athlete express his gratitude towards the DC team. (observation note)

Team Danmark do also function as an institution that gives dual careers legitimacy and thereby influence the dual career narrative which is an important precondition of the environment. In Denmark elite sport must be social and societal sound. This is decided by law.

The former director was convinced and valued our set-up right from the start. I did always recognise it and he was a part of the advisory board in the beginning. He was important and now the new director has continued the recognition. I would say that dual career have never been more important. I believe that we have a shared understanding and dual career philosophy. (Head of DC)

Local and national sports network. The local and national sports network is well established and organized in the city of Aarhus. The head of DC do have a big network and is invited in to several positions and boards. This created a link between micro and macrolevel of the DC environment. The city of Aarhus do have The sport system is setting the overall structure for the dual career. The championships and major events provide the structure around which the other activities are planned.

Local authority. The local authority is linking the sports and the study domain at the macrolevel because the municipality is overall supportive of a dual career. In the city of Aarhus elite athletes can live at a collegium, which created proximity between university, residence and training center for some athletes. The facilities are mainly owned by the municipality and therefor costs in this regard is limited. In Denmark the municipalities are financing the facilities and local sports clubs pay very low fees to use them. The university do have local campuses in smaller cities which broaden the environment. The importance for the student-athletes is the closeness between university and sports clubs/training center.

Jeg fandt ud af i samarbejde med min agent at få en kontrakt i Ringkøbing. Så jeg startede det første år her med at læse fuld tid og pendle til træning. Det var hårdt for mig. Både fordi det er nyt at starte på universitetet, og det er helt anderledes end at gå i gymnasiet. Det er meget mere krævende og det samme var transporttiden (student-athlete)

Det er lettere for os at atleterne bor samme sted og det er både rent praktisk, når vi skal til træning, men jeg tror også de bruger hinanden på en god måde. Der ikke er så langt til træningsmuligheder, for mange af dem løber selvfølgelig i skoven, så de skal bo sådan rimeligt tæt på skoven. Der skal ikke være alt for langt til universitet fordi logistikken i hverdagen skal være rigtig god (national team coach)

Macro-level Culture

The macro cultures which in particular influence the environment are the Danish educational and sports culture. The idea that education is for all is paving the way for student-athletes at the university; however, they have been challenged and to a certain degree still is by the conservative idea about university studies are the only mission in life. For example, the medical doctor education as one such conservative education. meeting teachers saying ‘you have to decide whether you want to be a doctor or an athlete’ meaning that now you are entering a study including a serious identity as a medical doctor and it is frivolous to believe that it is compatible with other identities. The youth culture challenges the elite sport career and the dual career. As sport psychology researchers we also see a challenge in the fact that student-athlete (at least in Denmark) are ambitious in both the sport and study domains – they want the high grades, and the top performances in sport. This is a part of an overarching performance culture, which can develop into unnecessarily high pressure. In international comparison the environment was described as flexible. Both coaches and student-athletes mention this particular trait.

Environment Success Factors Model – Aarhus University, UK

The following section outlines the Environment Success Factors model (Figure 6) for the AU elite sport, Danish case study.

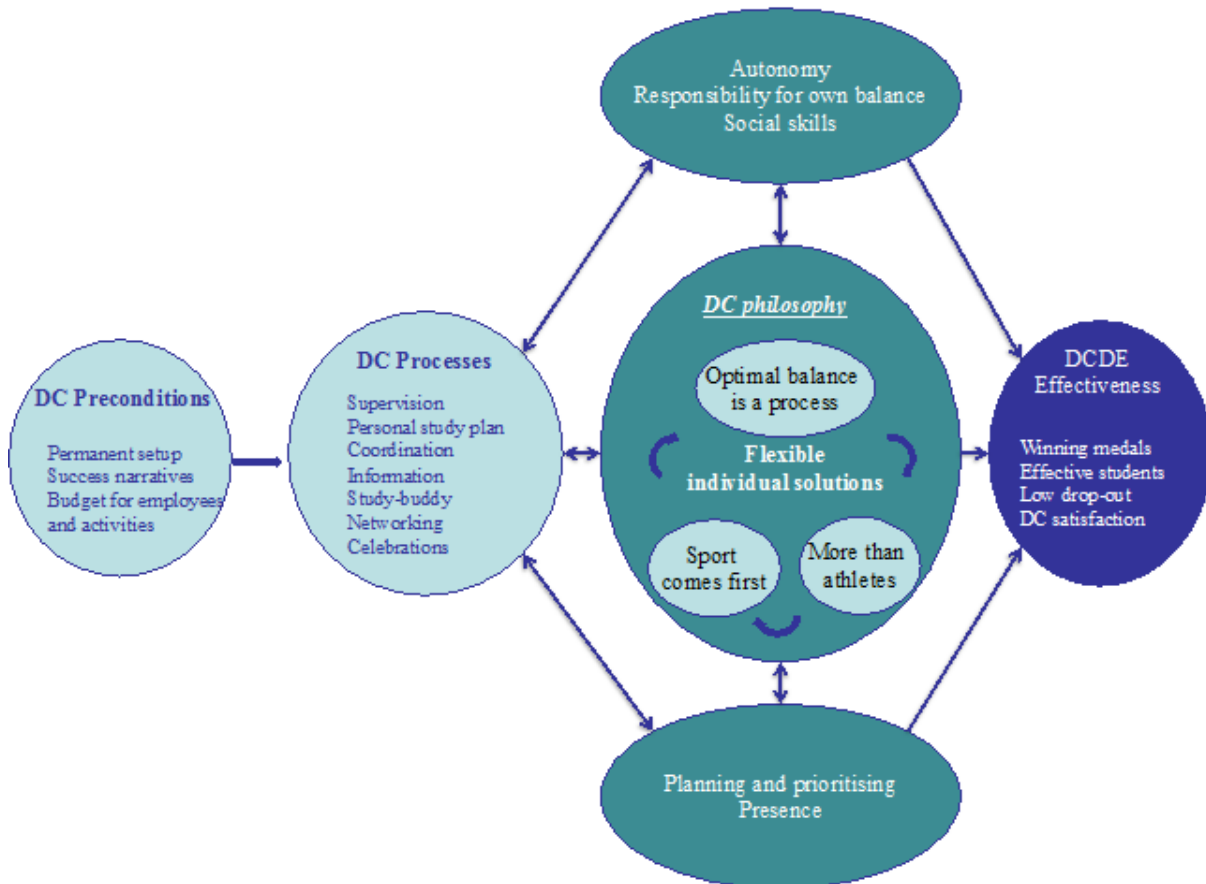


Figure 6: Environment Success Factors Model – AU Elite Sport, Denmark

Dual Career Preconditions

AU-elite sport is a permanent setup, which provides the stability that is needed for the team to support athletes continuously. It is a recognition of the work done by the dual career support team; and is a statement of the value of dual career. A major precondition for the everyday processes is the success narratives. It is easier for the current student-athletes to maintain flexibility and because other people have proved dual career to be meaningful and possible. There is an annual budget for employees and DC activities. Two full time employed, and one half time is supporting the student-athletes. They are not yet limited in the resources; but they can't expand the numbers of student-athletes.

The dual career support team has two offices – one in the central study administration building and one decentral at the department of sports sciences. This is a precondition for them being flexible in the meeting with students and for them providing proximity to both the university

system (the athletes study domain) and also to the sports system (the athletes sports domain). Other than that, resources and facilities are scarce. There are no specific training facilities or similar.

Dual Career Processes

The core task for the dual career support team was to provide individual supervision mainly focused at the development of individual study plans. These were created and recreated several times during an education. The individual student athletes were in an ongoing process of combining sport and studies in the most effective way with good support from their coaches, the teachers and the DC team. And only when necessary the higher levels in the university system was involved. A study plan was in a sense almost always preliminary, because the sporting situation did change along the way. The DC support team coordinated with other administrative teams at the university in order to prepare the units for proposals for dispensations from the student-athletes. The DC support team had an influential role in the local community in terms of informing about the dual career opportunities. They were participating in meeting at upper secondary schools, at meetings in national sports federations, in team Denmark or in various local sports network. These meeting were an important part of nurturing the local and national narrative about dual careers at Aarhus University. The head of the dual career support team had an extensive network in in the local and national sports systems. He had a knowledge about most coaches, clubs and federations which he used actively in the relationship building with the student-athletes. Every year there were an annual celebration of student-athletes who had graduated. This was arranged by the pro-rector, who saw the student-athletes as an important brand for the university. And she were proud of them representing the university.

Many student-athletes have a study-buddy/study assistant who is one selected study peer helping with notes and information from the lessons. The budget for AU elite sport includes salary for them.

”AU elitesport de hjælper mig jo med vejledning, så har jeg haft sådan en study-buddy, en studieassistent eller hvad man kalder det, og det har egentlig været det jeg har fået hjælp med # hende min studieassistent hun har ligesom hjulpet mig med

noter og noget til de dage hvor jeg ikke har kunne deltage, fordi jeg har været til træning, eller ude at rejse” (student-athlete, handball)

The door is always open. The door was closed because of cleaning which were noisy. The minute the cleaning was over – the door was opened again. This was just how it was – all the time. While we were talking, a student-athlete called the head of the DC support, he told her just to come by. A couple of hours later the student-athlete came to the office on her way for a training session. She was fully dressed for her training – she said ‘great that you had he time now I feel stressed because I can’t see how I can combine my studies and training the next three months’ (observation notes)

“With support from the DC team I was sending an application the study board to change the form of examination from written to oral exam. In this case also my supervisor was very flexible in regard to organize and hold the exam when it fitted my plans.” (student-athlete)

Dual Career Philosophy

Flexible and individual solutions. Flexibility and individual solutions is the core of dominating dual career philosophy in the environment, because the fact is that sport comes first, and finding an optimal balance is a process. Student-athletes are more than an athlete, and this philosophy drives the narrative of dual career as a part of a good life as elite athlete, at least in the stages towards the absolute top international level. Flexible and individual study plans are the key to the efficiency of the student-athletes everyday lives and their time; however, the student-athletes are the responsible part themselves.

It is a mantra for us to say that there is no single solution, which must fit you. It is you who needs to find the solution, which fits you the best. Clearly, we have the experience and thereby see multiple solutions, which the student-athlete don’t have the perspective to see. They are often surprised by the many solutions available to them; however, in the end they have to make the choice and say ‘this is what I want to do’ (Head of DC support).

A characteristic of all student-athlete supervision observed was that many stories and previous ways of solving challenges were used as exemplars – clearly no one-size fit all strategy, the solution of a particular challenge is solved for the individual student-athlete (on the basis of the specific sport and the individual’s needs). The DC support team refer to other student-athletes’ situations and referred to their stories and solutions, which is creating a community of narrative to which the individual student-athlete belongs. The stories and examples served as a mirror for the individual student-athletes own situation and provided an opportunity for them to belong to a community of dual career athletes. Since the individual student-athletes enrolled at AU elite sport did not meet regularly, the narratives had a central position in the environment as a ‘social glue’.

Sport comes first. The dual career support office is full of pictures and posters of elite athletes. Danish profiles from various sports who have won medals at the championships are portrayed. There is consensus in the environment that sport comes first. Obviously from the sports domain: “The athletes travel a lot, they train two times a day. Training cannot be too early or too late, because then the quality is too poor. We have to push them a bit. For us it is not a solution to let studies be an overarching focus.” (national team coach)

Det må ikke blive sådan at vi føler at de begrænser vores atleter eller omvendt, de hjælper os så meget som de (DC support team) overhovedet kan og de ved godt at det er sporten det vigtigste for os, det kan godt være de også har en anden dagsorden, men over for os der ved de godt at der er det sporten der er det vigtigste og det oplever vi også at det er den rolle de tager. (national team coach)

However, the other components of the environment stress similar philosophy.

Finding an optimal balance is a process. Finding the realistic and optimal balance is an ongoing process, which means that the student-athletes and the DC support team together is in an ongoing process of adapting the studies to the sports situation. Having a dual career is demanding because time is limited, and in the student-athletes’ endeavor to balance (not just combine) sport, education and private life requires integrated efforts and good relationships. However, the student-athletes must have the main initiative and drive in balancing sport and school.

”Det der ville være mest irriterende ville være at stå efter et VM og så sige, at man har fået et sindssygt dårligt resultat og man har måske fået bacheloren afsted, men man har ikke opnået det resultat med den, som man havde lyst til. Så er der ligesom fail på begge. Det er jo man frygter lidt, tror jeg. Er der lige fail på begge områder. Så derfor besluttede jeg mig for, at den her bacheloropgave ville forstyrre min sejlads alt for meget. Så jeg snakkede med (DC support) om det, og han er rigtigt god at snakke med i forhold til at være realistisk”(student-athlete)

Jeg tror på, at der er sådan noget med nødvendigheden. At når tiden er en knap ressource, og den er knap fordi der er flere ting, der interesserer dig. Så har du måske et ekstra niveau i forhold til at få gjort det så godt som muligt i første hug. Som betyder at man kan komme lidt videre. Man kan komme lidt videre, når man har travlt, end hvis man ikke har travlt. Det er netop at tiden er en knap ressource, der gør at du får de sidste promiller lagt oveni. For du kan ikke rigtigt udsætte det til i eftermiddag, eller i morgen, for du ved, at der er nogle andre ting, som du ved, du skal. Det betyder at denne her træning, den skal gennemføres med den høje kvalitet. (DC support)

Important to be more than an athlete. The people in the environment acknowledge that it is important to be more than an athlete, because the elite sport career is long and demanding and a narrow focus is then a constraint. If the student-athletes struggle in sport for a period they do have something else to focus at.

If I struggle in my sport, then I still have another aspect of life running in parallel, where I can find lots of joy. Then tough periods are manageable. Sport goes up and down – and especially in my sport luck plays a role once in a while. And the sports career is long. It requires many years and patience to become elite (student-athlete)

”jeg tror på at det er rigtig sundt at have noget andet, jeg tror på at det er rigtig sundt og kunne lægge noget til side. Altså deres sport fylder jo rigtig meget... hvis der skulle ske noget i deres sport, det er jo ikke til at vide med skader, eller med, kan man få en ny kontrakt. Jeg tror på, at, at det er godt og have en bredere identitet, for heller ikke at være så sårbar”(DC councillor)

Student athletes' development as athlete, student, and people.

Developing autonomy. The student-athletes develop autonomy within the environment. They are autonomous and responsible when they start due to their achievements in sport; however, it further develops. They mature as students, athletes and person. Some describe their development at an existential level. The autonomy is developed through the responsibility for own balance. "Who do I want to become? And when? What should I do to get their?" (head of DC)

Social skills. Social skills turned out to be another key to the development. They are needed because they must approach their study peers, teachers and others in order to get the help and support that is needed. Relationships are significant; however to build them requires social skills. They do not come by themselves. This is an active process initiated by the student-athletes themselves.

You may not underestimate the importance of good relationships with your study peers, because they can potentially help you very much. I think It is difficult for those who dont spent time to build these relationships and networks (student-athlete)

Student-athletes' dual career competencies.

Proactive planning. Prioritizing and planning are dual career competences, which is necessary for the optimal time spent. The competence is linked to the fact that the student-athlete is responsible in coordinating their own dual career. It is furthermore reflected in the choices they have made. Athletes are moving to the city to engage in a dual career.

Alting går igennem mig, og det tror jeg egentlig at jeg har det godt med, selvom det også godt kan være stressende nogen gange, at du ved, så får man en besked fra træneren, man skal tilbage, man skal over på skolen og have fikset og så sker der ændringer og man skal tilbage over til træneren, kan det her lade sig gøre. Men, men det har jo givet mig, selvom at det nogle gange er vanskeligt, så giver det mig jo nogen planlægningsevner, som jeg egentlig er glad for at jeg har fået, og som jeg ikke havde fået, hvis ikke jeg havde kørt det her dual career.(student-athlete)

Presence. Presence is an important dual career competence. The ability to have focus and shift focus during the day, week or year. To be present in the sport when in the sport and present in the study setting when at university.

Dual Career Environment Effectiveness and Efficiency

Many people within the environment talked about it as successful. We did not select the case as a successful/effective environment; however, it turned out to be the perception. They referred to facts such as that student-athletes won medals, and student-athletes were effective students with less drop-outs from the university. The student-athletes from AU elite sport achieved a fifth of all Danish medals at the Olympics 2016. They are successful as athletes. And in addition, the student-athletes are efficient in the education system. They have a low drop-out rate from their education and are more efficient in terms of number of ECTS per study year compared to regular students.

In general, the student-athletes and their coaches express satisfaction about the dual career supported by AU elite sport. One student-athlete, who has just got her bachelor's degree said:

“It is a big success. I think that I would have given up on my education if I was not supported, because sport means so much to me and I progress and perform very well” (student-athlete, interview)

The university management highlights the ‘hard facts’ as an indicator of the success of the environment.

“It is the facts such as ECTS point, and the total time for completion, drop-out rates, which tells me it is a success. Student-athletes are doing well. And in addition, the fact that they have completed an education and achieved good results in the sport at the same time” (pro-rector)

University studies are demanding whether you are a student-athlete or not. It requires time and effort, and the requirements is similar to all. The student-athletes’ have to pass the examines with similar standard as their non-athlete study peers. “There are no b-education” as the head of DC support states it. “There are no short cuts.”

The DC support team experience that the student-athletes are satisfied and tell that they express their gratitude after supervision and in relation to the support they get. The progress in number of student-athletes enrolled is an indicator of a good environment in which student-athletes are satisfied:

“We have progressed from 65 to 290 enrolled student-athletes. It tells me that the setup is valued. But it also tells me that Aarhus has a very strong elite sport environment. This means a lot to us. If there were no sporting system able to manage the high ambitions among the students, then they would not be here.” (Head of DC support)

Furthermore, the success of the environment is related to the dual career support providers' competencies. The social skills of the people are emphasized by student-athletes, sports representatives and management as crucial to the efficiency of the environment.

”det der jo har været helt afgørende for succesen synes jeg også er at som person, at, er der jo ingen tvivl om at det er den rigtige person har været i spidsen som kan begå sig både på den ene, den udadvendte sportslige side, og ind mod os, det har været meget afgørende for den succes” (pro-rector)

Dual Career Development Environment Case Study Results – Finland

The following section will present the results of the case study of a dual career development environment at a Sports Academy in Finland.

Dual Career Development Environment Model – Sports Academy, Finland

The following section specifically outlines the dual career development environment model for this case study. The purpose of the figure is to display the various components (e.g., the training facilities) and the actors (i.e., the people) that make up the DCDE of the Sports Academy, including the upper secondary, dormitories, training facilities and so on, as well as to depict the relationships between them, in order to gain insight into the functionality of said DCDE.

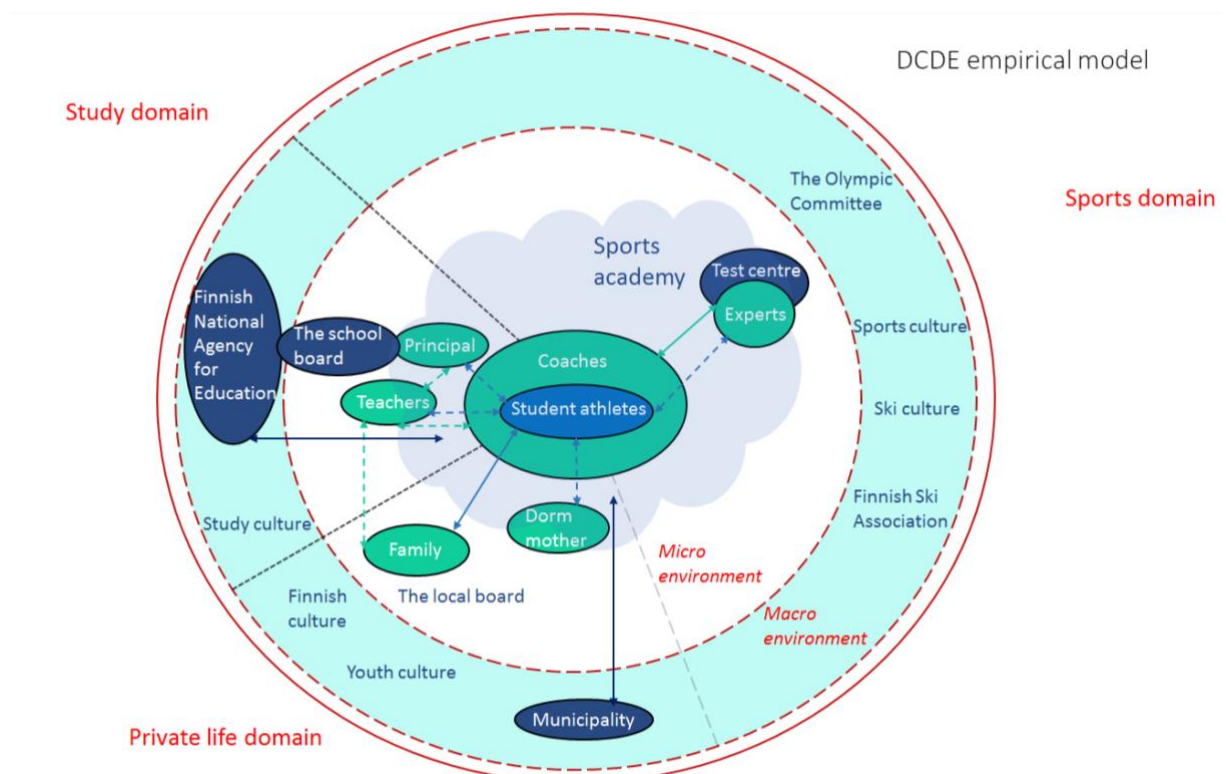


Figure 7: Dual Career Development Environment Model - Sports Academy, Finland.

In this model, the student athletes, along with elite athletes and sports peers have been placed in the centre of the model. The idea here is that these three actors are interconnected; they share very strong bonds, and in terms of their relations to all the other actors, they are mostly identical

with two differences: one, that only the elite athletes (athletes, who are on the national team) have access to the mental trainer, and two, that only sports peers affect the study culture, although those peers may or may not be elite athletes themselves. Other than those two exceptions, the relationships between the student athletes, elite athletes and sports peers are the same with all the other actors, as stated previously. Most of the time, these relationships go both ways, however, in some cases, as indicated by the one-way arrows, the relationship is one-sided. For example, the student athletes have access to the services of a masseuse, but the relationship is limited to the occasional massages, and only if specifically requested by the student. A student-athlete may also have a god sports masseuse student, which enables the student athlete to get multiple massages annually. Meanwhile, the relationship between the physiotherapist and the athletes is mutual and much closer, with the students having access to the services, as well as the occasional lectures and training offered by the physiotherapist to, essentially, teach the students to take better care of themselves. Due to the great majority of the relationships between the student athletes and the other actors being mutual, we decided to not include the two-way arrows for them as it made the model look very cluttered and difficult to decipher. For the interrelations of the other actors, such as the coaches and the teachers, two-way arrows were used as it was deemed that it would be overtly difficult to depict the relationships between the actors without them. Finally, the colour red was used to draw relationships more common to females and blue was used to draw relationships more common to males. These colours were chosen as they seem to be regarded as somewhat representing their respective genders (blue for boys, red for girls) in the cultural context of Finland, rather than choosing colours that may be considered more abstract by some.

To show the strength of the connections between all the different components, actors and the student athletes, the thickness of the connecting arrows and the circles containing the components and actors was used. The stronger the connection, the thicker the arrow and the circle. Placement was also used in order to highlight the bonds, with the stronger ones being placed closer to the athletes in the centre. Keeping this in mind, the components and the actors were placed within two levels in the model: the macro environment, namely the environments where the student athletes do not spend a lot of time in or elements of the DCDE that were seemingly not as important as those placed in the micro environment, which, in turn, encloses

the environments the students spend a lot of time in or elements of the DCDE that were given a lot of importance to. One circle, the test centre one, is placed between these two zones as when testing is taking place, it may take up more of the students' time for a short period of time, but it is not normally the case.

The two levels are further divided into three domains: the study domain, which includes matters related to formal education and school, the sports domain, which consists of training and sports, and the private life domain, which is essentially everything that does not fall within the first two domains or, in other words, the free time the student athletes have. These three domains were separated by dashed lines with equal thickness and style, save for the one separating the sports domain from the private life domain. This difference is due to these two domains being seemingly inseparable and overlapping, with the student athletes choosing to do sport related activities even in their free time, such as training together, swimming, dancing and so on, although it was also noted that there is not necessarily much else to do in the area. Furthermore, two of the student athletes interviewed stated that they wished to move out of the dormitories specifically due to the heavy focus on sports and results/success in the academy, suggesting that they needed to, in a way, have a break from sports and include non-sports related elements in their lives as well. One of the student athletes stated that they visit home, go hunting, fishing and hiking in the forest regularly in order to get away from the world of sports. In this sense, the fact that the sports domain is so strong can be seen as a positive thing, as the facilities are good and in terms of sports, there is much to do, however, it can also be seen as a negative thing as there are seemingly not many opportunities outside of sports.

On two occasions, a circle infringes on another domain. In the case of the principal's circle, it is placed slightly within the sports domain, but still mostly within the study domain to show that the principal took an active interest in the students' sports training by attending practice at times. As for the education circle, it is placed snugly between the study domain and the private life domain. The reason for this is threefold: the students did not necessarily spend much time at school or studying, often travelling to compete, occasionally skipping class, or coming to class late or leaving early, and seemingly prioritising other things over education, as well as the fact that it was not always clear whether the purpose was to spend time with sports peers or to genuinely study and learn, and, lastly, that some components that are linked with

education seemed to be left up to the students to navigate on their own (one student athlete stated that there is no guidance for education opportunities after graduating upper secondary, unless the student actively and independently seeks out that information). The second reason, especially, was difficult to evaluate as education itself came off rather result oriented, with the students seemingly being tested quite often and the focus being on simply passing and eventually graduating, rather than learning and finding new interests. It should also be noted that the student athletes themselves did feel that they do a lot of work for school, however, without further observation, it is difficult to quantify this, especially due to the fact that if the students feel like they are constantly being tested, it may result in them occupying themselves with cramming for and stressing over tests, which can, in turn, make them feel as though they are spending most of their free time on school, even if the amount of work is not necessarily high (although, it may be).

The relatively long distance to school from the dormitories may be another factor that can buffer this feeling as if the student athlete spends a reasonable chunk of their day simply getting to and from school, it would certainly contribute to the feeling of school taking up much of their time. Additionally, it was stated by a teacher and a student athlete that student athletes do not necessarily do schoolwork while they are away competing. It is not completely clear whether this is due to the student athletes not wishing to or being able to bring all the required course material with them, as much of the school material did not seem to be available online at the time at least, or if it is simply due to time restrictions while travelling. It is also certainly true that competing and recovering can take a lot of energy, which may lead the student athlete to being too exhausted to complete their schoolwork. One student athlete also stated that they feel like they have very little time to themselves, they are either training, going to school or being at school, or doing homework. Others also found that especially the first year was very busy and somewhat hard for them due to the amount of school and, in some case, alleged lack of flexibility on the school's part. If the student athletes' schedule is very busy even on a regular basis, it seems reasonable to think that a competition away may be even busier or their focus may be so much on the competition that there is not much space for schoolwork. Moreover, according to one student athlete, they are assigned extra work if they miss class. In other words,

if a student athlete is away competing, they are expected to do more work than they would if they had attended the classes they missed.

As for the relationships themselves. As mentioned above, the relationship between the student athletes and their peers is extremely strong. To that end, the dormitories served as a sort of community in that the student athletes would go visit each other and spend time together in their apartments. It was noted by the teachers that all the student athletes in the school, not just the skiers, tend to spend time with peers from their own sport, rarely mingling with athletes from other sports or the regular students. One student athlete did say that they have a couple of non-sports friends, but overall, the interaction was very much limited to the people they practiced and spent time with outside of school with as well. Another athlete pointed out that they seldom spend time with the opposite sex, with boys preferring to spend time with other boys and vice versa. One of the teachers also noted that the study culture is very much dependant on the sports peers; if the popular sports peer of the group is a diligent student, then the rest of the group would also take their studies more seriously, however, if they were not, then the opposite would happen. It was also said to be very apparent what sports a person did, for example, all of the skiers would dress in a very similar way, which made the ski culture a fairly important part of the student athletes' lives, as it even affected the way the student athletes dressed. Skiing practice was also considered more important than school which was visible in that the students would skip school in favour of practice or recovering from practice (the case of half the student athletes skipping a class, another occasion of a student athlete loudly announcing in the dormitory that she was not going to school).

The closest relationships the student athletes had, besides the sports peers, was with the coaches. It was stated by both the coaches and the student athletes that whenever the student athletes had issues or difficulties, the first person they would typically turn to would be their group's coach. Of course, the student athletes would also spend a lot of time with the coaches due to practice and many look up to the coaches, as all the coaches are previous skiers themselves, with some having competed internationally. As such, the coaches were close support persons, mentors and trainers for the student athletes, helping with school matters as well as providing support and help on multiple domains of their life. Whenever the students were in need of the services of experts, such as the physiotherapist, doctor and so on, the

coaches would make the appointment for them. In contrast, teachers did not seem to hold nearly as much importance, with only one teacher stating they wish they could be someone the students turned to and noting that there were, indeed, some who did. The relationship with the actor that was there to help the student athletes in managing their private life, the dormitory mother, was reportedly not seen as very important, with one student athlete stating that the dormitory mother simply stops by to wish them a good night on Thursdays. The principal and the teachers did mention them, and when interviewed, it was apparent that the dormitory mother does take care of tasks such as checking the dormitory rooms weekly, planning for some activities and driving the student athletes to see a doctor, therapist or such, if necessary. That being the case, they certainly have a role in the environment, but it was not seen as majorly important by the student athletes by themselves. This may quite possibly be due to the fact that the dormitory mother oversees a large number of students and may not have time to individually care for so many students or it could simply be that the student athletes feel more comfortable with relying on their coach or their family, with some students visiting home weekly and contacting their family daily (granted, some students preferred staying at the sports academy more).

Looking at the relationship between the staff experts and the coaches in the sports academy more closely, the link between them is strong, both as individuals and as a group. For example, if a student athlete takes part in testing, then an expert will go over the results and discuss them with a group's coach (every coach is responsible for a group consisting of 15 student athletes), as well as figure out what would be the most reasonable course of action for a specific athlete. In other words, the experts always communicate with an individual's coach. This type of approach is referred to as participating expertise philosophy, which simply means that that the athletes, coaches and experts communicate with each other. The coach in charge of a student athlete is also responsible for making appointments for them when they need the services of experts like the mental trainer, test centre, physiotherapist et cetera. The experts, the mental trainer, for example, also share their knowledge and expertise with the coaches. The coach may change or adapt element of their coaching, such as their coaching style, the way they communicate, and so on, as a result of this. Mental training sessions provided by the mental trainer are only available to the elite athletes, namely the athletes that are part of the national

team, whereas the other athletes have group discussions in the lectures. In addition, the mental trainer participates in and observes training sessions and gives feedback to the coach on matters such as the structure of the training and the way the coaches communicate with the athletes.

The role of the Olympic Committee is not limited to financial aid and providing experts; it is also educational. The coaches have annual in-service training, both by the sports academy and the Olympic Committee. The sports academy also arranges for discussions for the coaches, and The Finnish Ski Association offers conferences in order to develop the coaches' skills and knowledge. The Finnish Ski Association has located part of its functions to the sports academy's location and that can be seen in that academy coaches are also national team coaches. The role of the Olympic Committee and The Finnish Ski Association includes organising International Championship trips.

In terms of where and how the student athletes preferred spending their free time, girls had a tendency to stay at their residence, commonly the dormitory, often playing table tennis, dancing or doing other sports, whereas boys preferred going to town, also commonly taking sports activities such as baseball, as well as spending time in the dormitory's sauna (an hour a day, frequently), discussing sports, politics and a number of other topics. Interestingly, this was the only visible element of Finnish culture in the student athletes' environment. Youth culture could be seen in memes and viral videos, for example, some of the girls were practising the Skibi dance (a song by the Russian band Little Big) in the dormitory.

Other notable components of the environment were the Local board, which works on bettering the dormitory environment specifically, and the municipality, which offers funding to the sports academy and has taken them into consideration when designing the bus schedules for the municipality (albeit even then, the students are left with missing school due to the public transportation in the area).

Environment Success Factors Model – Sport Academy, Finland

The following section outlines the Environment Success Factors model (Figure 8) for the sports academy, Finnish case study.

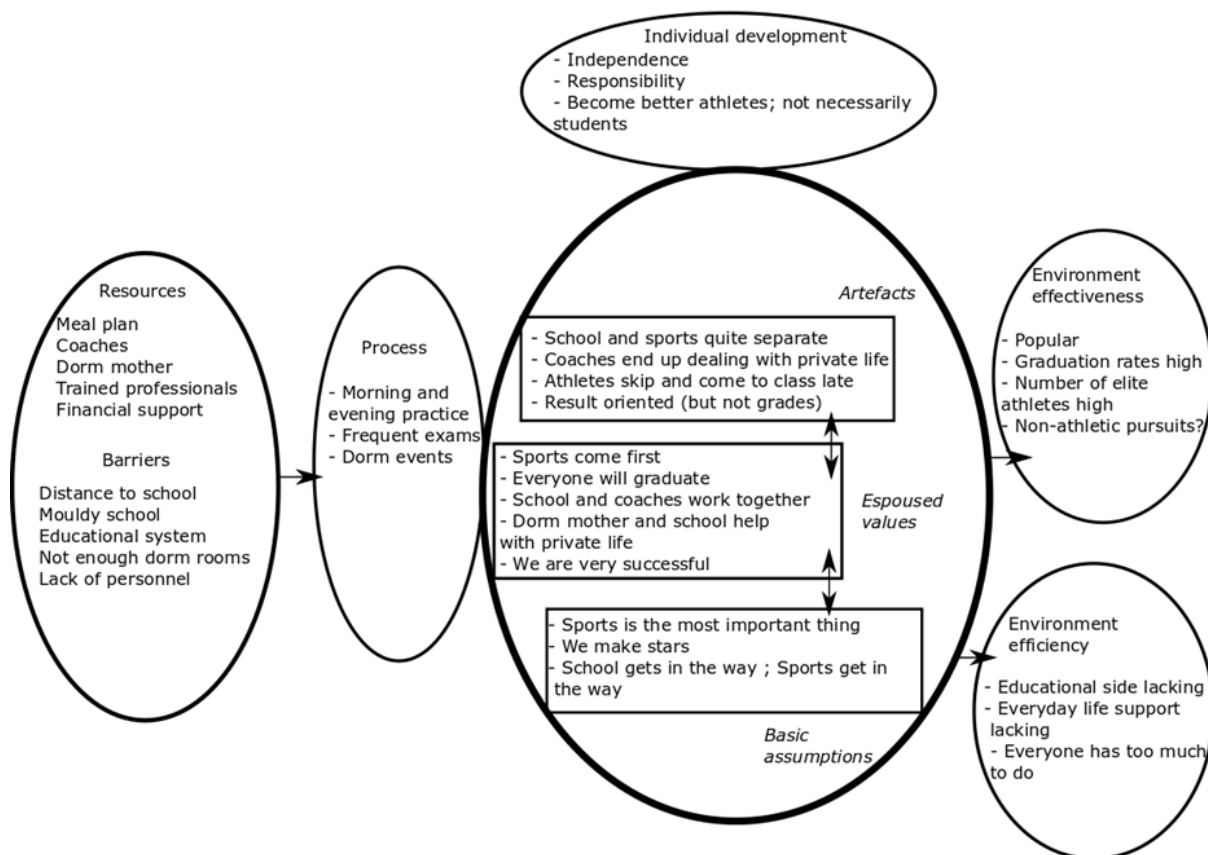


Figure 8: Environment Success Factors Model – Sports Academy, Finland

Figure 8 is the empirical Environment Success Factors (ESF) model whose aim is to depict the various factors that affect or influence the successfulness of the skier’s environment. The factors have been divided into six different circles, each with their own unique function, although the last two, effectiveness and efficiency, are somewhat closely related.

Dual Career Resources and Barriers

The first circle lists the major resources the academy has at its disposal. These are all elements that work towards making the environment successful. The athletes living in the dormitories have access to a free lunch at school, the dinner buffet at the dormitories costs 4,50€ per meal and snacks are 0,50€. Therefore, it is fairly easy and cheap for the students to keep themselves fed for the day and it also potentially saves them a lot of time.

Another big plus for the environment are the coaches, of whom roughly half also coach the national team in their sport, and whom are seemingly devoted to their job as they offer the

student athletes not only advice and support in bettering their athletic career, but also in dealing with their private life and school issues. Many of the students and coaches stated that if a student athlete looked distressed or if they had issues, they would turn to the coaches for help.

The student athletes also have access to a wide range of other professionals, such as doctors, physiotherapists, masseuses, a mental trainer and so on. Furthermore, six years ago, a dormitory mother, a person who is there to help the students manage their private lives better, checking their rooms once a week, arranging for some fun events, taking the students to their doctors' appointments and such, was hired.

The sports facilities in the area are top-notch for winter sports. They include items such as a skiing tunnel, that makes it possible to ski on snow even in the summer, although it is mostly being used in the autumn, a roller skiing track for summer training, and special asphalted road for uphill training. Additionally, snow is collected and preserved from the previous winter which is then used to open the first snow tracks already in early October. In the winter, there are very wide and versatile tracks for skiing. In the summer, there are hiking opportunities and demanding terrain for endurance training around the rocky hills in the area. The closest track and field venue is roughly six kilometres from the dorms. There is a football field nearby the dormitories, which makes it possible for the athletes to play different games in their free time.

Considering the popularity of the sports academy, the indoor facilities are a bit less advanced in comparison to the outdoor facilities. There is not a lot of room, the gym is often crowded, and the sports hall is often booked, which does not leave much room for voluntary training. Also, equipment like rubber bands and foam rollers for core, strength and recovery training should be owned by athletes themselves.

The faculty of Sport and Health Sciences of the University of Jyväskylä has a research and educational unit (The Sports Technology Unit) in the area the sports academy located that specialises in Nordic winter sports research. It is an internationally respected research unit that has hosted the International Congress on Science and skiing on multiple occasions. Some student athletes participate in research studies and can benefit from that. Another noteworthy factor is that this dual career research will provide valuable information about the environment.

The testing centre in the sports academy is responsible for collecting data about the longitudinal and individual development.

The financial side of the academy is fairly well covered as well, with the academy getting a bonus from the Ministry of Education and Culture of 12,000€ per student annually, as well as getting financial support from the Olympic committee, sports unions, leagues, and several other facets. The municipality the academy is located in covers the rest of the annual budget, amounting to a touch under 200,000€ annually. Whereas the financial support is a great help and asset to the academy and, thus, the environment, a number of the barriers listed in this circle are also due to lack of finances. For example, each coach is responsible for 15 students, which may sound like a small number to be responsible for, however, it is not much time for the coach to observe and give individual feedback and advice. Additionally, as stated before, the coaches are also typically the first person the student athletes turn to when they are having difficulties, which means that either the coaches are left overworking or having to turn down student athletes who may need help. Coaches stated that they are struggling with the lack of time to provide the student athletes with enough attention and feedback during the training sessions. It is problematic, and perhaps even unrealistic, to aim for high results while not providing the student athletes with adequate guidance in order to reach those results. Every individual coach-athlete relationship also brings challenges for the coaches in terms of time managing and overall workload.

Teachers were also spread out fairly thin, many noting that they are very busy and have a lot of work to do, having to constantly make new tests and accommodate for the student athletes' travels, practice and such. This may also be partially due to the educational system within the school, though, as there seemed to be quite a lot of focus specifically on testing and teachers were seemingly busy making new tests on a regular basis. The teachers also either did not have access to much technology or they did not have access to training in order to learn how to utilise it, which ultimately lead to the teachers spending a lot of time on designing and printing materials for the students. For example, in some schools, the teachers would get a tablet from the school and, as students are required to carry either a laptop or a tablet with them, it would be fairly easy for the teachers to manage and share files on the tablet in a matter of minutes, rather than having to walk to the printers and printing out the material.

Another issue was seemingly that student athletes would occasionally skip, come to class late or leave early, not turn in their assignments on time and not necessarily inform the teacher on time that they were leaving for a competition, which left the teachers with more work to be done on short notice, which, in turn, hindered their ability to plan for courses. Sports were clearly put before education in the environment, with school having to be flexible, and with very little, at least visible, consequences to students for their actions or choices, such as skipping class, coming late or failing to inform the teacher on time. This is not to say that it is bad for the school to be flexible, quite the contrary, and it should be noted that there were student athletes who thought school was, in fact, not flexible enough, however, at the same time, it is potentially harmful and could affect the development of the student athletes as students as well as future members of the working force, as this sort of behaviour is considered unacceptable in most schools as well as work life in general. There are studies that suggest frequent or chronic tardiness affects the students' and their peers', as well as the teachers', school performance negatively, leaving the students less knowledgeable and the teachers overworked, which, in turn, does not bode well for the student athletes' education, given that the statistics would be applicable to them as well. The school issues, namely being late and skipping, were further facilitated by the distance between the dormitories and the school, which is roughly seven kilometres, with public transportation being fairly sparse, the bus typically arriving at the school some minutes before the class started and ended, and only doing so once every one to two hours or so. There were no buses from the school after three p.m., which meant that in order for the student athletes to get home at a decent time, so that they could have dinner before evening practice and, of course, homework and private life matters, the students who did not commute by bike or car had to leave class roughly ten minutes before the end of the class.

In terms of lack of personnel, it may also be worth noting that the dormitories also only had one dormitory mother who is solely responsible for checking hundreds of rooms in a single day, as well as taking care of the student athletes' visits to the doctor, if they need a ride, and so on. Other issues, at least partially, caused by finances is that there are not enough rooms for the student athletes to stay in and the fact that whereas the school has a seemingly serious mould problem in the school, with some members of the staff as well as students being affected,

it does not seem to be on the list of matters to be rectified, with the head of the school focusing more on the lack of rooms than the issue with the school building. It was noted by one student athlete that whereas they do not personally notice the problem most of the time, when they are well, but if they have to attend school while they are ill, they are more prone to headaches and coughing fits. These factors are not simply due to finances, the process of deciding and building new faculties takes a lot of time, planning and acquiring land and so on; it is, by no means, a simple issue, however, it is a serious issue that should be dealt with, as it is affecting the different actors of the environment.

Dual Career Processes

Process lists the notable actions taken in order to make the environment successful. The school arranged for three instructed practices per week and the coaches may have arranged for more. The training can be either in the morning or in the afternoon depending on the class and school schedule. For example, the number of instructed practices, with the coach attending, was one per day on average (excluding weekends). In addition, effective weekends are organised for the student-athletes, where the coaches organise and attend the training. A ride to competitions was also arranged for by the sports academy. It is mandatory for student athletes to complete sports knowledge courses held by coaches or experts that includes sport specific topics on training, athlete well-being and nutrition. The aim is athlete development. The school's modus operandi seemed to be exams, however, whether it is truly the case that there are more exams than in other schools or whether it is simply that it comes across as such due to the fact that the teachers are constantly having to make new exams for the students who missed did not pass the previous ones, is not completely clear. Additionally, the school arranges some occasional events, such as the sports day, however, it was noted that many of the student athletes do not show up for it, with some coaches also advising them against attending. The dormitory mother also arranges for some events which were said to be popular, fun activities for the students. None of the student athletes mentioned these events, though, nor did they mention the dormitory mother as a whole in the interviews, which could mean that they do not consider them to be significant or worth mentioning.

Dual Career Philosophy

Moving onto the next circle, there are three different parts: basic assumptions, which are those underlying opinions, values or beliefs that a person has, but may not even be aware of, artefacts, which are the visible evidence of the opinions, values or beliefs, and espoused values, which are those opinions, values or beliefs that are advertised or openly spoken of as representing the ideologies of the environment. If espoused values are what the environment wishes to show or aims for, then artefacts are the visible entities of the environment and basic assumptions are those deep-rooted opinions that a person may not even realise they have. The espoused values of the environment were that sports come first and that it is the school's job to be flexible and work around sports. At the same time, though, it was stated multiple times that everyone would graduate and that that was the goal in terms of school. In order to achieve this, it was said that the coaches and teachers cooperate to offer a good environment for combining both sports and school. Additionally, it was said that the school and the dormitory mother help the students with their private life, and that the student athletes are very successful (ranking high in sports and graduating school).

However, looking at the artefacts, many of these values were not actually visible though. Whereas it was certainly very clear that sports were valued over school, with the athletes frequently coming in late, not handing in assignments, skipping classes and so on, it was fairly obvious that the two domains did not meet much and cooperation was quite rare, with the coaches and teachers meeting once a month and occasionally, more so concerning the freshman students, contacting each other on Wilma (a platform used by schools to send messages to parents, as well as to keep track of absences and such). For example, the coaches inform the teachers of competitions and major training events that require the student athletes to be absent, however, older student athletes seemed to take over and inform the teachers themselves (third and fourth grade students). However, it should also be noted that it is not typically possible for underage students to complete these tasks either way, so it is fully possible that more students would be willing to take over these duties. Moreover, it was stated by some other members of the staff that some of the coaches do not care for the cooperation meetings, either choosing not to attend or attending reluctantly. It was also found that whereas school and the dormitory mother do help with private life to some extent, it was mostly the coaches that ended up helping

the student athletes with their private life matters. Considering the how the sports academy and the municipality advertised the success in sports, it was very clear that these sorts of results were regarded highly. One concrete example of this was the European Youth Olympic Festival (European Youth Olympic Festival, winter 2019) where the sports academy would make daily posts on their Instagram and Twitter accounts on who was competing that day and, if there were no competitors from the sports academy, they would not post at all. Moreover, typically, only the competitors who did well were mentioned, those who did not, were not. This did, in a way, extend to school as well as much of the teaching appeared to be results oriented, with a focus on passing a course, simply in order to graduate rather than finding new interests or enjoying learning. It did not extend to school in the sense that the aim would have been to achieve a specific grade point average or even good grades, though, although some student athletes did measure their own success in terms of grades, some dubbing maintaining their grade point average their greatest school achievement.

The goal and development orientation can be seen in the training sessions. Coaches do emphasise technical, tactical and sports related communication, giving more or less direct comments rather encouraging athlete driven decision making or insightful learning. Some of the feedback was given when athletes had their backs towards the coach, which left us questioning whether the student athletes understood or responded to the comments. The practice had the same kind of pursue for effectiveness as school, with no actual learning taking place. One of the coaches said that it is important for every athlete to have successful races during the year, in order to maintain the motivation for training and keeping up with the group. Individual development is not always enough when there is a lot of competition between student athletes. One of the athletes said that for some time after a competition, it can be hard on them mentally if they do not do that well. This can also be seen in that the student athletes compare themselves with the other student athletes. For example, if one has a day off to rest and the other student athletes go train, it can be challenging for them to have a day off because they might feel that the other student athletes will get ahead of them and that they will, then, be at a disadvantage.

The basic assumptions were somewhat shared with the artefacts and espoused values, yet they showed just how deeply rooted some of these opinions are. Namely, sports were considered to

be the mission and thing to do, to the point that it was said they make sports stars in the academy and that the number of sports stars would probably be higher and the results would be better if the student athletes spent less time on school, like they do in certain countries. Essentially, it was implied that school gets into the way of sports and is a hindrance to becoming an international star. On the other side of the spectrum, it was suggested by some of the teaching staff that sports get in the way of school, too, as the students do not have much time and travelling a lot easily disrupts the rhythm of their studies, although there were said to be some exceptions as well. As a result of the actions taken and the ideologies supported, it was said that from the point of view of individual development, the student athletes became more independent and responsible, for example, directly communicating with the teacher about the tasks they needed to do during their absence. Independence is also supported by statements that student athletes visit their home and communicate with their parents less often than they do in the first year of their studies. They also learnt life skills such as cooking, doing the laundry, and managing their time in a way that allowed them to get the tasks done that they needed to do. This helped them to become better athletes, but not necessarily students, as the primary focus still seemed to be sports for many of the student athletes as well. However, there was also a case where a student athlete stated they had learnt how they learn the most efficiently, in other words, they had learnt what their learning style is.

Dual Career Development Environment Effectiveness

Next up is environment effectiveness. This is simply whether the environment gets results or not. In those terms, the environment is, indeed, fairly successful. It is popular with currently over 162 student athletes (162 out of a total of 336 students, reportedly with over half of the students being student athletes in 2019) of whom a staggering 144 come from other municipalities. 28 of these 162 students had already achieved some level of success in the junior league of major competitions (ranked 1-8 in the Olympics/Paralympics, World championship or European championship), 11 had participated in the adults' league competitions as a member of the national team, 38 who had done so in the juniors' competition as a member of the national team, nine of whom had already won a medal in the adults' league in the Finnish championship, and 95 who had done so in the juniors' league in the Finnish championship. Furthermore, it is claimed that 25 of those who graduated between the years of

2013-2017 have achieved success in the adults' league in major competitions (ranked 1-8 in the Olympics/Paralympics, World championship or European championship). Certainly, the school can be merited as being very successful in terms of its number of elite athletes. There were also no dropouts, although a total of 11 student athletes changed schools, five to a different upper secondary, five to a different sport upper secondary, and one to a vocational school, which means that the majority of the students do graduate. Since school success is measured in terms of graduation, the sports academy is successful in those terms. However, it is not clear what and if there has been any success in terms of non-athletic pursuits as the topic of future prospects was not discussed beyond the scope of sports, nor was there any data on the matter (KIHU and the Olympic committee, 2017).

However, whereas the environment is effective, it is not necessarily very efficient. The educational side was lacking, in importance, quite possibly in terms of efficiency, and, perhaps, in terms of finances as well, with seemingly most of the funding going into sports. There was also not enough everyday life support, one student athletes specifically noted that especially the first year, they felt they did not receive enough help and were, somewhat, left to their own devices. It was also very clear that everyone simply has too much to do, too many responsibilities and not enough tools to cope with everything.

Dual Career Development Environment Case Study Results – Slovenia

For the purposes of the project, we observed two swimming clubs from Ljubljana. The rationale for choosing swimming clubs were:

- Swimmers have two training sessions a day. First one before school (usually at 5:45) and the second one in the afternoon. This schedule is very demanding regarding dual career.
- There is a shortage of swimming infrastructure in Ljubljana. Both clubs that were selected for the observation share the training sessions in the same pool, training in neighbouring lanes.
- Although both clubs train in the same pool at the same time, they are different in some DC ecology modalities.
- One of the observed athletes had previously trained in one club and then transferred to the other and has experiences with both DC environments.
- Two athletes that were observed, one from each club, attend the same high school. As one is in the specialised Athletes Class and the other one in the regular class, although they share the school environment, they have different DC micro-environments.
- Coaches from both clubs have long coaching careers in swimming.

For the purposes of ECO – DC project, two sport and one educational environments were thoroughly analysed. Individual interviews were conducted with two coaches, two athletes and three teachers (two of them are DCSP). In order to preserve anonymity, only abbreviations are used. As one-week observation of the environments in clubs was not feasible, for one week both athletes were asked to precisely monitor how they spend their time. Their hourly diaries of the same week were then analysed.

As the environment of PK Olimpija has more elements, interesting to research from the viewpoint of environmental factors, only this environment will be thoroughly presented.

Table 2. Individual interviews participants

Name	Role within the environment	Insitution	Abbreviation
T	Coach	Olimpija – sport club	C1
O	Coach	Riba – sport club	C2
M	Athlete	Olimpija	A1
N	Athlete	Riba	A2
M	DCSP	High School	DCSP1
D	Teacher & DCSP	High School	DCSP2
H	Teacher	High School	T3

Table 3. People in two dual career environments

Role	PK Olimpija	ŠD Riba
Athlete	M (A1)	N (A2)
Coach	T (C1)	O (C2)
Teacher	D (sport coordinator as well) (DCSP2)	H (T3)
DCSP	M (DCSP1)	/

Interview Participants

Athlete 1 (A1) – M from PK Olimpija

M is 18 years old female swimmer from PK Olimpija. She swims for more than 9 years and is in this club for last two years. She started in ŠD Riba but two years ago transferred to Olimpija. The main reason were her high athletic goals – Olimpija is considered as a club oriented towards elite level sport. She attends 3rd grade of Gimnazija Bežigrad. She is in a sports class, therefore she has two DCSPs that help her with dual career. She is very successful student with very high average grade.

Coach 1 (C1) – T from PK Olimpija

T is 46 years old male coach with 25 years of coaching experiences. He is physical education teacher by a profession and has spent the entire working career in the competitive sport. He has been working in Olimpija for 25 years. He is the coach of the elite level group and currently coaches one of the six Slovenian international level swimmers. He coached majority of eight swimmers from the club who competed at the Olympics.

M – DCSP1 from Gymnasium Bežigrad

M is 57 years old female. She is a psychologist by profession and has been working in gymnasium for past 34 years. At the beginning of her work in school she was a psychology teacher. For past 24 years, she works in school counselling department. Among other counselling psychology related work, she is a pedagogical coordinator or dual career support provider for student-athletes. Her main role is to prepare educational plan for student athletes and coordinates between athlete, parents and other teachers. As the school offers several dual career supporting services, her role is to make sure that student-athlete gets optimal support.

D – DCSP2 (and head teacher) from Gymnasium Bežigrad

D is 30 years old male. He is physical education teacher and works in this environment for 1 year. Beside teaching physical education, his role is sport coordinator or sport DCSP. He's also a head teacher of third year athletes class (all pupils are student-athletes who compete in various sports). He's a head teacher of M (A1). The main role of sport coordinator is that he's in touch with SA and their coaches with the aim of helping them lead successful dual career. As SA three times a week start school with two hours of physical education, D ensures that SA can

have a condition training in school. He helps SA with the physical preparation, which is done in accordance with the coach.

Athlete 2 (A2) – N from ŠD Riba

N is 17 years old female swimmer from ŠD Riba. She swims for more than 9 years and is in this club from the beginning of her sports career. The main reason for staying in this club is her coach, who is very supportive and nice. She attends 3rd grade of Gimnazija Bežigrad. Although she is elite athlete that trains twice a day 6 days in week, she is not in a sports class. She is in the regular class and therefore doesn't have DCSP in school to help her with dual career. Her head teacher only recently learned that N is an athlete as she asked for the permission to attend the competition during school time. When asked why she hasn't applied for SA status, she rationalised that she doesn't need any special support in combining sport and school. She is very successful student with very high average grade and plans to go study medicine.

Coach 2 (C2) – O from ŠD Riba

O is 58 years old male coach with 38 years of coaching experiences. He is physicist by a profession and has spent the entire working career in swimming. He has been working in Riba for 14 years. He is the coach of the elite level group of athletes in the club as well as the coach of one of younger groups. He's known in the club for his good social skills and nurturing attitudes towards athletes. Athletes usually stay in his group as long as possible and the main reason is his warm coaching style. He works in a private club where elite level results are not prerequisite.

H – (T3) head teacher from Gymnasium Bežigrad

H is 50 years old female. She is a professor of English and German languages and is N's headteacher. She works in the school for past 25 years. Beside teaching languages, her role is to be a head teacher. Although N is in her class for past three years, she only recently learned that N is an athlete. The reason was that N never asked for any special assistance in combining sport and school. She described her pedagogical style as supportive and she highly emphasizes good and effective communication with pupils.

Environment Descriptions

Club 1 – PK Olimpija

Swimming club Olimpija was founded in 1975 in Ljubljana. It is a public sport club, founded by the city of Ljubljana. Since its beginnings, it was focused on two aspects – competitive elite level swimming of different age groups and recreational swimming with swimming own school to popularize sport. The club aims at best results in elite sport and is proud of its athletes' achievements. It's very elite sport oriented, focusing on the competitive sport and results at the highest levels. It is family friendly club, offering swimming for everyone. Apart from the competitive sport, they offer swimming school, non-competitive youth swimming, recreational swimming for adults, and veteran competitive swimming. The club is financed from the public sources (municipality of Ljubljana, Ministry of Sport and Education, Olympic Committee) as well from the private sources (parents).

In 2019, PK Olimpija has 142 members and 106 of them are registered as competitive swimmers. That makes Olimpija the third largest elite level competitive swimming club in Slovenia. 39 swimmers are categorized by the Olympic Committee of Slovenia: 1 international-level, 1 perspective, 26 national-level and 11 junior-level swimmers currently train in PK Olimpija. 18 of them compete at the senior level and 15 at junior level. Since its beginnings, 8 swimmers from the club competed in Olympic games, placing the club among the best elite level swimming clubs in Slovenia. Out of current 6 Slovenian international level swimmers, one is training in Olimpija. The club employs 6 coaches. One coach, the participant in this study, oversees the elite level swimmers.

Club 2 – ŠD Riba

ŠD Riba was founded in 2002 in Ljubljana. It is a private sports entity, founded by two former swimmers. Riba started as a recreational club, offering swimming school lessons for children and at the same time, recreational swimming for adults. Soon they added competitive selections and currently have five groups of athletes that compete at various levels. Majority of athletes compete in junior selections and there is only one group of athletes who are approaching transition to the senior level. The club promotes dual career of athletes, being aware that even the best swimmers in the group probably wouldn't proceed to the elite level and competitions of the highest ranks. As one of the two owners of the club is a sport psychologist herself, dual

career and athletes' wellbeing is indeed taken care of. Majority of the finances comes from the private sources (tuition from the recreational groups finance also the competitive groups in order to lower the financial input of athletes' parents). The club also gathers funds from the public sources The club is financed from the public sources too (municipality of Ljubljana, Ministry of Sport and Education).

In 2019, ŠD Riba has 72 registered competitive swimmers and is among the smallest clubs with competitive elite groups in Slovenia. Only 6 athletes are categorized by the Olympic Committee of Slovenia: 3 as national-level and 3 as junior-level swimmers. The club employs 3 coaches. One coach, the participant in this study, oversees the eldest group of competitive swimmers.

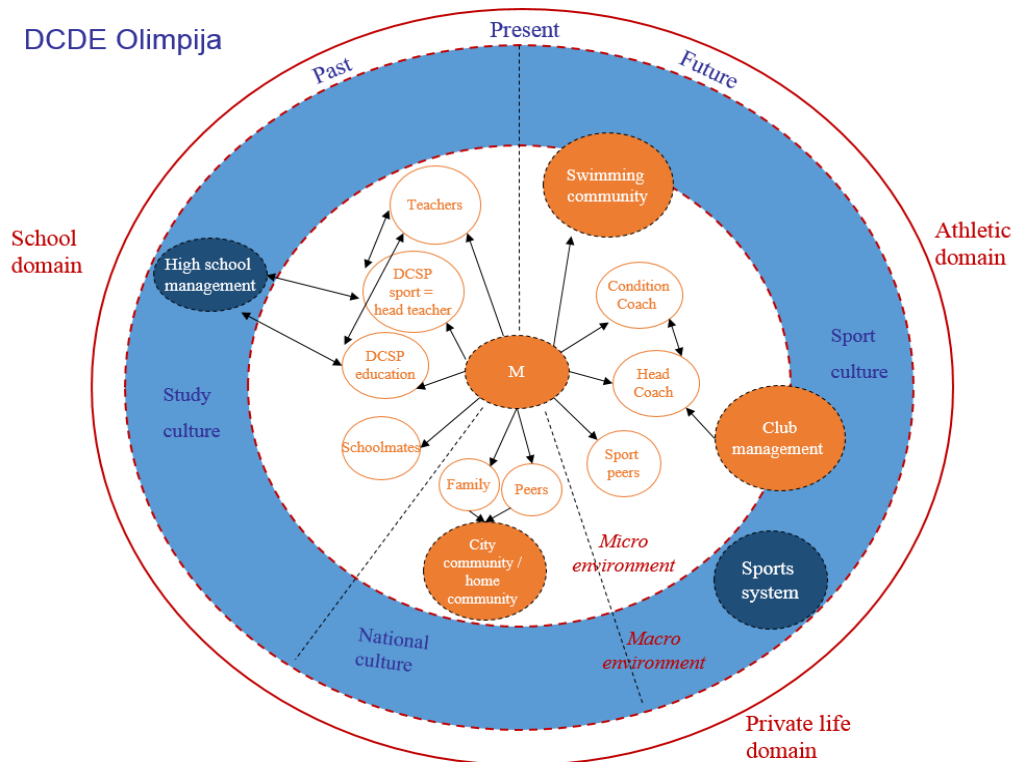


Figure 9: DCDE PK Olimpija, Ljubljana, Slovenia

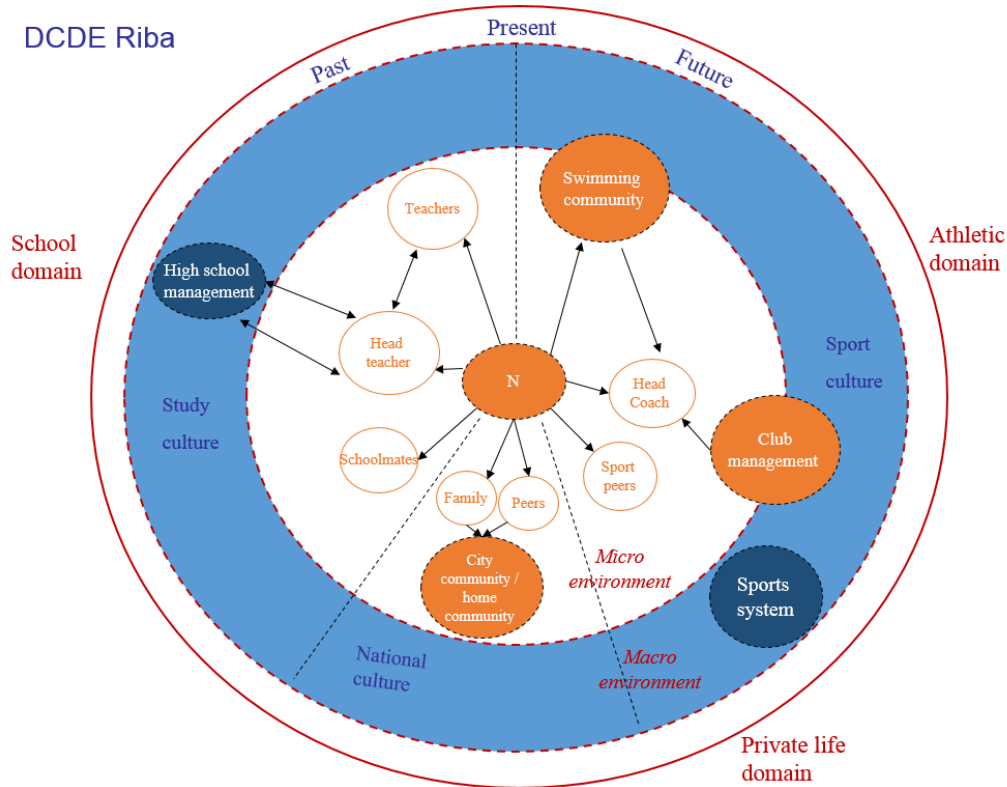


Figure 10: DCDE ŠD Riba, Ljubljana, Slovenia

Micro Environment

1: Sport Domain

The Club

As shown in Figure 9, the club (in the sports domain) together with the school (in the academic domain) are the two fundamental institutions of the student-athlete's core environment. The club has as primary point of its philosophy to promote the dual career of its student-athletes, helping them complete their studies while practising elite sports. Coach T describes:

For swimmers it is necessary to finish school and have education. There is almost no prize money in swimming. Even during the career, it is difficult to earn enough money to pay the bills let alone after the retirement from sport. As swimmers learn a lot about hard work and dedication, majority of them are very successful in education. For me as coach and for club as well, it is very important to help them to combine sport with education. It's a well-known fact

that majority of elite level swimmers will end their careers during the transition to the university.

Recognizing dual-career and difficulties related to combining both domains, the coach tries to organize competitive calendar in according to athletes' study obligations. This is especially important for athletes who are in the last (4th) year of high school and prepare for the matura exam. At the beginning of the season, the coach asks the athletes to bring him the study calendar and he tries to find the best solutions for both domains.

There is a shortage of swimming infrastructure in Ljubljana. As there is only one 50-meters indoor pool all clubs train there. This results in sharing good practices between the coaches and creates a unique environment where athletes that are rivals train in neighbouring lanes.

The importance of the sports domain is reflected in the high amount of hours that student-athletes dedicate to training. Swimmers train twice a day. First training starts at 5:30 and lasts until 8:00 and the second training is usually in the late afternoon or early in the evening. Athlete stated that she trains much more than her peers who compete in other sports. She explains:

If I compare my dual career with my schoolmates, I train much more than they do. Maybe only gymnasts train as much as we swimmers do. For example, I have to get up extremely early, at five o'clock in order to be in the pool by 5:30. And I'm lucky as I live 500 meters from the pool. After the morning training, I have to hurry up in order to get to school in time. I go to school by bike and I need almost half an hour to get there. I have to be really organized. But after so many years of training swimming, I'm already used to. My schoolmates who train team sports, have only one training per day. They can study in the morning, before they go to school.

The club is the third largest swimming club in Slovenia. It's oriented towards the elite sport, focusing on the competitive sport and results at the highest levels. Since its beginnings, 8 swimmers from the club competed in Olympic games, placing the club among the best elite level swimming clubs in Slovenia. Now, one of 6 current international level swimmers trains in Olimpija, with the coach who was participant in this study. Although sport results are very important for the club's finances, philosophy of the club is to support dual career.

Coach

The coach is one of the most important agents in the process of dual career as he spends so much time with the athletes. The coach himself explained that he is very attentive regarding the educational needs of his athletes. At this time, vast majority of his athletes are very successful in school and he doesn't need to make a lot of changes in the training and competition calendar as athletes manage to combine both domains. In the case of an athlete, who is trying to qualify for Tokyo OG, coach explained, that he is working closely with school in order to get an optimal combination between sport and school. It was agreed with athlete's parents and teachers to postpone some of the school loads after the Olympic games. It was coach's job to communicate with school and parents.

The athlete describes the coach in the same way, emphasizing his attention for their school work load. She describes:

I have a feeling that coach is working very hard to help us with school and sport. I don't have problems in school so he doesn't need to take care of me. But I like when he asks us about the tests and grades we got. He genuinely care. My previous coach was the same or maybe even more caring. But I don't know many other coaches who would care for athletes' school. My schoolmates often say that their coaches ask them to come to training and do not understand that they need to study and prepare for the tests.

Regarding dual career or other important topics, coach mainly communicates with the athlete. As she is already 18 years old and a very responsible person, the coach doesn't have a need to communicate with parents, at least not too often. If there is an issue, he writes emails to parents or teachers but this happens rather seldom. He's way of communication is quite informal and he tries to have friendly relationships with athletes and their parents. They see them as part of the team and therefore consciously works on good relationships.

2. Academic domain

School

The high school is one of the best high schools in Slovenia, attracting the students with highest academic achievements. It is a selective coeducational state secondary school and is famous for its quality and for eminent alumni. It is regarded as one of the top high schools in Central

Europe, emphasizing the achievements of pupils. The matura exam results show that its pupils achieve highest scores. School actively promotes pupils' achievements, especially in the field of scientific and knowledge related competitions. Its web page, social media accounts as well as billboards in school mainly promote these achievements. Sport achievements are promoted mainly from the viewpoint of between the school competitions (leagues) in different sports, such as basketball, volleyball etc. Students' personal sport achievements that are not linked to these inter school competitions are promoted far less. The aim of D (DCSP2), who is also a head teacher of sport class is to promote athletes' achievements much more. He describes:

This is something that I plan to do in next months, before the end of the school year. I would like to present to my fellow teachers how many hours per day and week do student-athletes train and how motivated they must be in order to be successful in school too. I have a feeling that they don't know exactly how time and energy consuming is sport. The colleague who worked here before me told me, that she showed the schedule of one of the SA during the pedagogical conference, which is the most important meeting for all the teachers. She said that some of the teachers were genuinely surprised seeing how much SA train. I need to promote this notion much more.

School's philosophy is that they give students (and not just to student athletes) as much support as they need in order to learn a lot. As matura exam results are very important for the school's status, they offer students help in order to help them achieve best possible results. H (T3), head teacher of the swimmer from Riba described:

We are very proud of our students' achievements. It is important that they perform well on matura exam. This is important for school and our status of the elite school. It is also very important for students as these results give them the opportunity to study whatever they like. Most of our students want to go to "difficult" studies such as medicine, natural sciences etc. They want to be successful in the society and our job is to give them the best possible education.

M (DCSP1), who is a psychologist, described:

I see our mission as a mission to give as much support as SA need. This is of course the same for students who are not athletes. SA have the possibility to have additional hours with teachers,

who help them to learn, especially if they were absent or in case of difficult content. Before the tests, these tutor hours are full of SA. Sometimes, when teacher sees that a SA has a problem with learning or was not successful at the test, he might invite a particular SA to come to these additional hours. In this case, the pupil is obliged to attend this class.

The teachers are mostly supportive regarding dual career. Both DCSPs described that they almost never have the problem to communicate with teachers in order to help SA. They have rather informal communication with teachers and they try to be as responsive as possible.

School's climate is very perfectionistic. As the achievements on different fields are important, students study a lot, much more than their peers in other gymnasiums with the same program. Interestingly, none of the participants from the school who were interviewed (one DCSP who is psychologist, the other DCSP who is PE teacher and head teacher, as well as a head teacher of the other athlete) didn't describe any DC related problems. All three of them see SAs as very capable and intelligent pupils who do not have any problems in regard to test performances in school or in sport. They have a perception that a vast majority of SA coordinate DC relatively without problems. By analysing hourly diaries of both athletes, it is noticeable that both of them spend significant number of hours studying.

Dual career support providers

There are two dual career support providers – one is pedagogical and other sport coordinator. Both describe that their main task is to coordinate between SA and teachers. As stated above, majority of the teachers are very supportive of dual career and if the SA respect their part of the contract, teacher will help them find the best possible solution. D (DCSP2) describes:

When there is a problem with one of the SA, I try to react as quickly as possible in order to help. I usually write an email to the teacher or go and talk to him/her. We have short, informal communications and they are much more effective than if we set a formal meeting.

Formal meetings are scheduled only few times a year. Usually at the beginning of the school year, when SA and his parents have to come to school and sign so called “pedagogical

contract”. Both DCSPs see these formal meetings as necessary but solves everyday problems in very informal way.

Both DCSPs see that parents are key persons for dual career. Although they actively work on empowering SAs to be their own ambassadors, the pedagogical contract is prepared with parents’ consent. They both describe that they need parents on their side in order to efficiently help SAs. DCSP1 who is a psychologist describes that her role is to be as supportive as possible. During the interview that was conducted in her office, I had the opportunity to see her being supportive. She was genuinely caring and focused on the well being of one of the SA who came to her office telling her that he is sick. Students, who are allowed to prolongation of the test time, come to her office to finish their tests. Both athletes (N and M) described that her office feels as a safe sanctuary, not only for SAs but also for other students.

3. Private life domain

The results of all the interviews that were conducted showed that SAs almost do not have life outside of sport and school. Unfortunately, parents were not available for the interviews due to the scheduling conflicts therefore no assumptions can be made about the family life. Both athletes (M and N) described that they have very supportive parents. M’s parents are concerned that she is too perfectionistic (according to her observations) and they would like her to study less and to go out more. They are encouraging her to go to the parties with peers as she works a large amount of time.

M (A1) spends time with her peers very rarely as she doesn’t have the time and the energy to go out and party. She described that it is much easier for her schoolmates who train only once a day to go out to parties. She needs to wake up very early and seldom have the time to go to parties. The analysis of her hourly diary shows that she spends vast majority of time for sport and studying. She is perfectionistic and aims to have the best grades possible. Her high school achievements are results of large amount of hours spent studying. M (A1) described:

As I would like to go to study physics, I need good grades. I’m not satisfied if I get grade 4, it needs to be grade 5, excellent. And it’s not only me who is competitive regarding grades. All of us are the same. I can’t think of any of my schoolmates who genuinely do not care about the

grades. I know I have to study hard if I want to be accepted. I would also like to be very successful in sport. If there is an opportunity, I would like to go abroad to study and I would definitely need a scholarship. It's not that difficult to get a sport scholarship, especially if you go to the USA. But my plan is not just to be at any university, just to have an education. No, I would like to study at the best possible university and for that I need good grades. Therefore I study until late in the night and I'm often very tired because I don't sleep enough.

Majority of her friends come from sport and school. As she is in this club for only two years, she doesn't have her best friend among fellow swimmers. In previous club, she had really close friends but unfortunately most of them stopped trainings. She gets along well with her schoolmates. She rarely has the time to go out with girlfriends shopping or engage in other age-appropriate activities.

Macro Environment

The information on the macro level of the environments were very difficult to collect. Prior to the interviews, none of the interviewees has not thought a lot about the macro level of environments. They agree on a general level that Slovenian society is supportive of their athletes but only about the athletic achievements. Sport achievements are important source of the national identity. Very rarely, athletes are presented through their dual career achievements in the media. Much more emphasis is given to the sport results.

Slovenian Ministry of Education, Sport and Science finance high schools and therefore provides funds for DCSPs salaries. All participants perceive that the ministry is supportive, especially as they enables special sport classes, where there are less pupils than in the regular classes. With this, they support better quality of learning process and make possible good communication between SAs, their teachers and DCSPs.

DCSPs described that the ministry would need to organize a formal group of DCSPs that would enable them to share good practices. Teachers of every subject have their formal group (e.g. mathematic teachers, Slovene language teachers...), organized by the ministry, where they share experiences and learn about good practices. Although DCSPs – in Slovenian schools known under the term “coordinators” – were introduced to schools more than 25 years ago, the



ministry still don't offer them much support. The ministry's policy is laissez-faire style. They allow them to be creative and flexible, which is perceived by participants as positive. On the other hand, the participants would like to get additional information, learn about DC studies findings etc.

Dual Career Development Environment Case Study Results – Spain

Introduction to Environment and Case Selection

The case we [Spanish partner team] selected is a multisport club specialized in water sports and count with more than 20 sports modalities, 27000 members and 57 Olympic and Paralympics athletes. In terms of athletics' achievements this club stands out with: two Olympic gold medals, eight Olympic silver medals, one bronze medal and 14 Olympic finalists; 10 world champions and more than 20 European champions, and seven European titles achieved by the club's female water polo team. In terms of sporting facilities, the club owns two sport centres which include swimming pools, paddle tennis courts, gymnasiums, a football field and a beach volley court. The school is a private centre, property of the club, which offers the superior primary education stage (10 to 12 years old) and the mandatory secondary education stage (12 to 16 years old). The school has approximately 160 students. The reasons to choose this case as environment to study in depth were:

1. Based on the current national needs and because it is representative of the national approach to dual careers,
2. It is a traditional club characterized both for the practice of their members and the development of an elite sport environment in some Olympic sports (e.g., swimming, water polo). Accordingly, it is very different from professional clubs with only professional athletes such as professional football clubs, and also it is different to clubs dedicated only to promote the practice of physical activity of their affiliates.
3. The club is very proud and promotes the combination of this 2 different environments and realities of sport becoming a relevant identity trait that influences their values. Table 4 and 5 show the participants in the interviews and focus group. Female pseudonyms are used to preserve anonymity and to be gender sensitive with a club in which, although there are more male athletes, female athletes have achieved historically better sporting results.

Table 4. Individual interviews participants

Name	Role within the environment	Institution	Specific sport participation
Catalina	Director	School	None
Rocio	Management team	School	None
Estefania	Sport psychologist	School	Swimming
Gabriela	Clinical psychologist	School	None
Pamela	Student-athlete	School and club	Waterpolo
Maria	Student-athlete	School and club	Waterpolo
Rebeca	Student-athlete	School and club	Swimming
Andrea	Student-athlete	School and club	Synchronized swimming
Matilde	Vice-president	Club	Waterpolo
Angelica	Student-athlete	Club	Waterpolo
Claudia	Retired athlete	Neither	Waterpolo

Table 5. Focus group participants

Name	Role within the environment	Institution	Specific sport participation
Josefina	Head of studies	School	None
Luciana	Sports coordinator	School	None
Julia	Coach	Club	Swimming
Melissa	Secretary	Club	Waterpolo

Dual Career Development Environment Model – Sports Club, Spain

The following section specifically outlines the dual career development environment model for this case study.

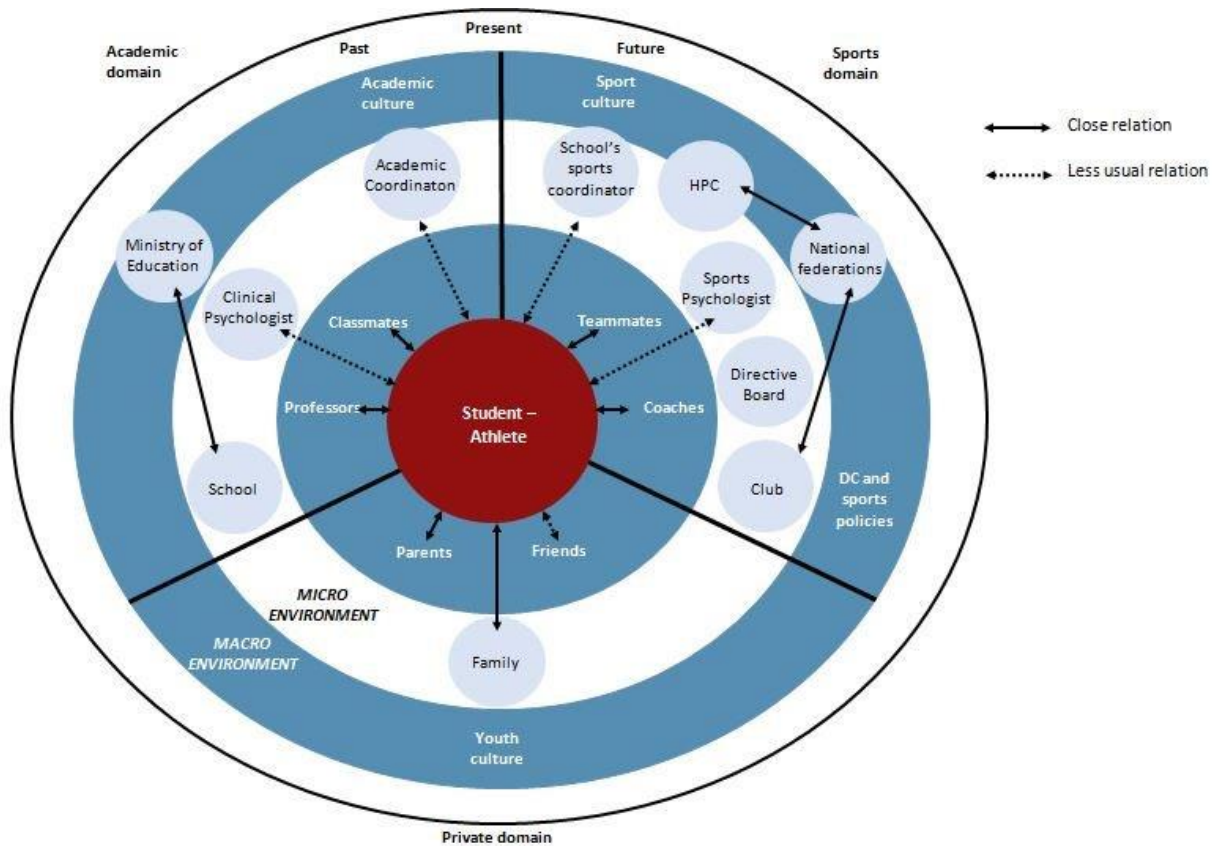


Figure 11. Dual Career Development Environment Model – Sports Club, Spain

Figure 11 shows the environment of the student-athlete in our selected case. Based on Dual Career Development Environment (Linnér, Stambulova and Henriksen, 2017) we adapted Bronfenbrenner ecological model to the multi-sport water club dual career environment and divide it in three domains: sports, academic and private domain.

The student-athlete is located at the centre of the figure, surrounded by the closest agents, with whom she maintains stronger relationships, except for her friends belonging in the private domain. In the bigger sphere (still in the micro-environment), there are the institutions and their agents with whom the student-athlete interacts periodically in a more formal way. This micro-environment is located within the macro environment, where cultures and systems are distinguished (e. g., sports culture, sports federation, educational system) and institutions are framed (e. g., school, club). The proximity degree of the student-athlete with agents and institutions within their environment has been represented by arrows in Figure 11: the straight arrows represent the closest relations and the dotted represent less usual relations.

Student-Athlete

The prototypical student-athlete is placed, at the centre of the environment (see Figure 11) and shares a characteristic –in its great majority –. They are both an athlete of the club and a student of the club’s own school. Accordingly, although both roles are important to them, sports practice is more relevant, as Matilde says: "They are athletes. And then they study at school, but obviously this is the order of importance". Accordingly, most athletes have a self-concept of being primarily students, but when they reflect on it, it is clear that they dedicate more time to sports than to studies, which is shown in Pamela's reflection "maybe it is true that I give a little more importance to the sport right now, in the situation that I am, but without leaving aside the study".

When studying and training, student-athletes develop certain characteristics that allow them to combine both activities in such a way that they can perform in both domains. Accordingly, the time management is fundamental in terms of allowing enough time for rest or study. Maria mentions that:

In the past, I leaved home at 5:30in the morning and do not get back until 19:00in the afternoon. And I only had one hour every-day to study and do my homework, from 19:00to 20:00, because at 20:00I ate dinner and at 21:00 I was going to sleep, for the next day I had to get up at 5:30 in the morning again. However, as my schedule was so structured/full, I knew exactly what to do all the time.

This benefit from, and appreciation for, the time also demonstrate a commitment to do both careers the best possible way, not using sport as an excuse for the bad performance in the academic domain. Pamela talked about her strategy to carry on with both careers: “It had happen to me, for example now we are low in school and training load until ‘Europe’ starts, so now I try to work in advance, preparing summaries and finding thing to work on to prepare the exams”.

Even when the everyday routine is hard and they must constantly be performing in both domains, it is important to remember that the student-athletes enjoy both the studies and sports, as it happens with Andrea: “I like the school a lot because I like learning and knowing new

things. And sports because I love this sport and if not, I would not do it, because it's tiring, but I love it". The combination of studies and sports will be supported by a whole club structure that makes available student-athletes various services to the student-athletes so they can perform the best way possible both in sports and in studies.

Micro-Environment

Sports Domain

Club. As shown in Figure 11, the club (in the sports domain) together with the school (in the academic domain) are the two fundamental institutions of the student-athlete's core environment. The club has as primary point of its philosophy to promote the dual career of its student-athletes, helping them complete their studies while practising elite sports. Accordingly, Matilde emphasizes that:

It is a National referent sports club and at the same time it has its own school, it means, that you are also prioritising the academic development of this person.

That gives you a status, I think, a positive one.

One of the main characteristics of both institutions is the physical proximity between facilities, being connected internally, and allowing student-athletes to easily walk from one to the other. This is highlighted by Andrea when she talks about why she would recommend this environment to other student-athletes: "This school helps you combining studies and sports, we have the club here alongside and I think everything is nearer and easier".

The importance of the sports domain is reflected in the high amount of hours that student-athletes dedicate to training, what in comparison with their peers means that: "they train a lot in my opinion, and they train much more than the rest of the boys in their age from other clubs" (Estefania). In any case, the student-athletes believe that this requirement is necessary and logical in accordance with the level they are in, so the coaches and trainers: "demand a lot because it is hard, otherwise we would not improve. I like that" (Andrea).

In this respect, the image of the club is closely related to the dual career, being the connection with the school an added value that adds to the great sporting record that has positioned the club as one of the main water sports clubs in the country. Therefore, is precisely the high sport

level that justifies the high training load, being a factor to consider related to the time management the student-athletes must develop to carry out their dual career.

Coach. This agent is probably the one who spends more time with the student-athlete and also it could be argued that is the one with the greater influence. For that matter, “it is essential that the coach is a good reference” (Catalina) as commented on the interviews, mentioning that “in general I would give them (the coaches) a good grade. And is positive that, in the case of the kids here, broadly speaking, both the coach and the tutor share information about them” (Rocio).

Even so, the main criticism is that they are only concerned about the sports domain, not paying much attention to the reality of the student-athlete outside the training space, as one of them comment:

The coach often has the vision that we come here, train, and once we get out of here we have nothing else to do. And that we only have the responsibility of practice water polo and that is all, but it is not. So, many times they tell us that we could organize our time much better and not skip any training but is very difficult. (Angelica)

The clinical psychologist believes that this lack of interest from the coach can be detrimental to the student-athletes since, not taking into account their academic load, the students-athletes will perceive that “when I (student-athlete) say I have an exam and I have to study, and I am not having this consideration from the coach. Then, the same is demanded of me, whether I have an important exam or not” (Gabriela) which will cause high levels of anxiety.

Now, from the coaches’ perspective, they justify themselves based on the demands that involves leading one of the most important clubs nation-wide. Accordingly, a member of the directive board comments on the response of a coach about this issue:

“Don’t come to me with this, my job is coaching. To train and win”. Also, surely this relates to talk with the coaches and tell them “you say they are being demanded, judged for sport triumphs, and yes man, but think that the kid as such, is a person” (...) There was more of this, a impenetrability from the club

saying: “no, the kid at an athletic level has to do this, and we will not change anything”. They are very inflexible and if she has an exam, bad luck. (Rocio)

All the above is summarized in Estefania’s vision, who describe them in the following way: “the coaches are very good(...) what they lack is this psychological part”.

Directive board. Further away from the closest and more direct student-athlete’s environment, but with a preponderant responsibility within the club, is the directive board (see Figure 11). This board is composed by a president, four vice-presidents, a secretary and 11 regular members. Also, “all the sports’ areas have their own sports coordination, sports secretary and the sports director” (Matilde).

Based on the interviews, the main function of the directive board –in particular, the president and the sports manager –is to propose, approve and supervise different projects, as the sport psychologist mention: Both, the directive board of the club and the school have made a plan of action in which there are three projects, one in education and two in the sports domain: stress and values. And then, we have to take care of them (...) the directive board is interested in that we are now focus on these projects.

As stated, the directive board has a hierarchy over the rest of the players present in the environment, which is reflected in how the club works. In this respect, one of the decisions that directly affected the development of a dual career within the club was the elimination of the high school degree, forcing student-athletes to search for other schools –in the vast majority without special treatment with athletes –to carry out their pre university stage. Josefina refers to this decision saying: “this new board, just arrived, one of the first decisions was to eliminate (...) the high school. We used to have 14 kids or so, then six, and now the whole program is closed”.

The directive board change referred by Josefina shows how these changes can affect important matters in the club’s functioning, in this case the dual career of their student-athletes. Now, apart from the elimination of the high school, Gabriela mentions another change made by the

recently elected directive board, such as the importance that is being given to the psychologist's role within the club:

They are giving a lot of importance because also, I think they are people who write a script to follow a clear pathway and since all of this part (psychological) is very important and greatly improve the performance of people by doing little things. I think this is very good.

One of the main self-criticisms made by some members of the directive board is the little knowledge that club members have about the power structure of the club, since "it is also true that there are many people and I don't know if all get to know the structure (...) I think sometimes the club lacks a more professional, business structure, to put it in some way" (Matilde), which is complemented by the opinion of Catalina who criticizes that:

The directive board should be more present in the day-to-day life of the club (...) because you have employees with an attitude a little like "if nobody says anything to me, why should I care?" Or the values we enunciate: "no, I do what I want, nobody has told me not to do this or that, if they tell me not to do it, I'll change" and that cannot be allowed, we have to go one step ahead.

School's sports coordinator. This agent has the main function of connecting the club with the school, as Catalina explains: "The sports coordinator is the one who links the sports demands and calendars with the school (...) and the head of studies is the one who check if those demands can be articulated or not, and how". In this sense, although the sports coordinator and the head of studies are two separate charges, the coordination between both is what allows the student-athletes the flexibility to have a more comfortable combination of academic and sports commitments.

That said, the sport coordinator is the one who has more relationship with the student-athletes, just like Josefina mention: "they (the student-athletes) are aware of the existence of this figure. The sports coordinator has very clear who are the best athletes in each section (...) he cares a lot about the kids", appointment complemented by Andrea's answer about who would she go to in case she needs a change on the date of an exam overlapped with a competition: "Well,

with the person that, I believe there is a person here who organize the sport, I think is Luciana, a professor who organize sports and competitions”.

Sport psychologist. She belongs to the club and takes care of: “individual cases that are more related to sports, like athletes’ mental block in competition or lack of concentration or some type of relaxation, all of that” (Estefania). In detail:

Most are, there are two parts; the kids here who want to improve in competition, which have no tools to help themselves. And the other part, who are mostly synchronized swimming athletes who want to leave the sport but can’t do it, and they are very, very angry, very disenchanted and very discouraged, and with a lot of confusing ideas. (Estefania)

The work of the sport psychologist goes beyond the sports domain, and together with the clinical psychologist, although having different specialties, they work together physically as well as dealing with cases that deserves other points of view, as one of them mention:

Apart from working in the same table, whenever there is a new case I say “look, this case has arrived to me, (...) I would like to do this and this”, we evaluate and then, after a few weeks if I perceive something that goes beyond my expertise, I tell her “look, this is too big, I think that you have to look at it”. (Estefania)

Regarding the perception by the student-athletes, these vary depending on the case. There are those who have a good opinion formed about it as Angelina, who says: “I personally do not use the services of the sport psychologist, but there are many people who go to the sport psychologist and I think that yes, they help you so you can organize yourself better”. On the other hand, many times the services offered by both psychologists remain unknown to student-athletes, one of them responding: “I have no idea” about whether there is a psychologist in the club. This answer is later complemented by reflecting on the psychological work in sports: “the truth is that I don’t know if psychologically it was good (an intervention of the sport psychologist) because psychologically it didn’t change anything” (Pamela), demonstrating the difficulties that arise both of information and assessment of psychological work.

Peers (club). Within student-athletes of the club, they are divided into those who attend the club's school and those who study in external schools, as shown in Figure 11. In this particular section we will refer to those who mainly have the condition of being present in the club, no matter if they study in the club's school or not.

As for the teammates, these not only support each other, but are sometimes role models for those younger student-athletes who deal with the demands of a dual career. In this regard, Pamela mentions that "They are classmates who are doing university degrees, complicated degrees that after six years they are still far from finish it, but you see them, and you realize that studies are very important."

Now, student-athletes who do not attend classes in the club's school, have the difficulty that "most of the schools are completely insensitive" (Melissa) with the sports practice of the student-athletes. Although, there are also cases of student-athletes who attend schools that are used to having students who practice sports in the club, this is mainly because the proximity existing between these school with the club. Angelica understands this as an advantage because:

They are quite aware of this because they have had many students from here (the club's school) who have gone there. And they have had a lot of students that go to this school for that reason, so perhaps they are used to it, habituated and they already have the mentality (...) for example, other schools, as there are not many people from the club's school, are not used to it.

Academic Domain

School. The school built by the club, more than 60 years ago, with the purpose of providing more resources to their student-athletes while developing a dual career. This institution is the context in which the vast majority of talented student-athletes can access to develop their dual career. The process happens the following way:

Firstly, coaches choose the athletes they think that can access the school (...) which parents want to get in, then there is a joint meeting between the school and the sport part where the whole project is explained. (Luciana).

As it was already mentioned, there is a close relationship between the school and the club even though it is not always perfect. The club's opinion is usually more considered than the school's opinion when making decisions, giving the impression that "the school always is conditioned by the sport domain and some teachers have complained about this (...)they say they always adapt and the others don't" (Maria), this is in the same line as Josefina's opinion about the message sent to the student-athletes: "when you have to send the message that the school comes first, I mean, that in reality first comes the sport".

A distinctive feature of the school is the lower number of teaching hours, Catalina enlightens this by saying "In fourth grade of secondary school you have to enroll to every mandatory course, but they have removed some elective courses to reduce (...) the amount of work". For instance, physical education is validated for student-athletes.

Flexibility is an added value to the school as it allows schedule/exams changes when "athletes go on sport concentrations or there is a competition and they can't study, they are given a day or a week more, it depends..." (Rebeca). On the other hand, flexibility given from the school is opposed to other schools' schedules, often being criticized for: "the fact that they are very strict because I am used to this school, and they are so rigid (...) with schedules" (Angelica). Moreover, there is also a comparison between schools based on their academic level, described by Angelica as:

"An aspect I didn't like about this school was the academic level, I mean, the other school didn't have the same level than this school. I guess that when you combine everything, they can't offer you a very high level"

Another school key feature is that when we did the interviews, the club's directive board decided to close the high school course (online). This meant that student-athletes that finished mandatory school (ESO) did not get to continue studying at the school. The sport psychologist reflects on this situation:

the problem is that when you finish mandatory school (4th year secondary) and you go to 1st and 2nd of high school, which are the most difficult years, you go to a regular high school where you don't have this... no only about schedules,

but also changing exams (...) this is also a conflictive situation, because there is a high dropout from sport (Estefania).

Thus, the school has the following characteristics: (a) selection criteria, (b) perception of low academic demands, (c) flexibility to adapt schedules to sport demands and, (d) struggles caused by not having a high school. These school characteristics influence student-athletes' dual career development.

Teachers. These key figures work at the school and they have a close relationship with student-athletes due to their daily contact at classrooms. Being a teacher in this school means that they need to deal with the fact that, in this school, the academic domain is adapted to the sport domain, assuming that: “they are in a <<special>> school, obviously, because I fit wasn't, they wouldn't accept this conditions” (Matilde).

In this sense, teachers must have flexibility and be aware of the athlete-student sport demands, as it is reflected in: “they gave me facilities in the sense that they changed them, and if you let them know in advance that we are in competition, the tasks are postponed, they help you a lot” (Pamela).

Having this in mind, the communication between the club and the teacher is essential for making it possible to reschedule exam dates. Sometimes this communication is not as good as the teachers wish because: “they only want more information fluency, but this is not something that bothers them, the teachers only do it and that is it” (Estefania).

In the same line, communication problems are usually between the teacher and the coach. The reason of this is that the school concedes more than the club does, this causes situations like:

The coach disagrees with the teacher, or the teacher disagrees with some of the coaches, and there has been some kind of argument but nothing serious. I mean, they always try to clarify everything and to decide what is best for us. They do not say “I am the coach so I make the decisions” or “I am the teacher so I make the decisions” (Angelica).

Academic coordinator. This character, also named in interviews as “academic tutor”, is a teacher who, besides playing her teacher role, also deals with the task of “knowing when

student-athletes have competitions and send them school work (online) so they can study while they are in pre competition meetings(or team stages)” (Rocio). Apart from this task, the academic coordinator is aware of what happens to the student-athlete, having a constant relationship with other teachers, "all teachers give information to the tutor" (Rebeca).

In this line, the academic coordinator is the one who receives any demand from the student-athlete (only if it is related to the academic domain), and then: “she asks specifically for Estefania or me, she gets the demand and then it can be for Estefania or for another teacher” (Gabriela). She also “meets with the coaches regularly” (Gabriela) to pass the information about what the psychologist may have told him. All of this in a very demanding and limited agenda.

Thus, the academic tutor/coordinator is in charge of the communication with other agents to inform them about important topics related to the academic domain of the student-athlete. This role is detached from the sport domain, but it is highly positive in Claudia’s opinion because:

It is very satisfactory that there may be the role of academic tutor who is not there in the swimming pool, and she is not tainted with the sport domain. It is good to have this distant point of view, I think the student-athlete is also grateful for this distance.

Clinical psychologist. Another key agent in the academic domain is the clinical psychologist who: “is more in charge of the academic domain, learning difficulties, behavioral problems” (Gabriela). Concretely, she describes her tasks as:

There is a learning part, a behavioral part and an emotional part, isn’t it? This is the behavioral part, and then there is guidance for teachers and parents, individual attention to students, isn’t it? And in this individual attention the demands can be behavioral, motivational or emotional. (Gabriela)

Even though she is known as the clinical psychologist, together with the sport psychologist and other collaborators, Gabriela is in charge of a programme for the attention to diversity, in which she:

Helps the academic domain to detect if there are learning problems, I mean, to evaluate the difficulties, derivations and reports because due to schedule problems we can't do exhaustive evaluations. However, we do have an initial assessment protocol to detect if there is really a learning deficit, and then we speak with the families, collect complementary information and if it is necessary we derive it to other external professionals. (Gabriela)

Therefore, Gabriela works as a clinic psychologist, but she is also very close to learning process and the detection of disorders in this field. At the same time, her job is not only focused on student-athletes, but also on the families and coaches, which are key agents in the interventions.

Peers (school). Peers are student-athletes' main allies to face academic demands, when asking for class notes or other complex forms of mutual help, such as:

The majority are the same age as me, we have the same subjects. We make agreements, now we are trying to have guidelines (...) there are also peers that have already passed the subject, others that haven't and we share stuff. (Maria)

Having a school within the club allows student-athletes to get to know each other and know the reality of other sports because in the same class there are student-athletes that practice water polo, swimming, synchronized swimming, even tennis and basketball. Gabriela thinks that sharing with other student-athletes from other sports helps them because:

It is good to socialize with other spaces and peers because, at the end they are peers but adversaries and everything ends like, it is very endogamic (...) sometimes it is also good to define other real spaces.

Private Domain

Families/parents. Parents' support is a key aspect for student-athletes' dual career, not only for logistical reasons such as transport for trainings and/or competitions but also for their support in the private domain (see Figure 11), as Pamela reflects:

In the end when you have to combine sport and studies, family life is very important, specially having a family that is with you because it is very hard to get home and see that nobody supports you... because you spend so many hours

out of home, I don't get to be home until night. At the end (family) is the thing that can make your day improve and makes everything better, I mean it is an essential support.

In this sense, the implication of the parents is a support in the private domain, covering the third sphere of development. Complementary, parents convey the commitment needed for a successful dual career, giving messages such as: “they warn me and they try that I am making the most of my time because they know I need it” (Angelica) or as Matilde said: “at home they are always saying “school, school, school”, and they tell you this so many times that you end up believing it”.

It is necessary to add that pressure from parents is something real in the club, it happens that “everyone thinks that their child is Messi, right? The Messi of swimming, the Messi of water polo”. This, added to the fact that “some parents act like they are coaches” (Estefania) giving them instructions, this fact bothers not only these parents' children but also the coaches, who are not able to do their job as relaxed as they wish, especially when (parents) are constantly watching training sessions. This is exemplified by Josefina: “I am teaching a class and I do not have any parents here. But they are training and they have parents watching from the stands”.

Friends. Known as those friendships out of the academic and sport domain. The main difference is the minimal amount of time they have to meet them, normally during the weekend. Alicia mentions that: “on Saturdays usually I rest because I am very tired, and then on Sunday I hang with my friends and well, either we meet or we go to downtown or to the cinema”. The same happens with Angelica, who said, “either I meet my friends on Saturday, not until very late because I have a game the following day, or either I try to meet them on Fridays night because I do not have sport competitions on Saturday”.

An important quality of these external (out of the sport-academic context) friends is the fact that they separate student-athletes from their daily routine. Pamela, for instance, points out that:

It is useful for having a break after a hard week. The friends I meet are not, well they are indeed from the sport world because I have always been in places where

everyone practice sport. But it is useful for winding down from the week, trainings and the same people.

In this sense, student-athletes interiorize the fact that most of their plans with “long-term friends and their parents’ friends” (Maria) will be postponed or plainly cancelled due to schedule demands from their sport.

Macro-Environment

Sports Domain

High performance centre (HPC). To a lesser extent and with a relative importance within the daily context of the student-athlete, HPC represents an institution similar to the club, an ex-student-athlete from both organisations commented:

The school is perfect until you are 16, then at 18 the HTC is also right as it works similarly (...) for instance, if you asked for some study time the coach would say “yes, go to study if you have exams”. (Claudia)

The quotation above illustrates the similarities related to the importance of developing a dual career between both institutions, each of them having a school for student-athletes within their surroundings. However, HPC represents a higher sport and budget level as a result of having the best student-athletes and athletes (professionals or those who are not studying) of their respective disciplines, and it is funded by the government. From all that, the most talented student-athletes are offered a scholarship to study and train at HPC –or at the Sports Technification Centre –which means they have to leave the school and they only are athletes in the club context. All of this is evident in the following citation:

This year is one of the years with least students because they leave. The older ones have scholarships, scholarships in the Sport Technification Centre, HPC. Parents want to take advantage of it. Students do not think it is negative because they will not leave their team, but we do lose a student. (Josefina)

Some of the student-athletes used to have these scholarships in the past, and this is now a possibility for those who can’t access to high school in the club anymore, as one of the student-

athletes said: “a lot of my teammates with the same age as me are enrolled in the HPC doing the high school degree” (Pamela).

Thus, HPC is relevant in the context in an indirect manner, but it is still important because it also offers the opportunity to develop a dual career, to a higher sport level, having higher budget and with the possibility to study high school. All of these features put HPC in a higher level than what the club can offer to their student-athletes. This difference is caused by the fact that HPC represents the governments’ sport policy, and this gives HPC an advantage respect the other aforementioned domains.

Environment Success Factors Model – Sports Club, Spain

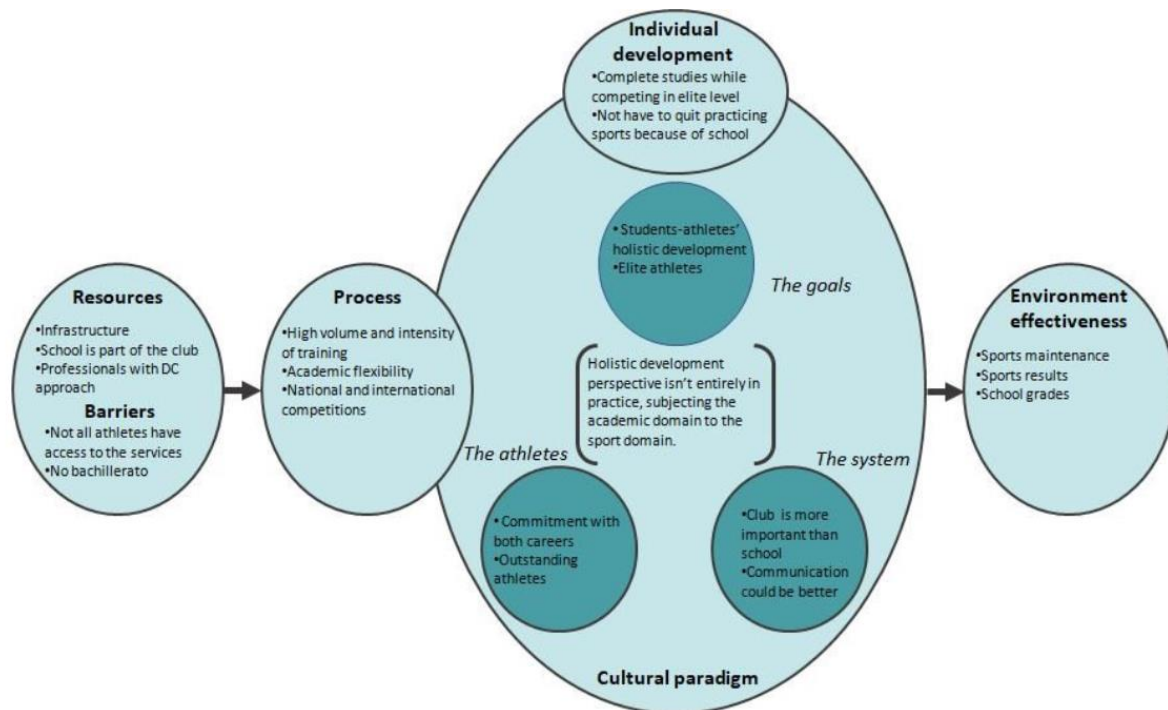


Figure 12. Environment Success Factors Model – Sports Club, Spain

Dual Career Development Environment Case Study Results – Sweden

In this section we provide a brief summary of our methodology followed by the description of the two empirical models outlining the Umeå DCDE for athletics (figure 13 and 14).

Methodology

Description of the case and target group

The environment under study was the dual career development environment (DCDE) organized for athletics by the Umeå School of Sports Sciences (USSS) at Umeå University with partners in the northern region of Sweden. Umeå University is a Swedish National Sports University (known as a “RIU”) and their DCDE is considered as (one of) the most developed DCDE at university level in Sweden. The DCDE as a whole supports about 240 student-athletes across various sports and across 50 educational programs. The DCDE supports two types of student-athletes; RIU-students who are current or potential national team athletes on national/international level, and USSS-students who are below the national team level. The USSS organized five high-performances centers (HPCs) in floorball, cross-country skiing, orienteering/ski-orienteering, badminton, and athletics. Of the 240 student-athletes, ninety were considered RIU-students and about half of these were enrolled in their HPCs. The main target group for the focal study was 14 athletics student-athletes (all RIU-students) in the Athletics Performance Center (henceforth, APC and APC-students). In the APC, there were also 15 athletics-students on the USSS-student level. The APC and athletics held the longest history of supporting student-athletes at the university in various ways since the late eighties when it was referred to as the ‘athletics sports university’.

Data collection, procedure and analysis

We did ten semi-structured interviews (with DC support providers, university and sports staff members and leadership, and two collaborative partners), and two focus groups (with four APC student-athletes, and four APC coaches). This in total amounted to 15.1 hours of interview and 195 transcribed pages (times new roman, 12, single spaced) of information.

We made observation of real-life events (e.g., meetings, training sessions, coffee breaks, performance team sessions) including shadowing key support providers and coaches and having additional informal talks with 13 student-athletes and 21 university and sports staff

members and stakeholders during eight full days. This in total amounted to 29 pages of observation notes. We collected relevant documents (e.g., policy documents, webpage information, PowerPoint-presentations of the environment, operational plans and reports) amounting to 153 pages of information.

Main procedure included a) collecting documents and visiting the environment two weeks prior to the observations to acquaint with the environment and USSS staff, b) sending an information letter to and receiving an informed consent from the USSS, c) having a pre-meeting by skype with the DC-coordinator to discuss the environment as a whole, key people to interview, and the overall strategy for the on-sight observations, d) upon arrival introducing the study, aim, ethics, researcher and procedure to the USSS staff (e.g., DC support providers, coaches, administrators, coordinators), and e) collecting data through on-site observations and interviews. After analysis, key findings and empirical models have been presented by skype to the USSS staff and partners in a member reflection session. Key findings and models were approved upon minor clarifications. The Umeå School of Sports Sciences at Umeå University has provided their informed consent to the use of their official name in the continuation of the project and related publications. Data were analyzed using a deductive-inductive approach.

Dual Career Development Environment Model – Umeå Sport, Sweden

Below we describe the DCDE for athletics in Umeå as depicted in figure 13. We start with the sports culture and context in which the university, USSS and APC-students live and operate, followed by key macro-level collaborations and description of the USSS and their DC support team. We then continue the description of the environment based on the three domains focusing on the micro-level and some macro related relationships as these were linked in the environment. We conclude with describing the environment in the timeframe.

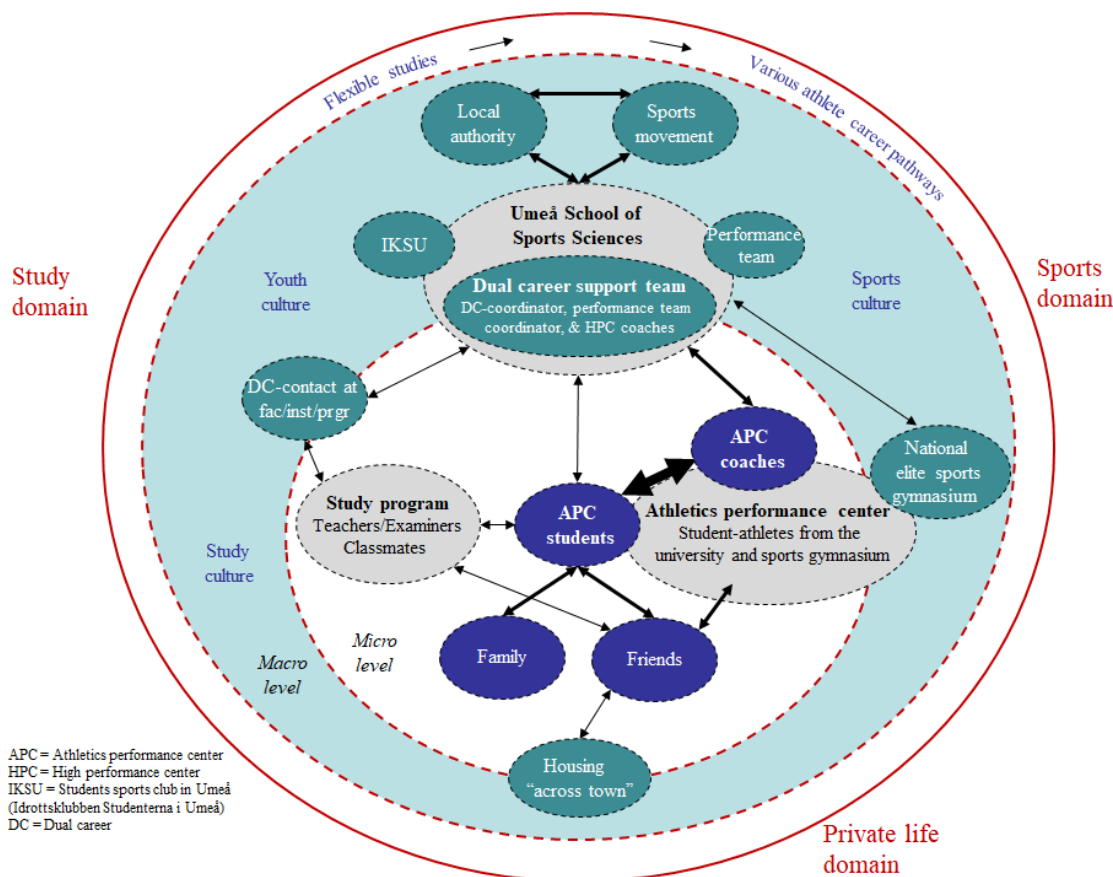


Figure 13. Dual Career Development Environment Model - Umeå Sport, Sweden

Sports and youth culture in Umeå – “Umeå breaths sports”.

“There is a genuine interest in sports in this city” (DC team member). Whether being youth sports, elite sports, recreational sports or physical activity in general, sports was a part of Umeå. The university and students were also a part of Umeå, as explained by a DC team member:

We have 33000 students and about 120.000 inhabitants, so every fourth inhabitant is a student. The mean age is 37 in Umeå, so we are a young city, and the university has a very central role in Umeå. As a student you are an important part of Umeå as a city.

The people in general wanted to exercise and be active. There were gyms almost everywhere and training facilities and sports arenas were strategically developed and built across town to facilitate being active and invite inhabitants to move and participate in sports. The local authority, as part of their intent to grow and facilitate public health, declared “Umeå. More

Sports.”. Umeå was awarded the best sports city of Sweden that year: “Several strong sports teams combined with high activity among inhabitants makes Umeå the obvious choice as this year's sports city” (documents collected).

Umeå University was founded in 1965, but some educations existed already in 1956. In 1959, IKSU, the students sports club in Umeå was founded. IKSU is a members-owned organization and all revenue is invested back into the organization. Today, IKSU sport is a 22.000 square meters training facility (with gym, various sports, group training etc.) and has more than 20.000 members (i.e., one in six inhabitants of Umeå train at IKSU). IKSU is located on the outskirts of the university campus and by many regarded as the pumping heart of physical activity in Umeå. As a study counsellor said:

Umeå university is pretty known for IKSU ... I hear from presumptive students... that it is quite sports-oriented and is part of the image one has of Umeå university... and those who come here use IKSU a lot, they have a lot of sports as part of their leisure time.

Combining sports and studies was part of the sports culture in Umeå. The USSS added to the sports culture by providing profile clothing to their student-athletes and giving them free tickets to sports events in partner sports clubs whenever possible. The USSS and student-athletes therefore were visible training across the city and in sports facilities. The benefit of sports and IKSU on campus was regarded by the university leadership as:

we of course benefit from that the whole city is or whole university is relatively sports crazy, in such a way that I mean students who come to Umeå they come here to train, it feels a bit like so, outdoor recreation and being at IKSU has to be one of the strongest motives for studying in Umeå, so I think it is very linked to image.

Macro level collaborations

The DCDE and its structure were characterized by strong collaborations at the macro level. The USSS was a working unit responsible for sports related collaboration at Umeå University.

USSS was a coordinating hub at the macro level connecting stakeholders in boards for the benefit of sports research and education, and dual careers at the university.

In the USSS board and four times per year, representation from the university leadership, the local authority and business community, regional sports federations and from university faculties/institutions discussed the USSS affairs and strategic development. In the APC board and twice a year, the DC-coordinator, director of USSS, the local authority, the Swedish athletics association, the dean at the sports gymnasium, and two APC-coaches shared their operations and activities, learning from each other trying to develop their cooperation and DC arrangements.

[Umeå School of Sports Sciences - Umeå/Local authority - Västerbotten regional sports federation](#). The USSS had worked and collaborated with their key stakeholders for many years. Apart from the university, the main financial partner was the leisure and recreation services department at the local authority providing funding for employing the HPC coaches. The local authority was central as they (in Sweden) run the upper-secondary sports schools/gymnasiums and built and provided sports facilities to partners/clubs to conduct sports training.

The regional sports federation, Umeå/local authority and county council, and Umeå University shared a non-profit foundation since 1992 (“Elite sports center North”) in which they together “strive for a long-term sustainable development of elite sports in Umeå”. The goal was to support more elite athletes towards national and international level, facilitate dissemination of sports research and knowledge, and increase the collaborations with the university and USSS (documents collected). The partners had “a very close collaboration and did things together” and had over the years developed a shared understanding and agenda including supporting DCs:

What I really think we have succeeded with is the good collaboration between the local authority, the local sports and the university... we speak a lot with the same tongue ... if you talk to the leisure and recreation services department [at the local authority] or if you talk to the sports gymnasium or if you talk to the sports federation or the local elite sports clubs or the university, what we have for ambition and wants [is similar]” (DC team member).

There is a positive attitude from everything and everyone, from the leadership of the authority and downwards, the university leadership and downwards, the gymnasium leadership and downwards. They really want this (i.e., dual careers) (Coach).

Over the years, the foundation itself had been more, or less active, and along the way tasks and responsibilities had shifted and settled on different partners. Although the collaboration implied formal agreements between stakeholders, the relationships and the communication was open, honest, transparent, positive and constructive. It was always a two-way street, about finding mutual benefits and creating added values. They met often and regularly, and were available to each other by phone or email when necessary. It was like they were colleagues, but from different organizations:

Everyone knows everyone, we meet very often, we sit in different boards and constellations, for example, that we have both our regional sports director and our leisure and recreation services department director in the USSS board is a great advantage for our business, its easy channels that way (DC team member).

[Umeå School of Sports Sciences – National elite sports gymnasium and coaches.](#) About ten minutes from the university campus was a national elite sports gymnasium run by the local authority. The sports gymnasium was one of the largest in the country and involved 15 sports and about 350 students and 30 coaches. Next to the gymnasium was an indoor athletics center, built by the local authority many years ago to support athletics at the gymnasium. The sports gymnasium and the USSS shared a team of five athletics coaches providing training for both adolescent/gymnasium and university student-athletes (APC- and USSS-students) in the athletics center. Sometimes the sports gymnasium was involved in research projects coordinated by the USSS, as stated by the sports gymnasium representative: “the athletic training environment and sharing coaches, that’s no problem... that’s’ pretty easy to manage, but you wish we could get a little bit more research done that benefits the both of us” .

The DC-coordinator and the dean at the sports gymnasium were both central figures in Umeå and keen on developing possibilities for student-athletes. They complemented each other working with different educational levels, did not partake very much in each other’s work,

participated in some shared boards, had a simple and constructive relationship, and could call each other whenever. The APC coaches communicated a lot with various sports coaches at the gymnasium, sharing experiences and learning in between different sports: "[our] colleagues at the sports gymnasium are almost all extremely experienced coaches within their specific sports, it's an environment with a lot of 'know how', it's contagious so to speak".

Swedish sports confederation - Umeå School of Sports Sciences. Umeå University was a National Sports University appointed by the Swedish sports confederation. The Swedish sports confederation provided financial support to USSS to work with flexible studies and issued the Swedish national DC guidelines to support the development of a national standard of DC support provision. The USSS and Swedish sports confederation had several sports research and educational collaborations (e.g., coach education) and met regularly in national meetings.

Umeå School of Sports Sciences – Swedish athletics association – APC coaches. The Swedish athletics association was an official partner for the APC, had representation in the APC board, and financed sports insurances for all APC-students. The collaboration mainly targeted the sports training at the athletics center as a continuation of the athletic career pathway from the sports gymnasium. The relationship to the athletics association therefore was closer for the APC coaches (having continuous dialogue with the federation about elite athletics) than the USSS staff. In comparison to other HPCs within the USSS, the APC had few national team member athletes, and therefore the management of the national athletics team was not very involved:

Few of our APC-students are taken for the national team... the management of the national athletics team is not very involved in the students, whereas our athletics coaches have close contact with the national team management and meet pretty regularly... but it is not like the national team management in athletics come to Umeå very often (DC team member).

Umeå School of Sports Sciences – Sports clubs. The USSS had a network of ten local sports clubs representing various sports (not athletics). The formal agreement was mainly about facilitating DCs. In all clubs there was a contact person who could market and inform new recruits and players about the DC possibilities at the university. While taking part in a local

sports event one night, a contact person shared that it is about being there, making the transition into studies easier and informing about what exists, and what is wise to think about in the process (observation notes). The clubs also provided the USSS with free game tickets to share with their student-athletes. Every year the USSS organized an information and networking event for the clubs, and continually informed the contact person about key events, news and changes.

Dual career coordination – the “DC-team” at Umeå School of Sports Sciences. The USSS worked with developing sports in the region in general, and DC support provision was fitted into this larger aim. The staff therefore held positions and worked with daily tasks beyond only supporting student-athletes. The USSS organized five HPCs and a performance team with expert support in strength and conditioning, physiotherapy, nutrition and sports psychology, and was responsible for the administration and communication of a flexible studies agreement based on a university DC regulation providing student-athletes with the right to flexible studies.

The USSS was located on the outskirts of the university campus in the same building as IKSU. The USSS consisted of a director, an operational manager being also the DC-coordinator, a DC-assistant, two administrative secretaries, a research coordinator, and four HPC sports coaches (i.e., one HPC was based within a club context with their own coaches) and a performance team coordinator, all sharing the same office space, apart from the APC-coaches whom had their offices mainly in the athletics center. In close connection were also the sports medicine department, with a sports laboratory and staff.

DC-coordinator – Performance team coordinator– HPC coaches. All of the staff at USSS was in some way or another connected to their sports collaborations and therefore indirectly to their DC support provision, but the main roles and what constituted as a “DC team” was the DC-coordinator, DC-assistant, one DC-administrator, the performance team coordinator and the HPC coaches, working and communicating about their student-athletes on a daily basis. The DC-coordinator, assistant and administrator worked close together in relation to study flexibility, whereas the performance team coordinator and the HPC coaches exchanged more about sports training, lab tests and student-athletes wellbeing.

The DC-coordinator had worked and developed the USSS into what it was today and was the USSS personified. The USSS and supporting DCs was explained by others as “the baby” of the DC-coordinator. As the organization grew, responsibilities were shared on more people, and the DC-assistant had “taken over and will take over more of [the DC-coordinators] tasks” in relation to supporting DCs and flexible studies at the university.

At the USSS office most discussions were held with doors open. HPC coaches in skiing, orienteering and badminton shared an office, and the performance team coordinator and head athletics coach (being there once a week) shared another, sitting next door to the rest of the staff. Whenever staff felt like it they could swing by each other and ask questions, just knock and start talking. They formed a working team with coaches/practitioners, researchers, teachers and administrators. The DC team was open, kind and ambitious, all wanting to improve and develop, to go forward. Most of them had worked together for the last ten years forming close relationships. Communication was close and the exchange was high. The DC team and USSS staff constantly learned from each other; in the office, meeting rooms, standing in the hallway, or during coffee breaks shared with sports medicine staff. As the athletics coach said: “[there are] researchers and educators there who sit on core competencies in a number of areas, so just to take a coffee break over there is sometimes pure education, I learn new things”. As the APC-coaches had offices and training was carried out in the athletics center next to the sports gymnasium, the APC-coaches were not as intimately part of the daily exchange at USSS as explained by a DC team member: “Athletics is so different compared to our other sports, partly due to the employments being as they are, partly due to that there are so many disciplines, we don’t work in the same way, as tight together with them”. The head athletics coach, being at the USSS office once a week, with the help of one APC-coach who participated in strategic meetings, carried the responsibility of coordinating the work with the rest of the APC coaches.

APC coaches – DC-coordinator – study program staff. The coaches had no contact with study program staff. As the university was large, all study related questions went through the USSS and DC-coordinator (or progressively the DC-assistant). As a coach explain:

When it’s problematic for someone with their studies or the combination in general, it’s [the DC-coordinator] I talk to, who knows the system and how it

works, what's possible to do and not, and how to think. [The DC-coordinator] has great experience working with elite athletes and towards the different programs and study counsellors...we have divided the tasks and roles depending on the problem, if it is academic then [the DC-coordinator or assistant] takes it. I'm more the one who points [the student-athlete] in the right direction, whom to talk to.

HPC coaches – Performance team coordinator – Performance team experts. HPC coaches and experts did not meet very often as the experts were preoccupied being also teachers at the university, whereas HPC coaches and the performance team coordinator met almost every day at the USSS office exchanging about training and student-athletes.

The performance team coordinator, also being strength and conditioning coach, therefore was the expert with the closest relationship to the coaches. The performance team coordinator had an academic background and reflected on the relationship to coaches, training and the role saying: "Well, my role is a little bit also to ask unpleasant questions and actually question things and really just why do we do like this?". It was about challenging the pre-conceptions of training in the various sports and trying to advance both the coaches and student-athletes thinking and attitude based on research.

The performance team worked from a preventive approach focusing on healthy performance development and did not provide any clinical care, but had an external referral network with specialists and clinical experts when necessary. The performance team and experts wanted to work more integrated, as a multidisciplinary team, coordinating support around the student-athletes with the coach, and meeting the student-athletes in three-part conversations (i.e., APC-student, coach and expert), but most often the expert and APC-student met by themselves, and if the APC-student permitted it they shared information and conclusions to their coach.

The physical therapists and HPC coaches had more interactions as the therapists had an open reception for student-athletes twice a week at the USSS office. During a Monday morning break, I took part in the conversation between an HPC coach and expert as they were sitting and talking, updating each other about a student-athletes, exchanging knowledge, ideas and agreeing on the need

for more coordination and exchange as they had much to learn from each other (observation note).

APC coaches – HPC coaches. As it was only the head athletics coach who, once a week, sat at the USSS office the communication between the APC coaches and other HPC coaches was limited. The HPC coaches at the USSS were a tight group, but the APC coaches were not a part of this, although the head coach tried as best to be a part of this context as well. For practical reasons, being most often at different places, not meeting very often and all being busy working in their respective HPC, their exchange was limited.

The Sports Domain and Relationships

The indoor athletics training center was fully equipped with everything the student-athletes needed to pursue their athletics. The APC-students therefore tended to do most of their training there and not at an outdoor arena by the campus or at IKSU. In connection to the running track in the center there was a gym, and on top of the gym, overlooking the whole center, was a ledge with seating and exercise bikes. Next to the tracks and just by the entrance were the coaches' offices. Throughout the day the atmosphere in the center varied from calm and peaceful, to intense and filled with activity, energy and people, as stated by a coach: "the environment in here is inspiring, stuff is going on everywhere and people are in motion". The athletics center was shared with the sports gymnasium floorball team, so training in various sports was going on simultaneously. The student-athletes had free access to the facility from seven-thirty in the morning to ten at night, and could come and train when it was suitable for them in relation to their study schedule. The daily life of the APC-students was linked to the athletics center and they considered it "as a second home" spending several hours there every day: "sometimes I can stay in the hall just to talk some more, I think it is so much fun being in this environment, everyone is so friendly, and I mean, most [in here] study", and "you meet so many good and knowledgeable people in the sport that you can discuss training with and get inspired by". The athletics center was a dynamic training environment with about thirty athletics-students from the university (including the APC- and USSS-students) and twenty adolescent athletics-students from the sports gymnasium.

APC student – student-athletes at the APC/athletics center. Athletics consists of 18 disciplines: “We have throwers, jumpers, sprinters, middle- and long distance runners” (Coach). It was difficult for the coaches to keep the group together as high quality training implied doing different things in various disciplines: “we’re a scattered flock”. At the athletics center there could be training going on simultaneously for various disciplines, ages and levels, with student-athletes mixed from both the university and sports gymnasium. The atmosphere between the student-athletes of different ages was relaxed and friendly, having fun and laughing, switching from full focus on the drills, to enjoying the time with their friends. The student-athletes supported and motivated each other in pursuing their DCs: there are many here “who are motivated and want the same thing and show that it is possible to combine. I think that is inspiring”. Although there was a good and friendly atmosphere overall, the throwers, jumpers, sprinters, and runners did not all know each other. They from time to time trained together, but it was more common with training within their discipline. This also led to more friendships being formed within their specific disciplines:

A male hammer thrower approached two girls doing deadlifts together. The girls studied in different university programs, but currently had the same training program. They’ve matched their schedules so that they could train together today. Between reps one asks the other about their planned Christmas dinner together, them and two others, all throwers. ‘We are doing some team-building together’ the guy says and everyone laughs. The girls switch places and the training continuous (observation note).

The APC-students. The APC-students was a group of fourteen athletics student-athletes, nine males and five females, with a mean age of 22.9. They were at various stages in their athletic development, all competing on at least national or Nordic levels, and sometimes earning medals. The group consisted of four throwers, five sprinters, two jumpers, two runners and one heptathlete. Seven of the athletes competed for a sports club in Umeå. They had spent, on average, 1.9 years in the DCDE, of which six of them also had been student-athletes at the sports gymnasium and spent an additional three years training in the athletics center with the APC coaches before starting at the university.

The team of APC coaches. The five APC coaches (sometimes working for the national team) worked as a team around the student-athletes while at the same time having more responsibility for athlete in their discipline. Together they covered the necessary expertise in all disciplines and spent most of their time “on the floor” with student-athletes. The APC coaches “meet every day, plus that we travel together a lot on camps... so we have an extremely tight cooperation”. They were very much like the DC team at the USSS, having many years of experience working together, discussing with doors open, over lunch or in the hall, and being kind and ambitious. We are: “driven nerds, who have all been in this for a long time, very experienced and skilled, so we can sit and discuss training, what we are doing, in abundance, and there is experience and knowledge enough and to spare”.

APC-students – Team of APC coaches/Head coach. Some APC students the coaches did not meet for several weeks (e.g., long-distance runners running in the forest), but most of them they met every day, during morning or afternoon/ evening practices, being available in the athletics center some ten hours per day. As long as the APC students did not train at late evening/night, the coaches were there accessible to them. Some evenings the head coach would still be there as stated by an APC-student: “he invests his life into this, he lives for this day and night”. Communication was relaxed and informal “on the floor” having fun. The coaches cared for their student-athletes sports, studies and wellbeing. If they needed to study, then training was adapted. For the coaches, it was about being there as a human being for the student-athlete, listening, and being someone they could talk to: “I usually describe my job, humorously, that I work on a scale from physiologist to Catholic priest and everything in between. That’s how my job description looks like when I work with [student-athletes]”. The APC-students that were former sports gymnasium students the coaches typically had closer relationships to, often including relationships to their family and parents.

The APC students looked up to their coaches and considered them as invaluable for their development. They also saw their coaches as the most important person’s for their DC as it was the coaches who knew how things were going: “It is the coach who keeps best track of the training and best understands, like around [how things are], they care very much and [are] honest, interested and wants to help if it is anything they can do”. The APC-students main responsibility in the relationship was letting the coach know how they felt and how things were

going, so that, in the case, they could adapt training or act as a link to receive help from the DC-coordinator or the performance team, as a coach reflected:

It's part of the daily talk, you follow up, you are aware when they have these periods, when they have exams, and the simple question, 'how did it go?', but also talking about the other thing, that it does not go three or four exams until they reach out, that we need to now earlier to help in some way... reduce training, help with study technique, guide them to the right people.

Athletics center/APC – Sports clubs and coaches. The athletics center and APC were purely a training environment for student-athletes and not linked to any sports clubs. The APC-students trained there, but competed for a sports club (in Umeå or from their home town). It was common for the best juniors in the athletics clubs in Umeå to switch from training in their club to training with the APC-coaches, as they started the sports gymnasium at age sixteen, although still competing for their club. The athletics center and APC in this sense was central to the development of elite athletics in Umeå. Four APC-students had coaches of their own outside the APC. The APC-coaches relationships to club coaches were okay and on a needs basis. As one coach explained:

[I have] varied relationship to [the relevant club coaches], some I know very well and it's no issues...others I know, but we have no real relationship, they take care of their thing we take care of our, but there are no controversies or opposition, rather it is the athlete that controls this, who they turn to. And there is situation where we have not had a relationship to their club coach until you reach a specific situation, but then you establish that relationship. We are in the same business and most often talk the same language.

The Study Domain and Relationships

The APC-students were spread across three faculties (Medicine, Social Sciences, and Science and Technology), and 11 study programs (e.g., Medicine, Dentistry, Civil engineering, Biology, and Architect) of which two students studied at a sports-related program (i.e., Physiotherapy). The APC-students typically did their studying at the university campus and not in the athletics center. Sports and studies were like separate entities, when in school they

were students: “with classmates and such you are treated as a classmate and then maybe they find out a little later that you are an athlete, but usually things don’t change very much, it’s more of an off-topic there” and “at school the focus is on school and... on studying, you talk about school stuff and what relates to that, the life of studying”. Although sometimes the APC-students stood out or was portrayed in university media for their athletic accomplishments the commonality was that they were “one in the crowd”, one out of all students at the university, and teachers did not always know that they had a student-athlete in their course. If a student-athlete did not ask for study flexibility, they were treated as any other student or grown-up: “Last year there was a girl, last semester, and asked about the thesis work. I [a program director] had never met her, never seen her name, she had gone through the whole program without missing a single exam”. Relationships within the study domain revolved mainly around facilitating flexible studies for student-athletes based on the university DC regulation and formalized through the flexible studies agreement between the student-athletes and the USSS.

[DC-coordinator \(DC-assistant, DC-admin\)](#) – [DC-contact at faculty/institution/ program](#) – [Study program staff](#). As soon as there was a new student-athlete with an approved flexible studies agreement, the USSS communicated this into the organization together with a document outlining best practice examples of study flexibility. The university had four faculties, eight colleges, 67 institutions, more than 150 programs and 4100 employees and was organized in various ways, so reaching out with the information was complex. During ten years, the DC-coordinator had worked to develop relationships and lines of communication in the organization. The DC-coordinator (together with the assistant and administrator) held lines of communication with about 100 DC-contacts at different faculties, institution or programs. The DC-contacts held various roles dependent on their internal organization (e.g., study or program counsellor, coordinators or teachers with responsibility for a study program). Communication was formal, by email and about informing the organization about the new student-athlete with an agreement, and nowadays went very smoothly, as explained by a DC team member:

[The DC-coordinator] built this... made it into what it is today and that it works so well, and has a great drive for this... and knows it inside and out, know every name of every study counsellor at the whole university, and the counsellors all know who [the DC-coordinator] is. [The DC-coordinator] is a former study

counsellor, and knows how it works... there is nothing [the DC-coordinator] does not know.

When asked about the cooperation with the USSS and receiving information about a new student-athlete a DC-contact at an institution said: “completely uncomplicated, I usually just confirm that I received the email” and “we take part in the decision [i.e., agreement] and relate to it and try to make the best of it”. The DC-contact was then responsible for informing the relevant study program or course staff about the new student-athletes (e.g., a program director, examiners or teachers).

APC student – Teachers and study program staff. The most important relationship in the study domain was between APC-students and their teachers (or examiners) formally responsible for a given course. The teachers changed from course to course and it was up to the student-athlete to approach them and claim flexibility. There were two major groups of teachers; the ones who supported the student-athletes and the ones who accepted to support the student-athletes.

The DC regulation and flexible studies agreement made flexible studies for APC-students into a formal obligation for the university staff. Whether teachers liked it or not, they should facilitate flexible studies as stated by study staff: “there are guidelines from the vice-chancellor... what rights student-athletes have...we follow the rules... we have to facilitate”. The formal obligation meant some teachers accepted to provide support without actually supporting it. From the beginning teachers were more skeptical towards the agreement and providing support to student-athletes without being provided with more resources/time to work with it, but over the years the collective experience was that student-athletes were good students and supporting them was often easy. The general attitude towards student-athletes was therefore very positive. Many teachers considered it as fun to have student-athletes in their course, looking up to their ability to pursue and have time for both studies and sports, seeing them as inspiration to other students in how to work hard, take responsibility and structure their life. Student-athletes were known for being at the top of their class, had reasonable expectations for support, and provided very little fuss in comparison to other student groups. To provide student-athletes with some flexibility was therefore “not that big of a deal”. The APC-students main responsibility in the relationship was to communicate their needs in advance, and they

could easily get in contact with their teachers, simply by “coming and knocking on their door” or talk to them in class to ask for flexibility:

Most teachers I still feel understand, we typically can walk up and talk to them and say that we have the flexible studies agreement... and then they know pretty much what it means, that we get, can move exams and such, and usually they accept it (APC-student).

The APC-students and program-/study counsellor were rarely in contact with each other. It was only occasionally when it came to prolonged periods of absence or the need to jump a course, that the student-athletes and a program-/study counsellor sat down to provide for an individual study route planning: “students approach me in my role as program counsellor for talks about how to structure their studies and together we make an individual study route plan”.

[APC students –study program staff/DC-contact - DC-coordinator/DC-assistant](#). The flexible study agreement for student-athletes and the concept of DCs was well-known across the university staff, and most often study flexibility was solved in the dialogue between the teacher and APC-student: “most teachers at the university are familiar with this concept... so most often [the APC-student] solve it with the teachers themselves” (program director). If problems occurred, or the dialogue with a teacher was problematic, the APC-student could always contact a study/program counsellor (often being the DC-contact) or the USSS and DC-coordinator: “if I have any problems or something with school... I can always contact the USSS... either they know the answer, or they find out and I find out by email or phone, how I can proceed”.

The DC-coordinator (and progressively the assistant) was a support to both student-athletes and university staff when necessary, working with implementation of the agreement, mediate dialogue, and finding the best and most suitable solutions for study flexibility: “[We] help students and staff, when there are difficulties, when they don’t fully know how to handle the agreement, ‘what kind of study adaptations should we make?’”. Except from information meeting or when signing the agreement, the student-athletes and the DC-coordinator only communicated when there was a problem, but this was rare: “I meet them only once normally,

when they are fresh” and sign the agreement, and then ”it works so well, it is rare that you get someone back wanting help“ (DC-assistant).

DC-contacts and study staff contacted the DC-coordinator on a needs basis for any question in relation to study flexibility and the agreement, but they rarely received questions anymore as explained by a DC team member:

There is a lot of experience, almost all programs has had a student-athlete, so nowadays there is like this is how we do it, we don't invent the wheel anymore, rather it is, like I said, [the DC-coordinator] has oiled this for so many years that it works.

APC students – classmates. The APC students in general felt strong support for their DCs and had good relationships to classmates having friends in school, but sometimes felt that their classmates did not understand their DC situation: “people there who maybe don't understand at all what you do or how much time you invest or how you think and like that”. This was specifically relevant when it came to exams in working groups and the need to synchronize their schedules:

The only person I have met who has not been positive [towards my DC] has been some classmates... in the sense that they do not fully understand that I want to pursue my sports as well, and I think primarily about exams in groups... me saying ‘I have training in the morning, I simply cannot then’ and they say ‘but you can train later’, but I want to train with my coach when she is available (APC-student).

Another student-athletes also stated “what do you mean having time!?” when referring to discussions with classmates who were not athletes.

The Private Life Domain and Relationships

The APC-students described their living situation as “scattered around” town, each one for themselves in a setting (e.g., apartment, rooms, shared corridors) arranged by themselves, as all other students do when moving to Umeå. As the city was small, they were still only a short bike ride from each other:

APC-students – Friends in sports and studies. The APC-students social life was characterized by their DCs and sports, having many friends through the general camaraderie at the APC, and some friends in their study program or connected to their housing, and trying to meet friends from home when possible. The APC students who previously went to the sports gymnasium typically also had more (retired) athlete-friends studying at the university or working in the region:

You train three hours a day maybe and then you have school, there is not that much time, to do other things... so besides in school, it is here [at the APC] you meet your friends, and for me, it's my sixth year here now, and there are many [athletes] who are in Umeå that I have known for a long time that you become very good friends with (APC-student).

APC-students – Other student-athletes at the university/other HPC student-athletes. The APC students typically had no contact to student-athletes from other sports studying at the university (if they did not study in the same program) or to other HPC student-athletes from other sports:

I hardly know who other student-athletes are if I should be completely honest, you meet them [HPC-student] once a year I think and then you cannot memorize all faces so you have no idea, maybe you meet someone here and there, but there is almost no sense of connection (APC-student).

The student-athletes (not only APC students) saw it as a benefit if they could meet more often, exchange experiences and learning, but saw no natural time-efficient way of doing it within the environment. The USSS organized a meeting place at IKSU open to student-athletes and students within sports programs. This “IKSU ledge” overlooking the common area and entrance was used mainly by the sports program students as a place to study or eat lunch. The APC students were never there as they trained in the athletics center.

Youth culture at the university. Part of the youth culture at the university was to go out, partying and drinking alcohol. The APC students rarely took part in this, as it “destroys several days of training” and if they did they sometimes felt guilty afterwards. Going out partying was a social event and a way of meeting new people and forming friendships. The APC students sometimes

felt they were missing out on this opportunity to expand their social network beyond the APC context:

Sometimes you can feel that you miss quite a lot, because it is also like this... 'how do you meet new people?', well yes, if you go out to the pub or if you hang at the pub in the evenings... you know the ones you know because you do not meet so many people, so that's what you can miss maybe, but then, one must prioritize (APC-student).

APC-student – Family. Most of the APC-students had relocated for pursuing their DCs and parents and family provided important support from a distance. The APC students could call their parents and receive advice on sports (several of the APC students previously had their parent as a coach) or studies or get emotional support in an unconditional way. The family was for many also an important source of financial support: “My parents help me a lot even though they don't live in Umeå. They call and check, 'how is everything going, can we help with anything?' You get maybe some money for food sent over and things like that”. The APC-students that had lived away from home for several years, some of which were in a partner relationship, considered family and parents as important, but they did not take part in their daily life as much anymore.

The environment in the timeframe – Flexible studies to various athlete career pathways

Umeå University had a long history of working with flexible studies for athletes. One of the APC-coaches who were involved in the work back then shared: “flexible studies we have been strong in, because that's what started first, since the late eighties” and “I worked with these issues in the beginning of the nineties and we were struck by how small of a problem it was for the student-athletes... there was a very positive attitude among university staff”. Long before the initiation of the USSS in 2000 to support growth of sports research the university in various forms supported the combination of sports and studies. Athletics was the first sport entering into formal agreements with the university in 1999 as the current dean of the sports gymnasium was in charge of developing the 'athletics sports university'. In 2008, the current structure of the USSS was formed with the HPCs and a precursor of the current performance team.

Umeå wants more. As a stakeholder shared: “Thanks to the Umeå School of Sport Sciences and the flexible studies agreement, the high-performance centers, we have come a long way, it’s just that we see that there is even more potential”. The DCDE stakeholders including the USSS, the leisure and recreation services department at the local authority and sports gymnasium, and the regional sports federation and elite sports clubs were in a collaborative process of developing the environment further and expanding it to support athletes beyond only those who combined sports with studies. It was about how to “better coordinate available resources, create an even better support for the elite athlete, for the person, for everything that relates to them and their career, and for organization of the clubs” (partner), linking a strong sports environment to a strong research environment, and developing an athlete career pathway from age sixteen and upwards (from the sports gymnasium and upwards), not forcing athletes in Umeå to relocate for sports. The challenge was how to organize an environment supporting athletes various career pathways. As a DC team member stated:

[We] have to find the organization for [it], it is a system where we are not only supporting those who choose to study, but we must find a development environment that works for those who want to study at Umeå University, for those who want to work and focus on their sports, or those who just want to put energy on sports, so that we find a common base, a common environment for them, so that we get a bigger mass of elite athletes, whether it is student-athletes or not. Because you need this sparring from others if you want them to developed athletically. So, I see that as a big challenge, how we should form that environment and we are doing a big developmental work to find it.

Environment Success Factors Model – Umeå Sport, Sweden

Below we describe the DC-ESF for athletics in Umeå as depicted in figure 14. We first describe the environments preconditions followed by key DC processes. The philosophical paradigm of the DC team is then described. We conclude with a description of the student-athletes’ development, their DC competencies and with DCDE effectiveness.

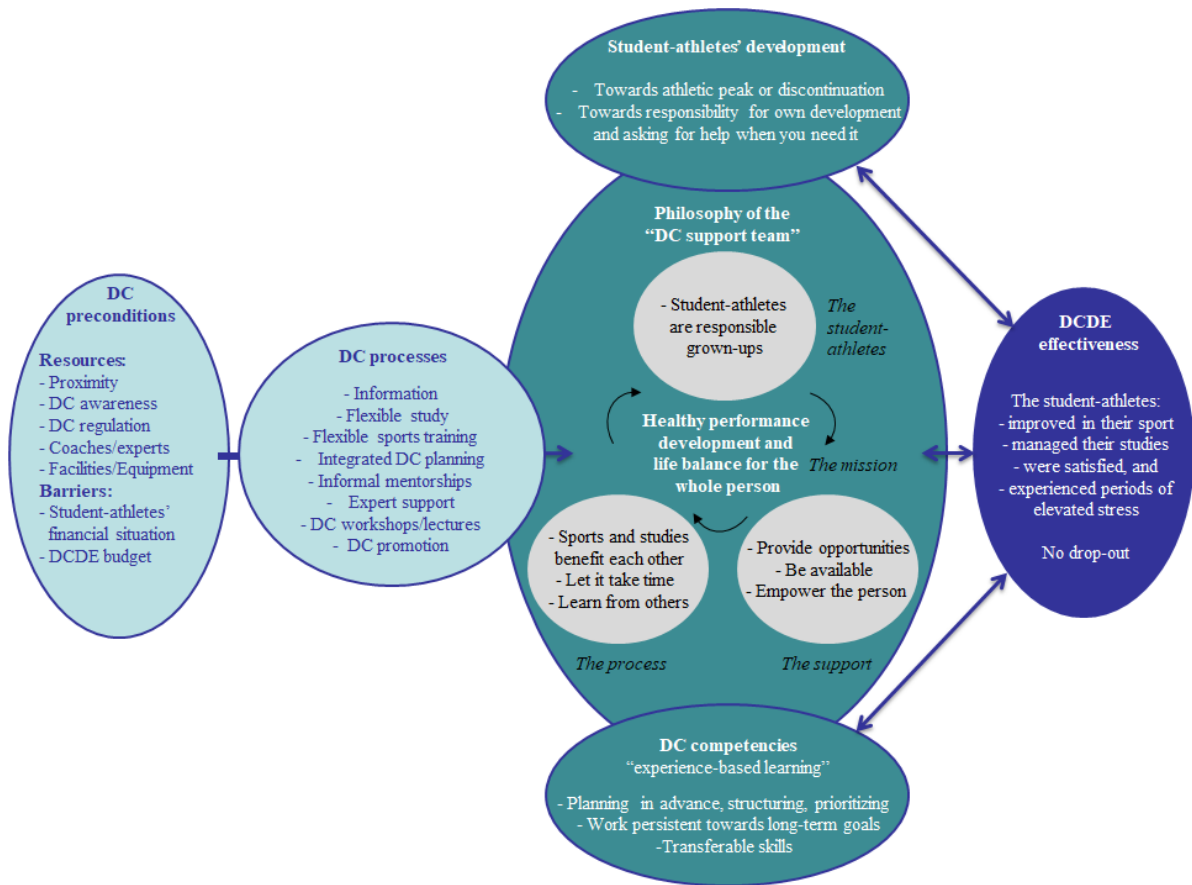


Figure 14. Environment success factors model – Umeå Sport, Sweden

Dual Career Preconditions

Resources

Belief that sports brings growth. One of the strongest preconditions and a basis for collaborations and financial investments/support from stakeholders was the belief that supporting sports meant creating growth. Local politicians, officials of the local authority, and leadership at the regional sports federation, the university and the sports gymnasium all highlighted that supporting sports and athletes' DCs was about creating growth, attracting athletes, students and staff, and having more and healthier inhabitants: "It's about attracting students, that's the interest from the university and the local authority... it's a growth factor, if we get them to move here many will stay. So it simply about students, and for the local authority it about getting inhabitants to move here" (partner).

Geographical and relational proximity. A benefit for the student-athletes was the geographical proximity in Umeå. The city was small and the university campus and training facilities were not far apart; “what’s good here in town, it is that we have short distances, you spend very little time getting to things” (coach). The training facilities, campus and student-athletes' homes were no more than a 10-15 minute bike ride apart.

Something that stood out being in the DCDE was the relational proximity. There was a sense of closeness and that everyone knew each other. It was like a spirit of Umeå that characterized their relationships, whether being a student-teacher relationship, or between collaborative stakeholders. As one of the coaches explained: “people of Umeå are quite ‘laid back’, we don’t make a fuss about things, its short ways, we are open, that’s Umeå.... it’s easy, close and pretty relaxed”. This made it easy to collaborate, to make decisions and to contact each other, as stated by a stakeholder: “it’s quite short distances, it is no problem for me to call any of the leading politicians and talk to them and I personally know them all since long time back”. In fact, many of the people involved had personal relationships going far back. The director of the USSS for example had played sports together as a child with the key collaborative official of the local authority, and the DC-coordinator had gone to school at the national elite sports gymnasium and the university, and the dean at the gymnasium had previously worked with DCs at the university.

I am (i.e., the researcher) standing with the DC-coordinator, in a shared VIP section that the DC-coordinator had arranged for us to see the game. I meet and talk to local politicians and officials, all are so close to each other, geographically, but also relationally, everything appears to move in the same direction. Suddenly a video starts on the jumbotron presenting Umeå as this year’s best sports city in Sweden. The video shows different athletes and the DC-coordinator, one by one, that’s a former student-athlete, she had, he did, she is a daughter to him, his dad works at the authority, and it just kept going. Story after story. Everyone knows everyone. The relationships carry through everywhere. So small so connected (observation note).

DC awareness. Observations and informal talks while being in the DCDE showed a high sense of awareness of DCs across the whole DCDE, including both sports and study staff, and stakeholders. The DC team (and several others) showed understanding of both the sports and study context having previous experiences in elite sports and university studies in different ways (e.g., having an elite athlete partner or child, having studied at university level, or that the coaches only worked with student-athletes meaning they naturally had studies in mind).

DC regulation at Umeå University. The foundation for study flexibility in the DCDE was a university DC regulation established by a former vice-chancellor: “For the combination of elite sports and studies to be possible requires a mutual responsibility from the elite student-athlete and the institution/faculty in question”. The DC regulation outlined the university’s and student-athlete’s commitments and required that a flexible studies agreement be signed between a student-athlete (who qualified as an elite athlete according to the university’s definition) and the USSS. The regulation stated that the exam requirement of student-athletes are to be the same as for all students, that university staff should have a positive attitude towards athletes’ DCs and facilitate the combination by providing support, and that USSS are to provide recommendations and guidance on appropriate support/study adaptations. The student-athletes committed to communicate their needs in advance to discuss possible study flexibility and to take personal responsibility for the combination of sports and studies in such a way that studies were not negatively affected. One in the DC team reflected about the significance of the DC regulation saying: “it facilitates everything, that you can say that the vice-chancellor has decided that it should be like this, we should be positive about this regardless of whether you like sports or not... it doesn't matter what [a teacher] think, we should be positive about this and I mean it makes everything so much easier”.

Coaches/experts. The APC-students had access to five full-time coaches who only worked with student-athletes in the athletic center, two DC support providers (DC-coordinator, DC-assistant/counsellor) whose main focus was on study flexibility, and a performance team with one expert in strength and conditioning, two physiotherapists, one nutritionist, and two sports psychologists. The APC-students also went through various lab tests twice a year and had access to two sports medicine experts in the sports lab. All experts were teachers at the university.

Facilities/equipment. The indoor athletics facility with gym was well-worn and in need of an update but had everything the APC-students needed to pursue athletics on the highest level. The APC-students also had access to an outdoor arena next to USSS and could train at IKSU through a subsidized price (optional).

Barriers.

Student-athletes' financial situation. The student-athletes struggled financially. The APC-students had a study allowance (i.e., grant plus optional loan) from the Swedish Board of Student Finance to pay for their living expenses while studying. Financial support for sports (e.g., travelling, competition, camps) varied in extent and came mainly from their clubs, family or from sponsors but this was rare, instead the APC-students often had a spare time job to cover their additional sports expenses. All the APC-students had a national sports insurance covered by the Swedish athletics association enabling quick access to clinical care across the country upon injury. The student-athletes were also given some subsidies by the USSS and collaborative partners (e.g., reduced prize on IKSU-gym card, and lunches at IKSU).

DCDE finances. The DCDE had main financial support from the local authority, the university and the Swedish Sports Confederation. The current financial support was enough to provide the APC-students with their coaches, the performance team, and with DC-coordination (meaning study flexibility and administration of the flexible study agreement), but every dime was counted for. DC-coordination was managed on a half-time position divided on three roles (DC-coordinator/DC-assistant/DC-admin) which was perceived to be insufficient to provide support beyond administration of study flexibility (e.g., teaching student-athletes relevant DC competencies). Budget for DC-related activities and support was low, rather DC support was incorporated in positions with primarily other purposes (e.g., coaches doing integrated DC planning).

Study program type. What type of study flexibility was possible was mostly dependent on the type of study program the APC-students were enrolled into. It was easier to reduce study pace and provide individual study route plans for students in programs where courses ran more often (i.e., not only once a year), which was depend on if the program had courses running in parallel

on reduced speed, or if the program admitted students more than once a year. The APC-students typically were in programs without this flexibility.

Athlete recruitment. The DCDE recruited athletes mostly from the region and had difficulty recruiting “the best” athletes in the nation, as stated by a coach: “I would like that more of the best athletes would want to be in this environment, rather it is quite a lot, those who are admitted to an education or [from the] region in the north that comes to Umeå” and “we maybe would need more on the absolutely highest level... we have sub-elite... it is national team people, but it is not the stars of the stars so to speak”.

Dual Career Processes

Coordination to provide opportunities. The major theme for the DC processes was that the USSS worked with coordinating the involved partners and people, collaborating and establishing stakeholder agreements (e.g., financial and operational agreements, access to facilities, subsidies for student-athletes, agreements with the university faculties for performance team employees) to provide student-athletes with the best conditions and opportunities for support. But it was always up to the APC-student to take advantage of and use the opportunities provided, no support was imposed upon them. Rather, it was the student-athlete who initiated the process of receiving available support: “nothing happens until the student-athlete asks for help” (DC team member). This applied across the board in the DCDE, including the student-athletes initiating the process of receiving the agreement for flexible studies, claiming study flexibility from teachers, communicating with the performance team experts, or being transparent with their coach on having too much to do in school and being in need of adapting their training. In this sense, the APC-students were always in charge of their situation, provided with opportunities for support, but left to take charge and use it if they wanted it. The processes in the DCDE therefore revolved around APC-students taking on a responsibility for their DC and letting support providers know when they were in need of support, and at that point various support was available to them.

Welcoming meeting. Every autumn, the USSS held a welcoming meeting for new student-athletes introducing the environment as a whole, explaining their responsibilities and what was provided and available for them (training, coaches, facilities, flexible studies through

agreement, performance team with expert support, lab-testing, subsidies, and DC workshops/lectures) and signing the flexible studies agreement. The DC team, performance team and HPC coaches attended and described how they worked, as having the student-athletes in the center surrounded by available support. The HPC-coach and student-athlete relationship was highlighted as the key relationship for coordination and communication in the environment and for access to further support. The responsibility of the student-athlete was highlighted as necessary for a successful DC in the environment. If a student-athlete was unable to attend the welcoming meeting, or if a student-athlete joined during the educational year, an individual meeting was held with the DC-assistant going through the same information and signing agreements. After the welcoming meeting, the student-athletes had access to the support providers on a needs basis and were expected to take responsibility for and manage their DCs in the DCDE. A DC team member reflected about the welcoming meeting in relation to new student-athletes becoming a part of Umeå as a sports city:

We arrange a welcoming for all new student-athletes, with information, we welcome them to Umeå which we do in collaboration with sports clubs, local authority and IKSU, so that they feel that they are part of Umeå as a sports city, get information about sports in Umeå, free tickets to sports events... how things work with the combination of elite sports and studies, informing about the flexible study agreement, provide some giveaways to them, profile clothing, so that they feel that they are a part of this environment.

Flexible sports training and integrated DC planning between athlete and coach. The APC-students trained 1-2 hours and 1-2 times per day and 5-6 days/week amounting to up to 20 hours of training per week. As a coach stated about the daily activities within the APC: “training, training and more training and then we compete sometimes”. Training was done in the athletics center, in the morning or afternoon/evening dependent on when they had school. All the APC-students followed individual training programs tailored to their needs and goals which meant they often could conduct training by themselves, which they did 1-2 days per week on average. The training programs were developed by the coaches and progressively by the athletes themselves. As APC-students were in various study programs and athletics disciplines, scheduling training was dynamic to coordinate with studies. Coaches organized

group training (within disciplines) as often as possible, typically 4-5 days/week, to also benefit social exchanges.

A key DC process in the DCDE was the integrated planning between the APC-students and coaches, as said by a student-athlete: “It’s the coach you turn to the most, because the coach is the one who adapts training...the schedule in school is fixed... and training you feel is what can be adapted some”. Training was individually adapted to the APC-students study schedules when having more or less teaching, ahead of time when updating their training programs, during exam periods or when the APC-student made their coaches aware of periods of high workload in school. The coaches stressed the need to have balance to reach goals:

Sport is not everything, but it is part of the cake... often you plan and make adjustments if you see that, here we need to reduce, here is a heavier exam period or here we push, but also this particular daily conversation that, when things flow versus when it is stress and pressure... you need to get flow in both aspects for it to be successful, there is no point to squeeze and stress in more miles and more training and then studies break down, because then you still do not get that extra.

The APC-students went abroad on camp (with the APC, clubs or together with the sports gymnasium students) for 10-14 days per year, typically arranged as a two week trip in January or April/May within their athletics discipline.

Flexible study. The study schedules were never adapted to sports. Rather, the APC-students attended programs/courses like any other student. The study situation could vary depending on what program/course they attended. Some APC-students had scheduled lectures/classes two hours a couple of times per week, whereas others had full-days in school several times per week. The APC-students studied at the university like any other student up until they experienced a need for flexibility. When an APC-student experienced a need they could claim flexibility (from their teachers) based on their flexible study agreement. The agreement was based on the DC regulation and could for example provide them with a reduced study pace (e.g., postponing a course or having an individual study route/plan), adapting their exams without changing the exam requirements (e.g., postponing an exam, taking the exam

elsewhere), and choose an internship location where sports and studies could be combined. As a DC team member reflected:

Throughout the years it has been approximately one third of all student-athletes [at the university, n=240] who choose to reduce their study pace and others do only minor adjustments... needing only to move [an exam] at some points and that is typically never a problem.

The APC-students typically studied at full speed and did not reduce their study pace. It was most often a matter of taking a course running in full speed, or not taking a course at all, to skip a course: “most often it is that they have to take a course in full and then skip a course and not have any studies” (DC team member). What on paper could look like half-time studies was therefore more a matter of periodization of full-time or no studies. The APC-students study flexibility was mainly to postpone or move exams from time to time, take the exam elsewhere (e.g., at a university close to a camp site), write supplementary assignments for missing compulsory seminars/labs, or do their internship at a location suitable for their dual career. In the Swedish higher education system students are provided, by law, with three opportunities per year to pass an exam. This means that if APC-students were unable to take the exam at the first/ordinary occasion, there was always a second and third retake-option to do it. As a teacher said, there has “always been retake occasions, many times it is not more difficult than that” to support the APC-students. The APC-students DCs were facilitated by that most athletics competitions were held during the summer when they did not study, so their competition and study schedules did not collide very often.

DC education for study staff. The DC-coordinator (and assistant) invited study staff and DC-contacts to a three-hour education twice a year to facilitate study staffs’ DC understanding. The education included information, explanation of the flexible study agreement and how it works, and discussing cases and how to solve various problems, as explained by a DC team member: “We have educations regularly for the ones who work in the institutions, these 100 people, plus that we also invite teachers, program directors, to come and receive more information about the combination of elite sports and studies”. Over the years all DC-contacts and more had

participated in such an education, and today there were many “ambassadors for DCs” in the organization.

Informal mentorships. Within the DCDE there were no formal mentorship programs or networks between student-athletes. Within the athletics center however, many informal peer mentorships were developed naturally between student-athletes, and APC-students acted as role models for the sports gymnasium students while training together, as explained by one coach:

Age differences is not a problem, it’s an asset in my view, where the younger ones learn from the good example of the older. The older set a standard of how things are done, being serious and such, fostering the younger ones towards a serious approach, being professional, and we have many example throughout the years where sports gymnasium students get help [with homework] from university students... it’s these kind of spontaneous contacts that are created in here in the athletics center, by them getting to know each other.

A coach reflected about the natural setting of combining sports and studies in the training environment at the athletics center saying: “they come to an environment where this is the way you do it”. As it was only student-athletes in the training environment, the younger student-athletes could see that combining sports and studies was possible also at the university level and had senior athletes to learn from and look up to.

Referrals to expert support. The DC team had an internal referral system. If a coach or a DC team member identified an issue they could refer the APC-student to experts in the performance team, but it was always up to the student-athlete to proceed and approach the expert. The performance team had three main tasks including: a) being a direct individual support to student-athletes, b) being a sounding board and expert support to HPC coaches, and c) educating both student-athletes and HPC coaches in their respective field.

The APC-students gained knowledge indirectly from experts through their coaches, and had access to experts through their coaches on a needs basis or in relation to being tested in a sports medicine lab twice a year (e.g., Vo₂-max, body scanning). Testing was adapted to the athletics

disciplines and were “primarily used as a tool for planning and guiding the individuals own training program” and as an evaluation and guidance of their development (documents collected). The performance team coordinator always took part in the tests and helped the APC-students to interpret the results, linking it to their goals. Tests were often followed by individual consultations with the performance team coordinator, sometimes together with their coach, and test results sometimes led to additional support from other experts (e.g., nutritionist). Beyond testing, the APC-students used the performance team very rarely, and as a performance team member said: “we are problem extinguishers, but want to be optimizers”. Student-athletes typically only came to the experts when there was a problem, and not to improve or get better at something, as stated by an expert: “we want to work preventively, not when they crash”. While attending a session together with a APC-student and expert, the expert at the end, and as a way of promoting the APC-student to reach out and us the performance team more often stated “We are here for you!... [and we] find it so much fun so just reach out!” (observation note).

DC workshops/lectures. The USSS provided workshops and lectures with relevance for student-athletes in collaboration with their partners once a month. Themes like life balance and anti-doping were recurrent, and from time to time a sports researcher provided their latest findings, and former student-athletes or elite athletes gave talks about their elite sports and career experiences. The APC-students (and also student-athletes in general) however rarely took part in these events, as explained by a DC team member: “we’ve had problems to get [them to come, or] I can say like this, our ambition with these types of activities is bigger than the interest from the student-athletes, or rather their time for it”.

Philosophical paradigm of the DC team. Below we outline the philosophical paradigm of the “DC team”. The DC team consisted of the DC-coordinator (DC-assistant and DC-admin), the performance team coordinator and the coaches at the HPCs including all APC coaches. The philosophical paradigm consisted of the key values and beliefs about the mission of the DCDE, the student-athletes, the support and the process.

The mission. The working theme of operations for the DC team was a mission of healthy performance development and life balance for the whole person. As said by a DC team

member: “what drives us is life balance, it’s our mantra... you have to get both [sports and studies] together, and at the same time feel good as a whole person”. Linked to the mission were several underlying values.

Without health, no performance. A shared basic value in the DC team was the belief that performance and health went hand in hand and you need to feel well in order to perform: “if you don’t have your health and feel well you won’t perform either”.

Whole-person perspective. A core value of the DC team was treating and caring for student-athlete as “whole-persons”. Being not only an athlete or a student was important: “I always say... you have to have a life by the side, you have to have other interests beyond sports and studies, if it is to play the guitar, breed goldfish, read books or crochet, I don’t care” (coach). In the coaches’ focus group, two of them reflected:

My philosophy as a coach is, at the bottom you have the person, then on top of that you have the athlete, and on top of that you have the discipline, being hurdles, javelin or thrower or whatever it is, and that view I think we all stand for... (everyone nods) so without being a specific activity I think we all the time have eyes on how it looks, how studies are going, how they feel, my first questions starting a practice is ‘How are things? How’s your day been like?’

Often, if we take what we do, training and when it fails, and you start to dig into why it fails, you find that the problem is somewhere else. You find the person... people talked about the life puzzle, I call it word feud, and I mix life very much like z-x-o-u-y, it changes over time you know, sometimes it’s easy, sometimes it’s hard, for different reasons, and all matters someday or somewhere, and [life] lands in our little world here with elite sports, where things sometimes are quite extreme, where the whole person has to work for it to work.

There is a life after sports and education is important. The DC team expressed a basic value to why one cannot exclusively focus on sports; there is a life after sports, or more to life than only the athletic career. Central to this was the understanding that only a limited few can live off their sport and that the elite athletic career has an end. The DC team, and also sports and

university staff and collaborative partners expressed the benefit of receiving an education, providing for a future, and the importance of having something to fall back upon when the elite athletic career ends. As two in the DC team reflected: “for me it is very much about... that day when they are done with their sport, they should, not just stand there and like, okay, what should we do with the rest of our time”, and “maybe 1.5 percent of the ones who go here will be able to live off their sport, we know that we have to educate the others so that they also can live afterwards, in that respect, sports cannot become predominant”.

Health and life before performance and sports. When performance and health (or sports and life) challenged each other, for example when an athlete thought about athletic retirement, the DC team choose health/life. If the student-athlete along the way came to understand that elite sports was not for them, the staff accepted it, even encouraged them to stop if they were not happy pursuing their athletic career. The value of health/life was stronger than performance/sports. As two of the DC team members stated:

They should have the choice, to feel, no, I don't want to be an elite athlete... you should be honest with yourself... if they don't think this is the most fun thing to do, then maybe you should do something else. To live on the financial minimum to do something that is not fun, that's worthless, then it's better to invest in something else.

He quite, and I think that was a great scenario, because he realized, he does not want to be an elite athlete... and I consider that a win, that we saved him from the elite sport [he did not enjoy].

The staff also valued the former student-athletes who pursued other careers and became successful: “we are very proud of the old students who have done great things in other areas... we have business people who started a company and made hundreds of millions”.

The student-athlete, as a responsible grown-up. All of the staff in the DC team emphasized that the student-athletes were grown-ups whom needed to take responsibility for their own development and situation, and that no one could be forced into receiving support. The student-

athlete as a responsible grown-up, when in need asking for support, was central to the philosophy. As one in the DC team explained:

... if a student-athlete is in need of support, then the student-athlete is, how to say, the client or initiator, they have to come and say, I am in need of this support, and then there is a fairly large package or amount of people that can provide help... but we do not work systematically and say you need this... and we have discussed this a lot, because sometimes you feel like saying, ‘you need this support’, but we have said that we work with adult individuals whom need to take their own responsibility for their own life, we can show, these are your possibilities [for support], but you somehow need to take the baton yourself, it’s your life.

The support. DC support was provided upon request. Key values linked to the support provided was the right to flexible study, empowerment of the whole-person and being available.

Flexible study is a right. The right to flexible studies was stated in the university DC regulation. Being in the environment, meeting and talking to people beyond the DC team and across both sports and university staff, it was eminent that this right was well known and established as a fixed regulation. Independent if I spoked to the university leadership, a dean at a faculty, a program director, a study counsellor, examiner, teacher, or a student-athlete or coach, or even an official of the local authority, the university DC regulation with the flexible studies agreement was known and considered by all as a right. As on in the DC team stated: “It is very much based on the student-athletes themselves saying that I need a study adaptation and then the university has a duty to do the study adaptation”.

Empower the person. The DC team worked with an empowerment approach, which was closely linked to the perspective of student-athlete being responsible and in charge of their development: “we are to teach them to take responsibility for their own training and for their own development”. The empowerment approach was eminent both in relation to school and sports, as seen in the following quotes:

my role as a counsellor is to guide the student in that if you take this course it will imply this and that, and if you take this course it will imply this and that, and its dependent on what path you choose, but it is you who choose the path. I can guide you in it. And we try to work the same way, both in the performance team and also the [HPC] coaches (DC team member).

... you don't just train people, you don't have that magical formula and just put people through it, you explain all the time why you do things, the purpose of things... I work very much this way as a coach being almost just as much a teacher (coach).

Be available. The DC team stressed the importance of quick support and being available to their student-athletes. The student-athletes could get an appointment to experts in the performance team within days, the APC coaches spent some 8-10 hours per day in the athletics center, so when APC-students came they were pretty much always there, and the DC-coordinator wanted support in relation to flexible studies to be available quick and easy (e.g., a new student-athlete signing the flexible studies agreement within 24 hours after contacting the USSS).

The process. Key beliefs linked to the process was that sport and studies benefit each other, that student-athletes should adapt an attitude of a long-term approach, a willingness to learn and believing in the benefits of working in teams.

Sports and studies benefit each other. The DC team saw sport and studies as something that benefitted each other. Sports and studies provided a break from each other, having something else to think about and clear your head, which facilitated performing in both areas. Sports, although taking time, also gave energy to perform in studies. Having studies made the APC-students more resilient towards setbacks in sports as their studies could still go well supporting a sense of being more than what they performed in their sports. As a coach stated:

Studies are important for sports because it is something else, where the brain is doing something other than being a full-time athlete, which is no play. Usually

its inside, in the head things goes wrong. One must be able to switch between different worlds.

Long-term approach. The DC team wanted their APC-students to adapt the attitude of a long-term approach to DCs and athletic development, meaning understanding and allowing their developmental process to take time, not trying to do everything at once risking one's health. As one of the coaches explained:

We could do even more in terms of career planning...it's easier said than done, it's not always that the student-athletes understands the need for it. (What do you mean when you say career planning?) How do we get from point A to point B, we do not have to do everything here and now to one hundred percent, instead do more sports during some periods and more studies during other periods... in some cases, [they are] trying to be one hundred percent and best as a student, as an athlete, as a girlfriend or boyfriend, as a friend, and this burns quite a few.

Willingness to learn. The DC team was open, transparent, and let people into their operations and activities. They "said things as it was" and wanted to share and learn from others and each other. Being at the USSS it felt like they constantly searched for ways to develop and improve (e.g., taking the performance team to the Swedish Sports Confederation expert support team working for national teams with the goal of synchronizing their approach and support provision).

After being in the DCDE for several days it was clear that "theory met practice" inside the halls of the USSS. Sports was there with its assumptions, thoughts and ideas on how things should be, and academia was there with its. It was a matter of doing vs. discussing, being on the floor vs. in a meeting, and to do what you know and believe is right vs. to do what you know and research tells you. A DC team member reflected: "this is both the big challenge but also what makes this so fun to work with, because you see how much there is to learn from each other, and you have to meet [and discuss]". There were some tensions between the coaches (being an extension to the wider sporting community with clubs and federations) and the performance team coordinator and experts (being academics), not in what, but in how to reach it. This was especially true for sports training and testing and how to work more evidence-based. The DC

team perceived it all as a challenge, but at the same time as a strength. Coaches and experts did not always agree, which was fine, it was the discussion itself that they wanted, to challenge and learn from each other: “it goes well, we argue a little bit and we nag about it and try to explain and, it goes back and forth” (DC team member).

Work as a team. The value of working as a team was visible across the DCDE. For example in how the DC team and staff at USSS worked closely together, how the APC coaches collaborated in the athletics center and how training was organized, in groups, always done to facilitate exchange of knowledge and learning in between different people, whether it being student-athletes, or coaches, experts or staff. A coach reflected on the importance of working as a team: “There are many important people around the student-athlete... and communication between different parties is typically what fails... so I think it is directly necessary to work in teams, just to improve communication between all the parties that are necessary”.

Student-athletes’ development

Very few of the involved personnel followed the APC-students and their development and therefore could not explain in what way they developed while being in the DCDE. Many of the involved staff (e.g., a teacher, DC-coordinator) only met student-athletes once, or on occasions, but never often. The only continuous relationship while being in the DCDE was between the APC-students and coaches. The DC team had previously identified this issue and had together with sports researchers at the university started a project to better understand how their student-athletes developed throughout their DCs.

Towards athletic peak or discontinuation. The general pathways of development for student-athletes at the DCDE (not only APC-students) were to continue or discontinue their athletic career, as explained by a DC team member:

There are two categories of students, a category that the longer one has gone into their education the better one is to adapt the studies to the sport so you can really do it when you peak in your elite athletic career and you learn the system so that you can make good study adjustments and also accept that my study time will take longer just because I want to be able to spend so much time on sport. While I have another student group, that the longer they come in their education

almost begins to decline their elite athletic career and once they have completed their academic studies then they also put their shoes on the shelf and feel that now is the time to move on in a new phase.

A general theme for many student-athletes at the DCDE (not only APC-students) was that having a DC was a way of extending and financing their elite athletic career. When the DC came to an end and a new financial situation appeared (e.g., the need to work for a living), many athletes decided to discontinue their elite athletic career.

Towards responsibility for own development and asking for help when you need it. The major theme for the APC-students development was the process of taking on the responsibility for own development including becoming a good initiator of support. As a DC team member stated: “They should be in command of their own development, this we try to work with... Maybe it is not the fastest way to get people good but I think it is most effective eventually, you get the farthest with it”.

Entering the university, the APC-students had to take on more responsibility as grown-ups living away from home. As they did this they matured as persons, became more independent and learned more about themselves and their sports and studies. This in turn led them to take on more responsibility and progressively to take over their training and starting to lead themselves being more autonomous while using their coach as a sounding board: “They become elite athletes after being here for a few years. They do not train more, rather they become better in choosing what to do, how to plan and evaluate their training” (coach). The APC-students (and also student-athletes in the DCDE in general) varied in how well they did this and how far they got in the process, especially when it came to being independent while at the same time initiate support when necessary. At the heart of this was their, sometimes lacking, ability to ask for help, which meant the missed out on available support: “The student-athletes are rather poor initiators, they do not want to be to any inconvenience and are used to being good and don't want to ask for help” (DC team member). This was especially true for study adjustments and receiving expert support from the performance team. As a DC team member said: “are you as a student-athlete not willing to receive the smorgasbord [of support] you can get, then it is also hard to help” and “there is a lot of support to get, but not that many use it, I

wish more would use it”. An APC-student with several years of experience said: “the performance team I use very rarely, unfortunately”.

Student-athletes’ DC competencies

The APC-students acquired DC competencies through “experience-based learning”. Although there were some learning opportunities for them through the DC workshops/ lectures, the general theme was that they learned competencies by living and operating in the environment.

The most prominent competencies mentioned was the ability to plan in advance including how to structure and prioritize time and effort, as stated by two student-athletes: “you have better structure in your life, how you should structure things and do things. ... to get everything done during the day” and “Prioritize is a key word for dual careers. You don’t have time for everything and need to prioritize what is most important in that particular moment”. Additional competencies that were mentioned were their ability to set, monitor and evaluate goals, focus on the task at hand, and work persistent towards long-term goals, as an APC-student said upon the question of what he had learned: “that hard work pays off”.

Many of the competencies were considered as a benefit also for their future vocational career, as a coach stated: “the whole process of planning, to set goals, plan how to reach them, compare training, evaluate how it went, make adjustments to the next period; that you can bring into almost anything”. An APC-student said: “you can certainly benefit from much you have learned, as well as many competencies you have with you from sports, that you can bring with you into the business world”.

DCDE effectiveness

A DC was according to the DC team about “Elite sports and studies, and feeling good as a person”. This perspective of combining sports and studies, and experiencing wellbeing as a person was communicated to new student-athletes every year and perceived as a goal for the DCDE.

The APC-students improved in their sport: “if I had stayed at home I would never become this good, not a chance”. Some earned medals in national or Nordic events, others did not reach their sporting goals. As a coach said: “if it’s enough to do Nordic championships and a few

national team events, then we are quite successful, many partake there, but the step to European championship and world level, we do not have that many who do”. The limited sporting achievements at the highest level were according to the coaches because of the limited athlete recruitment: “with even better athletes, even more, a better selection we would have probably even greater success with our work”.

The student-athletes managed their studies meaning they earned their study credits and was seen by teachers as top students: “the student-athletes perform well in their studies. We don’t see anything like that their studies suffer in any way” (teacher). All the student-athletes I encountered throughout being in the DCDE stated that they were satisfied with their DC and life within the DCDE, including having good coaches, friends, access to support, teacher understanding, possibility to make study adjustments, having everything close and enjoying living in “such a sports city”. As a senior APC-student said:

During the study time , that you have been able to take nine national medals and things like that and still have been able to keep the studies at 100%, be able to combine everything with sport and that it still worked, well that is what I feel is the great achievement for me.

The student-athletes felt well “most of the time”. Their wellbeing was dynamic and they experiences periods of elevated stress. Stress mainly came a) during periods with a high study load: “It goes so much in periods, calm periods, then it works pretty well, but in more intense...during exam periods or when you take a more difficult course... at least I find it difficult to get it together” (APC-student) which often led to less social life, b) due to the unwillingness of student-athletes to adapt their training load when their study load changed, as explained by a DC team member: “they have problems accepting... to reduce the training when [they are] actually full-time student, to still feel good. And then we also get the problem not to catch up again, when [they have periods of no study load]”, and c) the student-athletes perceived inability to reduce their study pace when in reality they needed it due to lack of finances, or reducing study pace (which meant an reduced study allowance) and being forced to take a spare-time job to pay for living expenses, in turn making the combination more



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difficult to manage. During the last three years no APC-student had dropped out: “We have not had any student-athlete dropping out during the last three years” (coach).

Dual Career Development Environment Case Study Results – United Kingdom

The following section describes the case study findings for a sport friendly university based in the UK.

Case Context

At the 2016 Rio Olympics, 50% of Team Great Britain's athletes were currently undertaking or alumni of a dual career programme (TASS, 2016). For the UK, this figure highlights the value and need to have a dual career programme that is effective in supporting individuals combine their sport with another domain of expertise. Dual career in the United Kingdom (UK) primarily consists of programmes that support individuals as they combine their sport with education, with programmes which support the combination of sport with a vocation (e.g., the Talented Athlete Sport Scholarship Programme Army Programme) very much in their infancy. Reflective of this, in total, there are more than 100 dual career support programmes focused on the combination of sport with education, with only limited examples of programmes supporting the sport vocation combination. This is further highlighted by the recent developments in the United Kingdom that have resulted in a limited, but recently increased, number of education providers in the UK (e.g., University of Bath, Leeds Triathlon Centre, Loughborough University) developing formal links with national sporting governing bodies (e.g., British Swimming, British Triathlon) or national institutes for sport (e.g., English Institute of Sport, Sport Scotland) to provide the opportunity for athletes to combine their education with their sport in an environment which has world-class sporting facilities and support (see Brown, Fletcher, Henry, Borrie, Emmett, Buzzza, & Wombwell, 2015).

Dual career programmes in the UK support athletes with a variety of characteristics. For example, the programmes support a vast array of sports, with the most prevalent provision being provided to the sports which are considered the most popular within the country including football, cricket, rugby, tennis, and Olympic sports. Dual career support is provided to athletes both in the developmental and elite stages of their career, with support programmes in the UK also helping dual career athletes across the education pathway. All children attend primary school from the age of 5 to 11, followed by secondary school from the age of 11 to 16. In secondary school, at approximately 15 or 16 years old, UK students will undertake a series

of qualifications, which may include sitting General Certificate of Secondary Education (GCSE) examinations or equivalent qualifications, in addition to their day-to-day education. Further education, which follows immediately after students have completed their qualifications at age 15 or 16, is compulsory for students in England, Northern Ireland, and Wales. Further education consists of additional examinations in the form of academic courses (A-Levels, Scottish Highers, or equivalents), practically orientated courses (B-Techs), or professional apprenticeship qualifications (GNVQs). Thereafter, within the UK, it is common for young people leaving further education to pursue higher education – indeed there is often an expectation to do so. The UK has over one hundred university and college institutions that constitute the higher education network. These institutions offer a range of courses which include, foundation, undergraduate/bachelor's, postgraduate/master's and postgraduate doctoral or research (e.g., PhD) degrees. Dual career programmes in the UK have, and continue to, support athletes across all of these educational levels.

In terms of provision, programmes that support dual career athletes in the UK vary significantly from one programme to another, with variations occurring between the eligibility criteria required to be on and remain on a sport scholarship programme (e.g., requirement to compete for the university in British Universities and Colleges Sport leagues and events, attain specific academic grades, annual reviews of sporting and academic progress) and the different types of support provided (e.g., financial bursaries and tuition fee support, strength and conditioning support, performance lifestyle / psychology, and academic support). Programmes are often individualistic and focused on the dual career priorities of the provider as a consequence.

Introduction to Case

The DCDE is a sport friendly university and is, therefore, an education-based system which permits and aligns itself with elite sport via a sports scholarship scheme for student-athletes. The scholarship scheme was created in 2004 by one individual (the current head of scholarship scheme), who was provided with funding from the University management to develop a scholarship program. The programme remains funded and governed by the University to this day. As of 2019, the dual career programme has supported a range of very successful athletes, including Commonwealth and Olympic champions, in sports ranging from gymnastics to athletics. The programme has also supported athletes in a wide variety of other sports including

boxing, judo, and football, amongst others. The scholarship scheme supports two tiers of student-athletes: tier 1 supports Olympic/ professional athletes; tier 2 supports national level or BUCS (British University League) level athletes. In addition, the scheme is designed to support athletes studying at both undergraduate and postgraduate level in any subject they wish to study; but, in reality, there are a higher proportion of student-athletes studying sport-related subjects in comparison to any other subject. In the first year the scholarship scheme supported 10 Olympic level or professional level athletes. It now takes a cohort of 34 student-athletes each year.

If students are accepted onto the sport scholarship programme at this University, they will receive a wide variety of support, including cash bursaries; access to and support of sport science and medicine expertise; access to relevant fitness centres; additional study support; access to a sport scholarship mentor; support for competition and training-related travel, accommodation, kit, and equipment; and a range of branded sports kit. The specialist sport science and medicine support includes, but is not limited to: fitness tests and profiling, strength and conditioning programmes, nutritional advice, sport psychology, individual or opposition match/technique analysis, access to sport massage specialists, and sport science seminars on latest relevant issues. Additional study support is provided to student-athletes via academic staff who provide additional taught sessions and alternative assessments as required. Student-athletes can also request academic flexibility based on their training and competition demands.

Dual Career Development Environment Model – Sport friendly university, UK

The following section outlines the dual career development environment model for the UK case study, a sports friendly university.

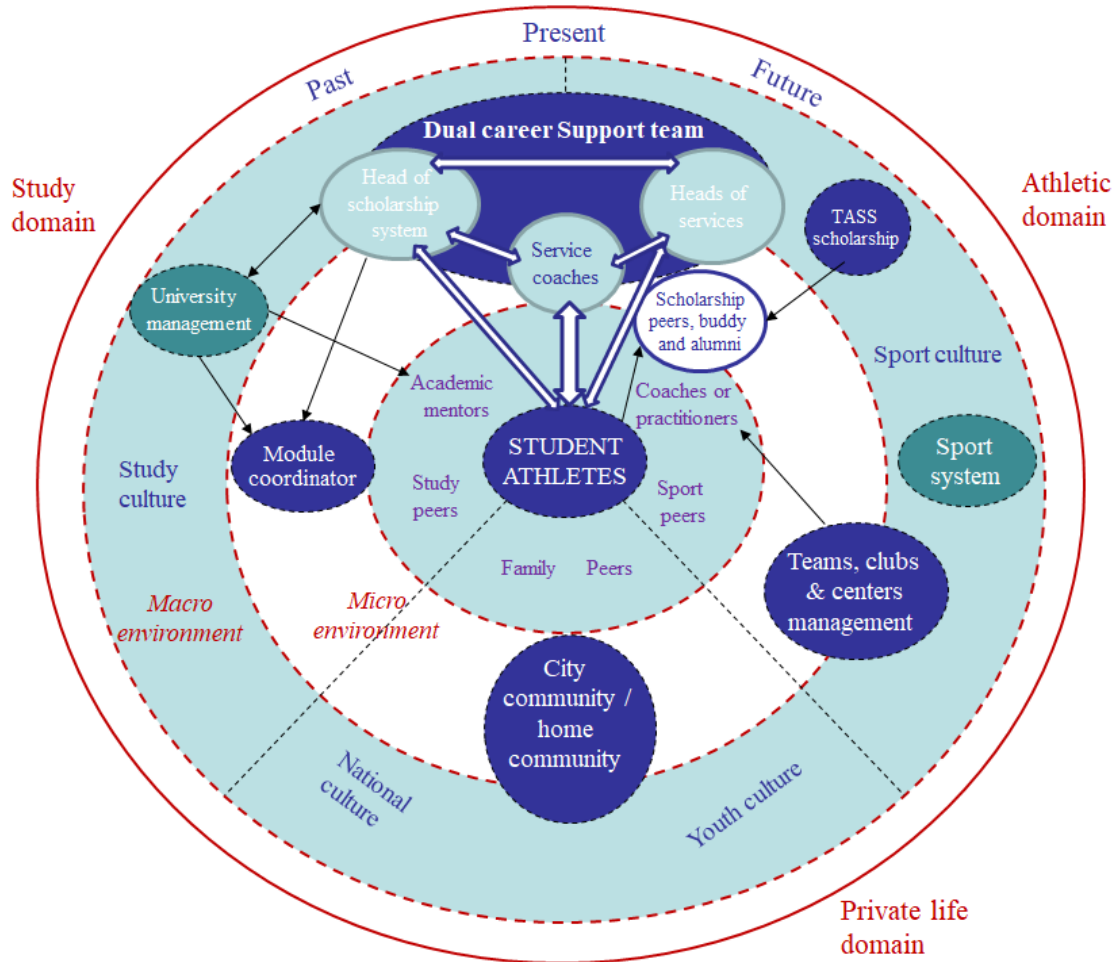


Figure 15. Dual Career Development Environment Model – Sports friendly university, UK

Main Features of the Micro-Environment

Within the micro-environment, there are a number of key stakeholders providing support to the dual career athletes, including coaches, sport science staff, academic mentors and module coordinators, family, and peers.

Coach(es). A key feature of the environment researched was that student-athletes were supported by sports coaches from their sporting environment. The closeness and bond of the coach-athlete relationship varied depending on the individual, their sport system, and the level the student-athlete was competing at, but was always a significant feature of the micro-environment. The dual career support team, mainly the sport science support staff, aimed to interact with the student-athlete’s sport coach in order to provide the most effective and

efficient support for the individual. This interaction was largely based on informal conversations and was dependent on the willingness of the sport coach to engage with the dual career support team.

‘Some [sport] coaches don't want to integrate, to interact with you in that sense. They believe that the job they're doing, is the job they're doing and the job you're doing, is the job you're doing. Some coaches try and dictate to you and tell you what they think you should be doing... and it's about trying to explain to them that “I'm the S&C coach, so I will work with you to get that information but, let me do my job”. And then, there are some coaches that are just brilliant. They just want to know what you're doing and why you're doing it, and how they can interact with that... So, yeah, it's a variable interaction to say the least’ (Head of Sport Science).

As illustrated by this quote, the sports coaches could be a facilitate or impede the student-athletes dual career and the work of the dual career athlete. Sports coaches who were willing to work with the scholarship team and were accepting of a dual career facilitated dual career management.

Sport science support staff. The package of sport science support (lifestyle, strength and conditioning, physiology, sport psychology and physiotherapy) that student-athletes receive is largely provided by either sport science support staff within their sporting environment or trainee practitioners within their scholarship programme on one-year internships. The internships are split into two tiers and are recruited based on experience - senior tier interns are master's level, PhD, or professional doctorate students and largely work with tier 1 student-athletes. Junior tier coaches are undergraduate level sport and exercise science students and largely work with tier 2 student-athletes. The trainee nature of the service coach positions allows for a high coach-to-athlete ratio as a number of sport science support staff can be recruited. However, their short-term nature means that one student-athlete could work with three different service coaches in their three years as an undergraduate student.

The program aims to align student-athletes with a service coach that has a connection in terms of their sport, their experience, or their personality.

‘We always try and link the support staff with the scholars. For example, this year we have a scholar who is a 100m runner and her S&C [strength and conditioning] coach was formally a scholar here and she was a 100m runner... You tend to have a good handle on the type of athlete, especially returning scholars because you know the way they think and the way the work... so you try and understand the character of the [service] coach and match them with a scholar’ (Head of Sport Science).

To do this, each service coach starts by providing a needs assessment of the student-athlete - this determines the level of support the student-athlete is currently receiving from their sport domain, the type of support they require, and also helps to ensure that support is not being repeated by the scholarship scheme and the sport domain. It also ensures that there are no gaps in support provisions. In addition, this process of connecting athletes to appropriate sport science provision enables the student-athletes and service coaches to quickly build a rapport and, therefore, student-athletes are more likely to engage with the program.

[Interviewer: Who do you consider as the key person that helps your effort to combine sport and school?]

Student-athlete: My S&C coach [strength and conditioning], I have three training sessions a week with him and he's just so flexible. He will make it work around my timetable, even though he's on the master's course as well. and he's come to watch me play. So he's, kind of, got that inside knowledge.

The effectiveness of this is reflected in that student-athletes often described the relationship they had with sport science support staff as one of their strongest relationships within the DCDE.

Academic stakeholders. Each student-athlete in the current programme is assigned an academic mentor who is their gateway to accessing academic support and flexibility:

‘Recently I have got a [course] exam coming up, and I go away then for [sport]. So, because my personal tutor knows I'm on this scheme anyway, we've not had

to come to [head of scholarship] or anything, he's just let me push it back a week” (Student-Athlete).

Nevertheless, the system, relies upon the commitment and understanding of key academic staff. Student-athletes and members of the dual career support team regularly commented that while some academic mentors were proactive, engaged, and supportive of the scholarship system, other academic mentors were not supportive and did not understand the benefit of the additional effort from themselves:

“I think it is mentor-dependent and there are some very pro-active mentors and I've also heard of some not very pro-active mentors. So, then there is a little bit of ownership on the scholar. But then it depends on the scholar. If they are a first year [scholar], they don't know what's going on.” (Head of Sport Science).

To try to overcome this challenge, the scholarship program has developed working relationships with some academic staff and, therefore, frequently use them as academic mentors. However, this network of supportive academic mentors does not yet cover all subjects in the university. Consequently, the academic mentors who are less engrained in the system can act as a barrier to the student-athlete accessing all the available academic support. This relationship then has to be mediated by other staff members, such as the head of scholarship system.

Family. Despite the majority of student-athletes in the scholarship system living away from home, their parents, guardians, siblings, and relatives still remain a significant source of support. In most situations, the family communicate directly and exclusively with the student-athlete. In some situations, however, the dual career support team felt it was important to establish communication with family members of student-athlete.

“With one of the scholars, who needs some extra support... me and her Mum are in regular contact. Her Mum just automatically contacts me every now and then, just to give me some updates and I will tell her the updates as well” (Lifestyle Practitioner).

When student-athletes were experiencing increase difficulty in managing their dual career demands, the dual career support team established a relationship with the student-athletes family members in order to provide more holistic support to the individual.

Peers. The micro-environment includes peers from the sport, educational, and private domains of student-athletes' lives. In addition to student-athletes own peers, who play a significant role in supporting the student-athletes day-to-day, the scholarship system aims to further support them through peer mentoring by connecting them to others in the scholarship scheme and other student-athletes who are at the university but funded through different schemes. There is a tight-knit community between student-athletes, who meet through the scholarship hub, the gym facilities, or by attending workshops. There is also a buddy system through which new, incoming student-athletes are paired with 2nd or 3rd year student-athletes who are expected to show the younger athlete what is expected of them and to be a point of contact for questions. The scholarship program also regularly invites previous alumni to give a talk on their experiences to current scholars. The benefit of this was considered to be the relatedness between the alumni scholars and the current scholars.

‘...Because [alumni-athlete] came here, originally, and she went to do it [the student-athlete's desired career] at [university], so I've already spoke to [lifestyle advisor] about that...I'm hoping to get in contact with her [alumni-athlete] to talk more about that transition and what it was like, because I think she did sport and exercise science as well, so exactly the same as what I'm doing.’ (Student-Athlete)

As illustrated by the quote, student-athlete could relate their career aspirations to the experiences of alumni-athlete, who acted not only as a role model but also a potential mentor for the current student-athlete.

Main Features of the Macro-Environment

Scholarship team. The scholarship team consists of one full-time staff member, who takes the role of head of scholarship and head of lifestyle, three part-time or consultant staff members, who act as heads of services - including sport science, sport psychology, and physiotherapy. The head of scholarship/head of lifestyle oversees the whole scholarship program and regularly

interacted with all scholars on a quarterly basis through performance lifestyle sessions. The nature of this dual position means that the individual had a high workload, but it also means that the scholarship management remained in regular contact with scholars and understood more clearly their associated needs. The head of scholarship also maintain regular contact with each of the head of service roles. The head of sport science is responsible for coordinating sport science support, including strength and conditioning, and nutrition. The role of head of sport psychology is held by a senior lecturer in the university as an addition to their research and teaching roles. While, this creates a high workload, it means the individual is closely connected with the latest research and practice in sport psychology. Finally, the head of physiotherapy is a consultant who is brought in to oversee the physiotherapy support, rather than a contracted member of staff. The head of services roles involves supporting some student-athletes directly but largely supporting and managing the sport science support staff.

Sports system and management. While, the student-athletes' closest communication link to their sporting domain was their coaches or practitioners, these individuals are influences by the wider sport system and sport management. Within the current dual career environment, the availability of coaches and practitioners was often dependent on the sport systems' funding and could be different for two student-athletes in different sports. For example, some sport systems preferred to provide all elite sport coaching at one national center, meaning that the student-athlete is requires to travel away from the university on a regular basis. This, in turn, effects their ability to study and requires the academic support such as distance learning.

[Observation note] Researcher was about to be introduced to a student-athlete by the head of scholarship system. The head of scholarship system explained that the student-athlete had been recognized as one of the 'ones to watch in the future' within the national team. He also explained that this sport has only one national centre for high performance where it hosts all of it's national team training sessions. The center was 4-5 hours drive away from the university. This meant that the student-athlete was almost never on campus and was completing all of his courses and assignments online.

In contrast, other sports have several regional centers for high performance, which means that the athlete can spend less time travelling to interact with national coaches.

University management. The university management provide the scholarship scheme with the financial resources and facilities to run the system. It does not, however, stipulate how services or support should be provided; this is determined by the head of scholarship, who has personal experience of managing a dual career. Further, the university management do not demand sport performance or progress targets from the scholarship team or the student-athletes. This approach from university management has meant that the scholarship has been designed to holistically benefit the student-athletes rather than to achieve performance targets. This also means that the scholarship team is able to focus on the long-term development of the student-athlete, rather than focusing on short-term performance benefits. This flexibility from the university management also enables development within the scholarship system. The scheme is able to adapt the support to each student-athlete's needs, i.e., provide alternative academic assessments as required, and is able to adapt and improve the scheme each year. For example, based on feedback the scholarship system now puts all its dual career workshops online so that student-athletes can still benefit even if they cannot attend.

Wider community. Since the DCDE is a university-based system, the student-athletes are most likely to be living away from their home communities. The influences of this home community, however, were still considered important to student-athletes as they regularly travelled back during weekends and university breaks. At university, student-athletes' main living environment was either university accommodation or private accommodation within the city. The culture of these two communities can be quite distinct. The university accommodation is considered to be a safe place to live that is overseen and managed by the university and populated with students only. Whereas, in private living accommodation the student-athletes are required to be independent and responsible for managing aspects such as rent and bills. They might also be living with non-student neighbours and, therefore, often considered themselves to be a part of the city community.

Environment Success Factors Model – Sport Friendly University, UK

Below we describe the DC-ESF for a sports friendly university as depicted in figure 16. We first describe the environments preconditions followed by key DC processes. The philosophical paradigm of the DC team is then described. We conclude with a description of the student-athletes’ development, their DC competencies and with DCDE effectiveness.

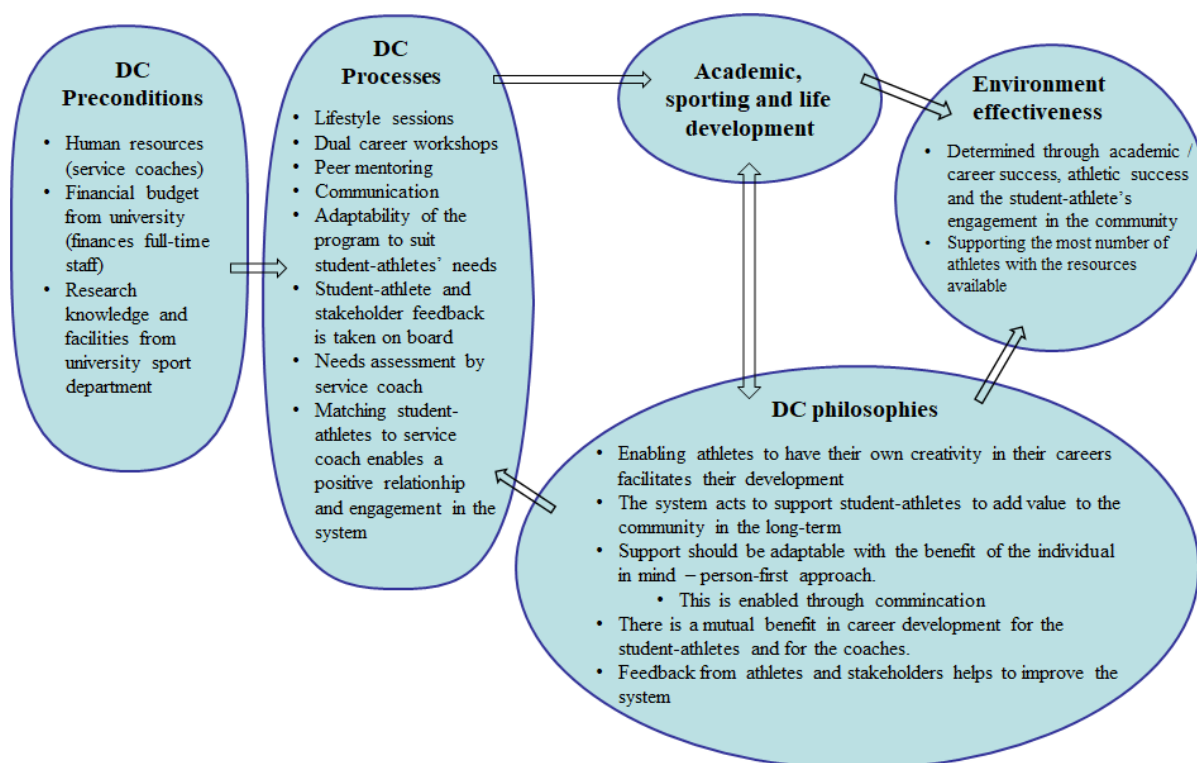


Figure 16. Environment Success Factors Model – Sport Friendly University, UK

Description of the Environment Preconditions

Resources. The program receives financial funding from university management - this is used for the Head of Scholarship and Head of Services’ salaries. However, the financial resources are considered to be limited and did not extend to additional equipment or salaries for sport science support staff. In lieu of salaries for service provision, however, the support staff are provided with education, experience, and career guidance in exchange for working with student-athletes.

‘What we do have is the resources of people, and that network of people that we really play on, and services in kind. So, a lot of the S&C [strength and

conditioning] interns [support staff], we don't pay those guys. But we give them an education as part of the internship, we give them kit as part of the internship, we give them career guidance” (Head of Service).

The support staff received national accredited training to ensure they are providing the best service provision.

Additionally, student-athletes are encouraged to participate in research being conducted in the School of Sport and Exercise Science. This research then informs practice within the scheme. Further, service coaches were able to discuss practical issues and interventions with lecturers and researchers.

‘There's a growing number of transition research now that I use, there's a life-development intervention that I use, based on research. And that is due to a lot of [lecturer at university]'s work, here, in transitions in sport. So, there is a research communication side and it's obviously very easy to talk to the [lecturers] or whoever to discuss issues you might have’ (Sport Science Support Coach - Lifestyle).

Gym facilities are also provided by university - these are separate from wider university facilities to enable student-athletes more access to equipment. Additionally, the university also provides access to other equipment, such as testing equipment. Large amounts of the equipment, however, is borrowed from the School of Sport and Exercise Sciences within the university. This can be challenging for the programme, as the scholarship program must work around the teaching and research demand for the equipment, rather than being able to access it at their will.

‘If we want to do any kind of bespoke testing, we have to do that within the School of Sport and Exercise Science building... If we need equipment, then it's a bit of a beg, borrow, and steal scenario, where we have to go to the School and say, we need these things...but if there's teaching going on, if there's research going on, we have to work around that... at lot of the time we have to book way in advance... It is about very clever timetabling, very clever communication, and very clever logistics...’ (Head of Sport Science).

Dual Career Processes

Annual induction meeting. The regular change of student-athletes, service coaches, and academic mentors means that the induction at the start of the academic year is important to ensure that all individuals involved in the program understand their roles, responsibilities, and expectations. This meeting also establishes an open-door policy to student-athletes who are encouraged to communicate issues to any person(s) they feel comfortable talking with, rather than imposing a hierarchy of staff members to communicate with.

‘We don't say, “don't bother coming directly to us, you've got to go through this chain and this chain”. It is, “go to the part of the chain that you [scholar] feel is most appropriate”’ (Head of Service).

This approach also means that student-athletes have several points of contact within the dual career support team who they can communicate issues with.

Lifestyle sessions. The Head of Performance Lifestyle and two lifestyle practitioners (both placements for professional doctorate sport psychology programs) meet with student-athletes at least four times in the academic year - the regularity of sessions was determined by the needs of the student-athlete and was most commonly more than this at once a month. These sessions aimed to support student-athletes to set short- and long-term goals, manage their dual career, and provide an opportunity to raise any issues they were having about their dual career.

“What we target mainly is career aspirations, time management, work-life balance, and how they [scholars] are communicating with the stakeholders” (Lifestyle Practitioner).

The lifestyle practitioners also aimed to encourage the student-athletes to consider their sporting, educational, and personal development and establish an appropriate balance which was beneficial to them.

Dual career workshops. Support staff in the dual career system also deliver a series of workshops for student-athletes. These sessions are available in person and via an online portal to ensure that student-athletes can still access the resource if they are unable to attend in person due to training or competition. The sessions include topics that are related to dual careers such

as developing dual career competencies, career planning, and performance lifestyle. Sessions tend to be run by members of the scholarship team, alumni student-athletes, or research experts from the universities sport department.

Communication. The sport science service coaches interact closely with student-athletes. As a result, the coaches tend to be the student-athlete's first point of call for communicating issues. In some cases, the service coaches are not equipped (or expected to be) with the skills to deal with some issues (e.g., a strength & conditioning coach is not expected to have the skills to deal with mental health issues). Instead, the service coach is encouraged to communicate the needs of the student-athletes to the head of sport science services or head of scholarship who can then delegate the responsibility of support to the relevant person.

'I'll give you an example, there was [a scholar] recently who, [experienced personal trauma]. The S&C [strength and conditioning] coach then came and communicated that to me [head of service]. He was like, "it's affecting her training a little bit and I'm not really very equipped with that and, I'm letting you know about it". I then say, "that's not your issues to deal with. Try to be as normal as you can". But, I'll then communicate that to [head performance lifestyle]. The [scholar] comes in, speaks to [head of scholarship system], he then came to me and said, "actually, they're fine, they want to be treated normally". Then, I relayed that back to the coach... So, communication between all the team is kind of key.' (head of service)

A key aspect of this system is the close-knit community of the scholarship team and the effective communication links they had established in order to best protect and support the student-athletes. The communication of issues allowed for the most appropriate and qualified person(s) to support the student-athlete and for them to have autonomy in how they wished to be supported. Difficulties arose in the system, however, when student-athletes did not communicate with scholarship staff or did not engage in the service. Therefore, the program is reliant upon the scholarship team building relationships with the student-athletes and with service coaches.

Dual Career Philosophy

Support should be adaptable with the benefit of the individual in mind. The system promotes supporting student-athletes in a way that provides the best for them. This means that the services and support are adapted for the student-athletes' needs, which is recognised by student-athletes:

‘I just know that they will always put the [student-athlete] first. They always put us first. They are always open for feedback... and they always want to know what they can do to help us.’ (Student-athlete)

One example of this is, unlike many similar systems, the scholarship system does not have a policy which demands that student-athletes compete for the university in the national universities league if it does not work for their schedule or their training. This means that the university sacrifices the potential short-term benefit of having their best athletes compete for them, but it does mean the individual is better supported and less likely to experience burnout or overload due to competing too much or having too many demands.

[There is a mutual benefit in career development for the student-athletes and for the service coaches.](#) During their internship or placement, service coaches receive support, education (e.g., lifestyle advisors were sent on a CPD national training course), and work experience from the rest of the scholarship team in return for their work with student-athletes. Therefore, this system works on a two-way, beneficial relationship between the service coaches and the scholarship program.

‘What's great about it [scholarship system], is the service provision is being delivered by guys who are trying to build a career, the system has been designed and integrated by someone who has changed career, it's been driven by someone who is trying to enforce the message of dual career. So, career through everything. Whether it's career as a coach, career as an athlete. Its driven through everything’ (head of service).

[Feedback from athletes and stakeholders helps to improve the system.](#) A growth mindset within the program and scholarship staff was evident. Staff members were open to receiving feedback

from student-athletes or stakeholders and made every effort to adapt the service based on this feedback in order to enhance the system's effectiveness.

Dual Career Development Focus

The dual career support team aimed to support student-athletes' development in two ways.

To have their own creativity in their careers facilitates their development. The approach to supporting student-athletes was to empower them to have their own creativity in their careers. This means that student-athletes are encouraged to follow a career path that works for their strengths, rather than following a set pathway. The understanding behind this was that the individuals will succeed in and enjoy their careers more if they had been empowered to take their own path. This philosophy was encouraged in both sport and in their careers.

To add value to the community in the long-term. The system aims to support student-athletes to succeed in sport and in their careers, but also to add value to their community after sport. This approach is backed by an understanding that the benefit of the system to the university is not in the national university league points they can gain in the short-term, but the value is in the long-term through athletic success, academic success, and the student-athletes giving back to the community. There were three female athletes given as examples of successful student-athletes who have graduated the scholarship scheme. All three individuals had achieved Olympic or professional athletic success and had obtained high quality degrees. However, it was emphasised by scholarship team that the success of these individuals was really measured through the active role they play in the sport, university, and city communities. Furthermore, it was believed that the individuals did this because they enjoyed their experience at the university because they were not contracted to these commitments.

DCDE Effectiveness and Efficiency Criteria

The athletic performance of the student-athletes is monitored by the dual career support team, however the scholarship staff recognised that this is not always a direct link to the effectiveness of the work that they do. Therefore, the system also uses regular athletic metric tests, including their progression in various physiological and strength measures, that are appropriate for the sport. These metrics are used regularly and compare with alumni student-athletes scores as a marker against progress.

Feedback from student-athletes was provided at formal reviews and taken seriously by the scholarship management, who regularly adapted the system based on these comments. Feedback also came in the form of informal chats between the student-athletes and service coaches, which was then passed to scholarship management. For example, it was suggested that the program could implement formal review meetings with service coaches to ensure this feedback is passed on and adaptations are made quickly. Furthermore, the scholarship team would conduct an annual review between themselves to review their effectiveness and efficiency, and to enhance the service for the following year. This review included an assessment of how resources have been delegated, which services had been particularly busy the previous year, and which services had not been as well used by student-athletes. This allowed the scholarship team to adapt the distribution of resources the following year, by bringing in more service coaches for the sport science services that are most used and less coaches in the services that are not.

‘So each year, me and [head of scholarship system] will meet up and do a review of the previous year. What went well? What can we do better? From a performance point of view, I will look at services that were popular that we might need more provision in. We might look at services that weren't popular, that we don't need anymore’ (Head of service)

Factors Contributing to Effectiveness and Efficiency of Dual Career Development Environments Outline and Methods

Next, the research group conducted an analysis that aimed to identify the shared factors (e.g., related to the structure, dual career arrangements, organizational culture, and the role of dual career service providers) that contributing to the effectiveness and efficiency of the DCDEs. To achieve this aim, all of the results from the case studies across Europe were evaluated and were then drawn together to create a list of shared success factors for dual career development environments.

Methods

The research team consists of two-three researchers from each partner country (15 in total) and four DC support providers from Belgium, Denmark, UK and Sweden. The cross-case analysis proceeded through five stages: (1) Familiarization with the seven DCDE case studies through oral and video presentations. (2) Provisional list of features. (3) Series of focus group discussions about the provisional list aimed at defining and describing the shared features of European DCDEs. (4) A working group constructing a list of shared features based on focus group discussion, and (5) member reflection of the shared features review and final agreement of the list of features as presented in table 7 and 8. To provide us with rigor, critical reflection and discussion was in all stages until we found consensus (Smith & McGannon, 2017). When consensus was found we entered the next stage of the analysis.

The first stage was *Familiarization with the seven DCDE case studies through oral and video presentations*. The aim of this stage was for all partners to get a feeling of the unique features of all seven cases. This stage was based on preparatory work of each partner country and consisted of a written report of each case study supplemented by the empirical versions of the DCDE model and DC-ESF model, and a 15 minutes videotaped presentation (table 6). All members of the research team were prepared for this presentation round and had read the reports and viewed the videos of all seven cases beforehand. At this meeting one researcher from each country provided a short oral presentation for the entire research team. The partners were asking for clarifications if this was needed in order to reach the aim of the first stage.

The second stage was the *Provisional list of features compiled by the project coordinators*. The aim was to provide a starting point for the identification the shared features of European DCDE. The project coordinators (two persons) read all reports, analyzed the empirical working models, and watched the 15 minutes video presentations. Based on this initial step they presented a provisional cross-case analysis. The research team (presented above) was discussing and critically reflecting on the preliminary list and agreed that further cross-case analytical work was needed. Therefore, a third stage with a series of focus group discussion was designed and initiated.

The third stage was *Series of focus group discussions*. This stage consisted of two rounds of focus group discussions. The overall aim was to identify and discuss similarities and differences of the seven cases and to develop the list of shared features. All members of the research team participated. To avoid that we overlooked important differences between the multiple types of DCDE environments (Cartigny et al., *Manuscript in Preparation*) in the ambition of identifying shared features of European DCDEs, the research team divided into two groups. In the first round the groups were: One focus group analyzing cases of sport schools for adolescents (Finland, Spain, Slovenia, Belgium) and one analyzing university cases (Denmark, Sweden and UK). The two groups discussed and reflected upon the unique features of each case and identified initial similarities and differences. Since both focus groups identified similar descriptive features of the DCDEs, the research team agreed to continue with one list of shared features for all DCDEs. The research team acknowledged that all environments are unique and that they are embedded in and shaped by specific local contexts and cultures; however, the research team agreed on a list of features for further elaboration to understand the European DCDEs sharedness. The second round of focus group discussion was to find consensus on the meaning of the shared features identified in the first round. The research team were again divided into two groups with representatives from all countries in each group, so an expert of the case was represented. The discussion centered around clarifying the meaning of shared features, and provide detailed descriptions one by one. One group was mainly focusing at the holistic structure of the DCDEs and the other on the shared DC philosophies. Two persons in each focus group took notes and were leading the discussion in a collaborative and democratic manner and were making sure that all member of the research

team contributed with insights from their case studies. At this stage the cross-case analysis the common features of athletic talent development environments served as inspiration (Henriksen, 2010).

The fourth stage *A working group constructing a list of shared features based on focus group discussion*, was aimed to create a written outline of the shared features. Based on the notes from the two rounds of focus group discussions (stage three) a leading working group consolidated the focus group reflections and constructed a list of shared features. In addition to providing descriptors of the shared features, we also constructed the descriptors' *opposite poles* to further clarify the meaning of each feature (see table 7 and 8). These opposite poles are meant as examples. However, they are not only inferred logically but also grounded in the project team's extensive experiences of working to improve less successful DCDEs and from the focal cases, where the participants reflected on both the strengths and the weaknesses of their environments.

This was an iterative process going back and fourth between notes from the focus group discussion, the case study reports and the list of shared features of athletic talent development environments (Henriksen, 2010).

The fifth stage was *Member reflection of the shared features review and final agreement of the list of features* as presented in table 7 and 8. A draft of the table with descriptors and opposite poles was sent to all members of the research team, who was invited to reflect, comment and revise the document. We used member reflection to go back to each case and provide further intellectual precision of shared features of European DCDEs (Smith & McGannon, 2017). Based on minor comments and feedback, the working group revised the table, which again was sent to the entire research team. The table was further developed by using it as a pre-designed coding frame (Braun & Clarke, 2019) for a second case description. This stage provided insight to how all environments do have space for improvement; they compensate for their weak points; however altogether the cases helped us to formulate and construct descriptors and opposite poles of European DCDEs. The research team agreed on the shared features of European DCDEs as they are presented in table 7 and 8. Finally the shared features are reflected in the real-life practices and features that were present in the seven cases studies (Table 9).

Table 6. Overview of European Cases and Data Collection

	European Cases						
	Belgium	Denmark	Finland	UK	Slovenia	Spain	Sweden
Type of DCDE	National sports programme	Sport friendly University	Elite sport school	Sport friendly University	Private club	Private club	Combined dual career system
DCDE effectiveness	Sports progress and performance Most student-athletes continue DC at higher education No/limited drop-out	Student-athletes winning international medals Effective students Low drop-out DC satisfaction	Student-athletes winning international medals in juniors and later in seniors. No drop-out. High graduation rates. No data of non-athletic pursuits	Long term success as athletes, in their careers and as members of the community	Long term success in their future vocations and as members of the community High graduation rates Academically successful students	Sports maintenance Athletic achievements (results) Academic achievements (grades)	Low drop-out Effective students
Sports	Gymnastics	Multiple	Winter sports	Multiple	Swimming	Multiple	Athletics
Age group	12-19	19+	16-20	19+	16-18	10-18	19+
DC support	Organisational set-up	Three full time employees	No DC support team or system	Three permanent support providers for	Two part-time employed DC support providers (both	School's sport coordinator and to a lesser extent both the	Four support providers

				sport science and lifestyle	in school, one is teacher as well)	clinical and the sport psychologist	
Data Collection of the Case Studies							
Interviews	Coaches (3) Student-athletes (5) Staff sports federation (2) Staff Sports Administration of the Flemish Government (2) Staff boarding school (3) Staff elite sport school (5) Parents (2) Medical team (2)	DC support (2) Student-athletes (2) Coaches (2) Vice-counsellor Teacher	Student-athletes (6) Teachers (3) Student counsellor Coaches (2) Principal Head of the sports academy Mental trainer (non-structured) Dormitory mother (non-structured)	DC support (5) DC athletes (2)	DC support (2) DC athletes (1) Coach (1)	Students-athletes (5) Management board (3) Sport psychologist Clinical psychologist Retired athlete. Focus group interview (2 management board members, teacher and coach	DC-support (4) Coaches (2) Vice-counsellor Focus group interviews (4 DC-athletes and 4 coaches)
Observations	30 hours	50 hours	144 hours	75 hours	30 hours	90 hours	85 hours
Documents	Web page Information documents boarding and sport school	Web page Social media	Social media Web page Surveys Work sheets Banners	Web page	Web page Official documents Social media	Web page Official documents	Web page

	Policy documents	Bus schedule Staff photograph	Athlete's diary of activities
Data received from each country	DCDE empirical model, DC-ESF empirical model, case description (5000 words), a deductive case analysis using table 7 and 8 as a lens.		

Factors Contributing to Effectiveness and Efficiency of Dual Career Development Environments Results

The following is a list of shared features of successful DCDEs. The list is derived from an analysis of seven case studies from across Europe. The environments vary in terms of the age of the athletes, the type of environment, and the level of sport and education they support. All environments were unique and had developed their own ways of supporting dual career athletes. Still, the environments also shared a number of features and in many ways employed the same principles in their work. Therefore, the uniqueness of each environment was often expressed in the approaches they took to implement the common principles.

In addition to providing descriptors of the main features, we also include the descriptors' *opposite poles* to further clarify the meaning of each feature. These opposite poles are meant as examples. However, they are not only inferred logically but also grounded in the project team's extensive experiences of working to improve less successful DCDEs and from the focal cases, where the participants reflected on both the strengths and the weaknesses of their environments.

The shared features are structured into two overarching themes – holistic structure and shared dual career philosophy – ten themes are encompassed in the overarching themes (five for each).

Holistic structure

The features listed below (Table 7), refers to the specific components of the environment (people, institutions etc.), to the roles and functions of these components, and to the communication and coordination between the different components and levels of the environment. The holistic structure of DCDE should be centered around DC athletes and embrace micro- and macro-levels, and sport, studies and private domains with appropriate connection and relationships between key stakeholders being central to this. This theme mainly relates to the DCDE model.

Table 7. Holistic Structure Factors of Successful Dual Career Development

Environments

Features of Successful DCDEs	Descriptors	Opposite Poles
Dedicated DC support team	<ul style="list-style-type: none"> • Designated team (or person) responsible for coordinating sport and study domains with specific the specific function of ensuring facilitation of (successful) sport and study. The team provide one central entry point so that the DC athletes know where to go for support. • Helping DC athletes manage their dual careers is everybody’s business (coaches, teachers, and others should all make an effort to make dual career as easy as possible) but the responsibility to coordinate and integrate should lie with a few designated people - the dedicated DC support team. 	<ul style="list-style-type: none"> • Multiple contact points leave DC athletes uncertain about who to approach when they need assistance with DC issues. DC athletes are sent to multiple people in the system and feel no one has overall responsibility and can really help.
Integration of efforts across the whole environment	<ul style="list-style-type: none"> • Coordination and communication across the sport and study domains. Representatives of the domains (e.g., coaches, teachers, DC support team) have on-going communication about solutions to DC athletes’ challenges. Micro- and macro- levels are linked through formal or informal networks. • DC athletes experience concordance and synergy in daily life. 	<ul style="list-style-type: none"> • Lack of communication. Conflicting interests. DC athletes experience contradicting priorities in daily life - for example, when coaches advise athletes to primarily focus on their sport and teachers on their studies.
A clear understanding of DC issues and support from across the environment	<ul style="list-style-type: none"> • The environment provides opportunities for DC athletes to focus on the sport and study at different time points depending upon key priorities at that time. People around the athlete acknowledge and accept the DC 	<ul style="list-style-type: none"> • The wider environment shows lack of understanding of the demands involved in pursuing a dual career. Academic staff express that sport

	<p>athletes' dedication to combining sport and study.</p> <ul style="list-style-type: none"> • Recognition, understanding and support from family, coaches, teachers, peers and others to facilitate this. 	<p>is a barrier for education, and sport staff and teammates consider studies as a barrier to sport performance.</p>
<p>Role models and mentorship</p>	<ul style="list-style-type: none"> • The presence of appropriate persons who DC athletes can be guided by. This guidance may be direct support (mentorship) or a person they look up to and try to emulate (observational learning). • Opportunities to learn from other DC athletes who are willing to pass on their knowledge. DC support team passes on inspirational narratives about experiences of other DC athletes. 	<ul style="list-style-type: none"> • Impermeable boundaries between DC athletes at different levels of sport and or education. Athletes regard other athletes as rivals and are unwilling to share. Successful solutions to DC issues are not used for inspiration.
<p>Access to expert support</p>	<ul style="list-style-type: none"> • Access to experts and services, such as nutrition, physiotherapy, sport psychology, and medical services, and appropriate teaching support. This access can be through the sport or study domains. DC support team knows how to help the DC athletes get access when needed. 	<ul style="list-style-type: none"> • No access to experts. DC athletes who need expert support do not know how to get this help.

Shared Dual Career Philosophy

As an overarching theme, a shared philosophy suggests that key stakeholders in the environment share basic ideas and values related to dual careers. The features listed below (Table 8) start with the very idea that the philosophy is shared. Key values and ideas related to dual careers are shared or aligned among DC support providers, sport staff, academic staff, family and friends.

Additionally, there is agreement at the most fundamental level, that sport and education can benefit each other and that competencies acquired in one domain (study, sport or private) can be of value in the others. Below, we describe the content of the philosophy, i.e. the key values

and ideas that successful DCDEs share. This theme mainly relates to the dual career environment success factors model.

Table 8. Philosophy Successful Dual Career Development Environments

Features of Successful DCDEs	Descriptors	Opposite Poles
A whole person approach	<ul style="list-style-type: none"> An acknowledgement of the influence of the different domains influencing DC athletes' lives, with a focus on developing the DC athletes holistically in whatever pathway they select. People from one domain take an interest in the athletes' experiences, challenges, and learning in the other domains. 	<ul style="list-style-type: none"> People in the sport domain focus solely on sport, people in the study domain solely on education etc.
An empowerment approach	<ul style="list-style-type: none"> Providing opportunities for DC athletes to develop competencies and resources to manage their own dual career and become autonomous. Focus on personal development. An on-going development system with increasing empowerment of the athletes. 	<ul style="list-style-type: none"> Focus only on sport and study specific skills and not on DC competencies. Excessive control. No active involvement of DC athletes in key decisions regarding their own DCs.
Flexible DC solutions	<ul style="list-style-type: none"> Recognition that DC athletes are different people and will require different solutions to support their DC. This may include sport and / or academic flexibility, and flexibility with, for example, education assessments. Education based DCDEs allow for an extra focus on sport when needed, and sport based DCDEs allow for an extra focus on education when needed. 	<ul style="list-style-type: none"> Dual career initiatives and services are not individualized but fixed. Support services are not appropriately contextualized to the different sport and to the needs of individual athletes. Academic and sport staff compete for the limited time DC athletes have.
Care of DC athlete's mental	<ul style="list-style-type: none"> Dual careers are managed in a socially responsible manner. People in the DCDE recognize 	<ul style="list-style-type: none"> No recognition from the environment of responsibility for DC

health and wellbeing

their responsibility, not only for the athletes' sport and academic achievements, but also for their wellbeing and mental health.

- Ethical conduct guidelines for the protection of athletes and support systems (e.g., referral systems) are embedded in the policy of the environment.

athletes' overall balance and mental health. Gladiator philosophy that sport is hard, and athletes should toughen up. DC athletes hide vulnerabilities. Sport and academic staff do not speak up when they learn of practices that are not appropriate. No policies in place.

An open and proactive approach to the development of the environment

- Dual career support providers engage in on-going development of their environment and their own competencies. Examples include: further education, reading of new scientific literature, on-going evaluation of services, visits to other DCDEs, and involvement in research projects.

- Lack of time for on-going professional development and evaluation. There may be knowledge sharing within the team but no expansion of horizons via further education, reading of new scientific literature, on-going evaluation of services, visits to other DCDEs, and involvement in research projects. Seeing other DCDEs as rivals.

Table 9. Characteristics of the environments under study

	Features of European DCDEs						
	Belgium	Denmark	Finland	UK	Slovenia	Spain	Sweden
Dedicated DC support team	<ul style="list-style-type: none"> -Three institutions represented by one key person from each constitute the dedicated DC support team. -The elite sport school, the sports federation and the boarding schools are central pillars. 	<ul style="list-style-type: none"> - An open and accessible team of three people employed at the university is first point of entry. - Personal relationship between student- athlete and DC support providers. - Specified roles and responsibilities. 	<ul style="list-style-type: none"> -No specific DC support team. -Two student counsellors provide support in course related matters at school. 	<ul style="list-style-type: none"> -Well-coordinated DC support team. -DC support team communicate with sport and academic stakeholders. -Specified roles and responsibilities. 	<ul style="list-style-type: none"> -DC support team is situated in the school system. -Roles and responsibilities are specified for a few people. -DC support is mainly provided for the educational aspirations. 	<ul style="list-style-type: none"> -No specific DC support team. -Coaches, teachers or sport psychologists act as DC support providers as a secondary role. -The school's sports coordinator was key stakeholder. 	<ul style="list-style-type: none"> - A dedicated team of DC support providers and coaches. -Roles and responsibilities were clear, and actions were coordinated. -Coaches were often first point of entry to dual career support. - Easy to get in contact with.

<p>Integration of efforts across the whole environment</p>	<p>-Managed by three key persons representing the sports, study and private life domains. -The structure is the key connector between the three domains. -Student-athletes get emotional support in close relationships with their friend from sport and school.</p>	<p>- Student-athlete and DC support provider relationship is key connector between sport and study domain. -The integration of micro and macro systems is mediated by the DC team. -Team Denmark provide financial support for the combination of sport and study.</p>	<p>-The communication between school and sport is distant. -There is a lack of communication between coaches and family. -Finnish Olympic Committee provides educational and financial support for the sports domain.</p>	<p>-DC support team communicate with sport and study stakeholders to ensure support is not missed or contradictory. -Relationships are largely informal between persons. - Communication and coordination is 'person-dependent'.</p>	<p>-The swimming club and the gymnasium are separate organisations with no to little integrated efforts.</p>	<p>-No integrated efforts. -There is a lack of coordination between several agents, specially between coaches and teachers. -The school domain adapts to the sport domain to compensate. -Families provide practical support to compensate.</p>	<p>-The DC support team was integrated with both sport and study domain related staff. -Study related communication is via DC-coordinator. -Collaboration at the macro-level between the university, the local authority and the regional sports federation and local sports.</p>
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<p>A clear understanding of DC issues and support from across the environment</p>	<p>-A clear understanding and support integrated in the environment.t -The aim of the environment is to facilitate student-athletes' graduation from secondary education; yet, sport is the priority. -Family has a critical supportive role, but unintentionally risk imposing extra pressure because they emphasise school since there is no</p>	<p>-A clear understanding and support across the environment. -Coaches were supportive and willing to allow flexibility. -Study peers were important in practical and emotional support. -The external support network acknowledges DC.</p>	<p>-No clear and common understanding. -Teachers are giving extra assignments when athletes are absent. -Coaches say they support DC but do not encourage the pursuit of academic accomplishment. -Family is distant but remind about the importance of school.</p>	<p>-The DC support team promote the importance of DC. -DC is mostly well supported and understood. However, on occasion, some stakeholders do not understand the benefit of making adaptations for DC athletes.</p>	<p>-No clear and common understanding. -The main focus is at education. -Coaches were supportive and flexible. -Sport peers were supportive during training.</p>	<p>-No clear and common understanding. -Lack of interest and/or sensitivity from coaches regarding the obligations and commitments that student-athletes have with the school. -Parents remind about the importance of going ahead with education.</p>	<p>-Shared understanding of student-athletes needs and challenges. -Coaches and teachers are supportive, acknowledge and accept the student-athletes dedication to pursuit a dual career. -Sports peers provide strong support on a daily basis as primary social network.</p>
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	future living in gymnastics.						
Role models and mentorship	-The boarding school educators was close mentors supporting a whole life balance. -No developed structures for mentorship and role modelling.	-Not situated in one specific location. -Virtual community based on shared narratives support vicarious learning.	-The DCDE highlights the sporting role models who have achieved international success. -Olympic training centre is located in the environment, but the available athletic role modelling resources are not utilized.	-Multiple methods of mentorship. -Student-athletes are assigned a buddy. -Tight-knit community promoting peer learning and support. -Previous alumni gives presentations.	-No organised mentorships. -Peer student-athletes were helpful and thus acted informally as mentors.	-The DCDE acknowledge student-athletes that managed the transition from junior to senior, at the same time as not dropping out from their higher academic education. -Coaches were role models.	-Informal mentorship between student-athletes at the training centre. -Role models from the same sport.

Access to expert support	<ul style="list-style-type: none"> - Multidisciplinary meetings to follow up on injuries and training schedules. - Access to physiotherapists on an everyday basis. - Sport psychologists mainly provide support related to sports domain issues. 	<ul style="list-style-type: none"> - Via federations, clubs and Team Denmark the student-athletes get expert support. - DC support providers referred to the sports system. 	<ul style="list-style-type: none"> - Physiotherapist, sport science and nutrition specialists within the DCDE. - National team athletes have access to sports doctor and mental training. 	<ul style="list-style-type: none"> - Lifestyle, sport science, psychology and physiotherapy support services within the DCDE. - Career planning workshops. - Additional expert services in the sport system. 	<ul style="list-style-type: none"> - The school provide support related to the education. - Physiotherapy and sport psychology via the sports clubs. 	<ul style="list-style-type: none"> - Student-athletes not aware of support services available. - The sports club provide sport psychology service, medical services and physiotherapy - The school offers clinical psychology. 	<ul style="list-style-type: none"> - The DCDE organised a performance team with experts in sport psychology, sports medicine, physiotherapy, nutrition and training.
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<p>A whole person approach</p>	<p>-All stakeholders take an interest in the other domains. -The close cooperation and direct communication are key to a whole person approach. -The boarding school is the main driver of the whole person approach. -In the future a more individual trajectory for each student-athlete is needed.</p>	<p>-Student-athletes are more than athletes. -They learn to prioritize and plan if they have not developed this competence before. -Student-athletes develop social skills. -Support to be in the present moment.</p>	<p>-Student-athletes are mainly perceived as athletes. -Too much time spent on studies is seen as a barrier for sport development. -The primary goal is to develop in sport and secondary to pass classes.</p>	<p>-DC support team take an interest in sport, study and private life domain. -The aim is to develop the student-athletes outside sport and develop skills and competences for long-term success in sporting and vocational career.</p>	<p>-Student-athletes are more than students and athletes, but there is a lack of support for this challenge in both sport and study domain. -All should have other interests besides school, and sport as additional to elite education.</p>	<p>-Lack of communication challenge the whole person approach. -The sports domain stimulates contexts and roles in their lives (e.g., friend, student, child, partner) to avoid one-sided athletic identity.</p>	<p>-Student-athletes are more than students and athletes. They are whole persons with individual needs and interests. -Student-athletes must be able to switch between different worlds.</p>
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An empowerment approach	<ul style="list-style-type: none"> -Self-discipline, planning skills, and maturity developed in response to the requirements of the environment. -The strongly structured DCDE restricted interactions with peers outside elite sport. 	<ul style="list-style-type: none"> -First year student-athletes get proactive support. -DC support as a response to the student-athletes request in all other phases, then they grow as self-responsible student-athletes. 	<ul style="list-style-type: none"> -Coaches gave very direct instructions. -Student-athletes matured as persons. -Student-athletes are encouraged for the athletic path -First year student-athletes struggle to adapt to a new living, education, and training, but it is not specifically supported. 	<ul style="list-style-type: none"> -Student-athletes are encouraged to follow a career path that works for their strengths. 	<ul style="list-style-type: none"> -Student-athletes are co-creators of a good environment. -In the school and in the swimming club the student-athletes are expected to act as grown-ups. 	<ul style="list-style-type: none"> -Teach time-management and emotions regulation. -the DCDE philosophy is not shared (at least in an explicit way) by all agents in the club. 	<ul style="list-style-type: none"> -Student-athletes are responsible grown-ups who need to take responsibility for their own development. -Support is a matter of empowering student-athletes to be in command of their own development.
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<p>Flexible DC solutions</p>	<p>-Flexibility from both sport and study domain, but mainly in the study domain. -Modular study systems and online learning environment to monitor study requirements and progress. -Teachers provide extra tutoring during the day in the lunch break. -Coaches shorten sometimes practice session in exam-period.</p>	<p>-The key to success is to find flexible solutions in the ‘normal’ university system and create individual study plans. -Individual study plans are changed along the way, which is supported by the DC support team.</p>	<p>-Little flexibility from sports and school domain. -Student-athletes’ curriculum differs from that of regular students. -Possibility for night school. -Possibility of completing studies in five years (instead of 3-4 years).</p>	<p>-Aimed to provide individual solutions, identifying short and long-term demands, individual needs, and establish a culture of flexibility. -The services and support are adapted for the student-athletes need.</p>	<p>-The pedagogical coordinator support for student-athletes’ individual study plans. -Student-athletes are allowed to spend PE classes in the club. -The school offered additional teaching.</p>	<p>-Flexibility from the study domain. -Teachers and the schools’ sport coordinator support student-athletes’ planning (e.g., exams, homework).</p>	<p>-Flexible study solutions with possibilities for moving exams, taking exams elsewhere, or reduce study pace. -Training was organised in a flexible way to fit the DC lifestyle. -Training facilities accessible 8-10 hours per day.</p>
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<p>Care of DC athlete's mental health and wellbeing</p>	<p>-Student-athletes do always have access to sport psychologists. -The student-athletes struggle with homesickness because they live at a boarding school in a young age.</p>	<p>-Free access to health care systems in Denmark. -The law of elite sport states that elite sport should be pursued in a socially responsible manner. -Optimal balanced DC is seen as a protective factor.</p>	<p>-Free access to health care systems in Finland. -Life skills classes teach student-athletes to balance their life. -Lack of services to support mental health problems (e.g. eating disorders or anxiety).</p>	<p>-The lifestyle and sport psychology practitioners manage mental health and well-being issues. -Recognition of mental health and well-being is developing in UK.</p>	<p>-The pedagogical coordinator is a psychologist and support mental health issues. -Problems regarding perfectionism. -The coach is aware in the club context and refer student-athletes to a sport psychologist.</p>	<p>-Clinical psychologist and sport physiologist are responsible for mental health issues.</p>	<p>-The mission of the DCDE is healthy performance development and life balance for the whole person. -The Swedish DC system aims providing "winners in the long run".</p>
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An open and proactive approach to the development of the environment

-Ongoing DC development of student-athletes in the fifth and sixth year of secondary education by DC support team.
-Career guidance meetings with career counsellors for student-athletes who are about to graduate.
-Student-athletes stay in the boarding school during the transition to higher education.

-Take part in research projects.
-Visit other DCDEs to learn and to share own knowledge.
-Continuous evaluation of sports achievements and study efficiency (ECTS points).

- Internally collected satisfaction questionnaires.
-Engage with research conducted by the department of sports sciences to develop the sports domain.
-Teachers say there are no training opportunities for them.

-Open to feedback and evaluation.
-Evaluation of the efforts at the end of each academic year and adaptation of the program.
-Engage with research conducted by the School of Sport and Exercise Science.

-No time spend on developing the environment.

-No time and resources at the time of investigation to develop the environment.
-This investigation encouraged the employment of two part time DC support providers.

-The DC support team searched continuously for ways to develop and improve.
-National network meetings on DC.
-Were visited by other DCDEs.
-Constructive discussions in the DC support team on a daily basis

Conclusion

This report provides a summary of work package 2 which covers aim 2 of the Ecology of Dual Career ERASMUS+ project - To identify factors contributing to the effectiveness and efficiency of DCDEs through exploration of selected DCDEs in participating countries by exploration of their structure, dual career arrangements, organizational culture, and the role of dual career service providers.

The report outlines seven case studies that were conducted to explore successful dual career development environments. These case studies each developed two model: (1) an environment model, that outlines the structures of the case study's micro and macro environment; and (2) an environment success factors model, that outlines the preconditions and processes that lead to the environment's success.

The report then outlined the environment features that were common to all seven successful environments, including dedicated DC support team, integration of efforts across the whole environment, a clear understanding of DC issues and support from across the environment, role models and mentorship, access to expert support a whole person approach, an empowerment approach, flexible DC solutions, care of DC athlete's mental health and wellbeing, and an open and proactive approach to the development of the environment.

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