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## White-Water III Rafting Guide at *Faszinatour*

Master's Degree in Nature Sport

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Keywords: Rafting, Canyoning, Nature and Adventure Sports.

“My belief is that we were put into this world of wonders and beauty with a special ability to appreciate them, in some cases to have the fun of taking a hand in developing them, and also in being able to help other people instead of overreaching them and, through it all, to enjoy life - that is to be happy.”

**Robert Baden-Powell, founder of the Scout movement**

“Para a construção da Feli(z)cidade”

**Fernando Nelson Corrêa Mendes**

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## ABSTRACT

Nature and adventure sports has seen a great increase in the past years, not only as a personal practice but also in the tourism sector. Among these sports it is possible to find two which are further characterized in the present work: rafting and canyoning.

A common point between the two is the role played by white-water, even if the interaction with the element differs.

A highly qualified company in Haiming, Tirol, provided the set for a 5-month internship as a white-water rafting guide. It allowed an up-close field view on how these sports are applied in the tourism sector.

A study was preformed among canyoning guides in Tirol, allowing the characterization of the population in question, regarding physical activity levels, nutrition and certification.

The internship was essential to apply knowledge previously acquired during the master's lessons and to understand how it is applied in a "real life" setting.

Keywords: rafting, nature sports, canyoning, white-water, guiding.

## RESUMO

O desporto de natureza e aventura tem visto a sua prática aumentar nos últimos anos, não apenas como prática pessoal, mas também no setor de turismo. Entre estes desportos é possível encontrar dois que serão caracterizados no presente trabalho: o *rafting* e o *canyoning*.

Um ponto em comum entre os dois é o papel desempenhado pelas águas bravas. Aqui difere a interação entre o desporto e o elemento.

Uma das empresas mais bem classificadas na zona do Tirol, em Haiming, permitiu a realização de um estágio de 5 meses como guia de *rafting*. Assim, foi possível ter uma visão de perto de como estes desportos são aplicados no setor de turismo.

Foi realizado um estudo com guias de *canyoning* do Tirol, permitindo a caracterização da população em questão, tanto quanto aos seus níveis de atividade física, à nutrição e à certificação obtida.

O estágio foi essencial para aplicar o conhecimento adquirido anteriormente no mestrado, e entender como este deverá ser aplicado num contexto de “vida real”.

Palavras-chave: *rafting*, desporto natureza, *canyoning*, águas-bravas, guiar.

## ABBREVIATIONS LIST

BMI - Body mass index

CIC – *Commission Internationale de Canyon*

HDL - High-density lipoprotein

IFMGA | IVBV | UIAGM – International Mountain Guide Association

IRF – International Rafting Federation

Km – kilometers

kN – kilonewtons

m – meters

mm – millimetres

NAS – Nature and Adventure Sports

NRS – Northwest River Supplies

PFD – Personal Floatation Device

SPSS – Statistical Package for the Social Sciences

TG – Triglyceride

TL – Trip Leader

WRF – World Rafting Federation



CHAPTER I  
**INTRODUCTION**



# 1. INTRODUCTION

Several terms are used to convey the notion of sports practiced in nature. Some authors refer to it as “Active Tourism”, “Adventure Tourism” or “Nature Sports”; some prefer the term “Adventure Sports” and others “Nature and Adventure Sports (NAS)” (M. Silva, 2010). Regardless of the used term, they all describe activities that represent an alternative to mainstream sports and are in some way connected to nature, whether by utilizing it as an instrument or as a means to trigger physical activity in a different and more interesting surrounding. Krein (2014) claims that “nature sports are those sports in which a particular natural feature, or combination of natural features, plays at least one of the primary roles that human competitors or partners play in traditional or standard sports”. These sports include a variety of activities such as rock climbing, white-water rafting, hiking, mountain biking and caving (Hardiman & Burgin, 2011).

Although nature sports were once perceived as dangerous and, therefore, only practiced by fearless participants, the search for NAS has increased in recent years as tourists look for new and more exciting ways to explore places of difficult access (Brandão, 2016; Brandão, Pereira, Gonçalves, Coelho, & Quaresma, 2018; M. Silva, 2010). Nowadays, athletes are attracted to the risk, adventure and fascination provided by nature, seeking to overcome challenges, themselves or emotions that are deeply linked to today’s society (Brandão, Pereira, et al., 2018; Breivik, 2010; M. Silva, 2010). Buckley (2012), on the other hand, argues that while these activities are risky, it is the rush provided that is addictive, not the risk itself.

The gratification of NAS is also related to the absence of set rules in comparison to conventional sports as there is no referee nor are competitions regulated in well-defined environments or a strict time frame in which they must progress (Brandão, Pereira, et al., 2018; Breivik, 2010).

NAS is a distinct category of sports which takes place in and explores nature using elements such as water, air and land, having in common the

challenges and emotions provided by the sport (Brandão, 2016). Among these we can find rafting and canyoning – sports which will be further studied in this document.

The International Rafting Federation (IRF) is credited, since 1997, as the world governing body for Rafting Sport (“International Rafting Federation,” 2019a). On the other hand, the World Rafting Federation (WRF) is the world governing body for Sport Rafting (“World Rafting Federation,” 2019). As such, the IRF is responsible for overseeing the training and certification of professional rafting guides, working together with national organisations and offering the only certification program that is accepted worldwide (some countries might require a guide to obtain a national or regional certification, as well) (“International Rafting Federation,” 2019b). Differently, the WRF is responsible for the regulation, management and promotion of competition rafting, thus being in charge of worldwide competitions (“World Rafting Federation,” 2019). They ensure status in the Olympic Games and determine and maintain rules for international rafting competitions. Both federations vow to protect the environment.

According to the IRF, “rafting is an outdoor recreational and sport activity which uses an inflatable raft to navigate a river or other moving body of water. This is often done on white-water rivers in a natural environment, and requires physical skill using paddle and/or oar to control the raft’s direction and speed.” (“International Rafting Federation,” 2019a).

Rafting is considered to be a typically hard adventure (higher risk, more physical and more challenging) (Mckay, 2014). However, according to the author, this “classification” is not set in stone, depending on the overall situation and river characteristics as, for example, a trip consisting of only raft guides is bound to take bigger risks than a very controlled, one-hour trip provided by a company.

## 1.1 THE SAFETY TALK

As clients arrive to the base, they are greeted by a guide which will explain how the base is organized and how the trip is structured. Before handing out the equipment, the guide must ask if all clients are able to swim; in case of a negative answer, the client must be told they will not be allowed to join the trip. As the guide proceeds with the initial briefing, they must also ask if any of the participants have any medical conditions such as asthma or diabetes (important to make sure the clients know they can talk privately with their guide) as medication may be brought on the boat in the guide's first-aid box, and recent injuries should be known (Raftingverbands, 2015, p. 79).

The safety talk is a crucial part of a rafting trip. It should be short, straight to the point and performed in a place that ensures clients' full attention, meaning that if it's done at the put-in with all the other company's clients and boats around, their backs should be turned to the fuss happening behind.

According to Costa (2019, p. 54), before starting the safety talk, one should make sure not to be wearing sunglasses or hats that may conceal one's face and position themselves in a way that transmits confidence, leadership and friendliness. The information given should be passed on in a loud and clear voice and be accompanied by gestures.

Proper communication should be ensured by all the parties involved in the activity, whether it being between guides or from guide to client (and vice-versa). This will create a positive interaction, reduce many of the risks and avoid the majority of undesirable situations (Costa, 2019, p. 56).

Briefly presented next are the points that should be covered (Raftingverbands, 2015, p. 85):

- presentation of the raft: front, back, seating positions and foot cups;
- paddle: how to hold it and paddle strokes (forwards and backwards);
- emergency command: how to get down in the boat;
- white-water swimming position: one should never stand up in the water, active swimming (back to the boat), passive swimming (feet

downstream, pelvis up to avoid hitting rocks), assisting another person getting in the boat;

- throw bagging: how to catch and hold it;
- flip: how to act when there is a flip (no panic, hold on to the paddle, swim to the boat or out from under it and hold on to the safety line, let go on the guide's command, get in).

Following are the standard commands used by guides:

*Table 1 German and English standard commands*

<b>German Command</b>	<b>English Command</b>
Alle vorwärts	All forwards
Alle rückwärts	All backwards
Stopp	Stop
Rechts rückwärts	Right back
Links rückwärts	Left back
Alle ins Boot	Get down
Alle nach links	Over left
Alle nach rechts	Over right
Position/zurück	Positions
Loslassen	Let go

## 1.2 GEAR

In order to go white-water rafting in Austria, there is some equipment which is essential in a trip. The equipment may vary in other countries as the conditions and rules may change from place to place.

- Raft – an inflatable man-powered boat which is proposed for the navigation of rivers with a high-speed current (white-water) and which allows a minimum number of four people (Raftingverbands, 2015). In Austria, rafts must be subject to the ÖNORM (Austrian Standard).



*Figure 1 Standard Northwest River Supplies (NRS) raft. Image from <https://www.nrs.com/product/1136/nrs-otter-130-self-bailing-raft>*

Rafts can be made of either hypalon/rubber coated polyester mesh or plastic/PVC polyester mesh; they are required to be long-lasting (years of “rough” treatment) and can be either asymmetrical (the bow is pointy) or symmetrical (bow and stern look the same).

The floor (inflatable or foam) must be shaped so that it is steadfast and provides safe usage.

The main tubes must correspond to the overall proportions of the raft and guarantee enough stability.

The stern must be at least as high as the main tubes (particularly important for asymmetrical rafts).

The raft may have cross tubes and these can either be permanently fixed or removable.

The seating for the passengers must be made of a non-slip material.

There must be valves on each air chamber (equipped with a check valve system) and able to be closed by hand (independent of the check valve system).

There must also be a safety line (outside line), which is tied together through at least four D-rings so that it is not possible for people to slip through or objects (stones, sticks) to get caught on it.

In Austria, the raft must have two suitable foot cups for each passenger (or, in the case of passengers sitting directly behind a cross tube, only one foot strap as the other foot is secured under the tube), which have to be mounted to prevent

the passenger slipping through or getting caught on it. Foot straps are no longer considered safe in Austria and are no longer fitted to new boats.

The boats must be self-bailing through bailing holes, laced-in floor or bailing tubes.

- Paddle – are mostly made from a mix of plastic and aluminium, although there are some made out of materials such as wood.



*Figure 512 NRS paddle. Image from <https://www.nrs.com/product/77106.01/nrs-pte-economy-paddle>*

- Client's equipment
  - Neoprene suit or long john with neoprene jacket;
  - Neoprene diving shoes or neoprene socks with sports shoes;
  - Personal floatation device (PFD);
  - Helmet.
- Guide equipment



- Thermal protective wear (wetsuit/long john/neoprene jacket/dry-suit/cag or wind jacket/ synthetic undergarments);



Figure 3513 NRS men's drysuit. Image from <https://www.nrs.com/product/22536.01/nrs-mens-pivot-drysuit>

- Stable footwear (neoprene socks with sport shoes or canyoning shoes/sandals/river shoes);



Figure 4 Rafting footwear. Images from <https://www.nrs.com/product/2342/nrs-hydroskin-wetsocks-closeout> (sock); <https://www.adidas.pt/botas-terrex-hydro-lace/CQ1755.html> (boot)

- Helmet (according to the EN norm for watersports);



Figure 5 Sweet white-water helmet. Image from [https://www.sweetprotection.com/en/strutter-mariann-s%C3%A6ther-edition-helmet-18/845050.html?dwvar\\_845050\\_color=BBMEC&cgid=15337](https://www.sweetprotection.com/en/strutter-mariann-s%C3%A6ther-edition-helmet-18/845050.html?dwvar_845050_color=BBMEC&cgid=15337)

- Buoyancy aid with QR rescue system (according to the EN norm; must have pockets for guide material);



Figure 6 Peak UK river guide vest. Image from [https://www.peakuk.com/index.php?route=product/product&path=74&product\\_id=212](https://www.peakuk.com/index.php?route=product/product&path=74&product_id=212)

- Throw bag (usually carried around the waist with a belt and minimum of 15 m and 7.5 mm in diameter);



Figure 7 HF Weasel throw bag & belt. Images from <https://goodrotations.co/products/hfweaselthrowbag> (bag); <https://www.furtherfaster.co.nz/products/hf-swifty-throwbag-belt> (belt)

- Flip line (webbing or rope with a screw gate carabiner attached);



Figure 8 Flip line with attached screw gate carabiner. Image from <https://paddlesports.capacitysports.com.au/shop/accessories/safety-and-rescue-equipment/miscellaneous/raft-flip-line>

- River knife (must be usable under water and with one hand; must be able to lock in place);



Figure 9 Peak UK river knife. Image from [https://www.peakuk.com/index.php?route=product/product&path=74&product\\_id=356](https://www.peakuk.com/index.php?route=product/product&path=74&product_id=356)

- Whistle (should not have a pea in order to avoid swelling from water);



Figure 10 Waterproof whistle. Image from <https://www.nrs.com/product/1814/fox-40-safety-whistle>

- 3 x screw gate carabiners (minimum 22 kN breaking strength);



Figure 11 Mad Rock screw gate carabiners. Images from <https://madrock.com/collections/hardware?page=1>

- 2 x prusik slings (suitable for the throw bag and knotted with a double fisherman's knot);



Figure 12 Prusik sling with a double fisherman knot. Image from <https://c8.alamy.com/comp/RWK9Y3/prusik-knot-or-triple-sliding-hitch-formed-with-a-5mm-yellow-prusik-loop-around-a-98mm-red-climbing-rope-this-friction-hitch-is-used-in-climbing-RWK9Y3.jpg>

- 1 x pulley (minimum of 22 kN breaking strength).



Figure 13 Petzl pulley. Image from <https://www.petzl.com/INT/en/Sport/Pulleys/FIXE>

- Equipment on the raft
  - First aid equipment;
  - Throw bag with at least 20 m, 8 mm thick; secured to the raft in a quick release way;
  - 2 x Locking carabiners;
  - Bow and stern lines (to secure the boat to shore);
  - Spare paddle;
  - Mobile phone and rafting license.

All the information about the materials and equipment was obtained from the Österreichischer Rafting Lehrplan V2 (Raftingverbands, 2015), the official manual for the Austrian IRF rafting course.

## 1.3 DIFFICULTY GRADING SYSTEM

The grading system of white-water rivers and rapids considers three variables: the difficulty, the danger and the consequences which may arise from a mistake. According to the Österreichischer Rafting Lehrplan (Raftingverbands, 2015, p. 37), level of difficulty varies from I to VI – from “easy” to “at the limit of navigability/raft ability”. It is important to point out that the river classification system can differ from author to author or guide to guide, from country to country and, more importantly, with changes in the water level – a rapid can go from being classified as IV in a high water period to a III- in a low water period. Also, important to mention is the fact that man-made structures are not gradable and, as such, are not included in a river classification. Nonetheless, the lack of knowledge of river obstacles such as weirs (an artificial drop that is built to either create energy, to divert water or to change the speed of the river) can be deadly as these are responsible for 42% of all rafting deaths (Raftingverbands, 2015).

The classification of rivers and rapids is as follows:

*Table 2 White-water grading of difficulty (Raftingverbands, 2015, p. 37)*

<b>DIFFICULTY LEVEL</b>	<b>DESCRIPTION</b>
<b>I Easy</b>	Regular currents, regular waves.
<b>II Moderately difficult</b>	Irregular currents and waves, medium-sized rapids, stoppers and whirlpools, single obstructions.
<b>III Still clearly navigable</b>	High irregular waves, large rapids, powerful stoppers, whirlpools and pressure areas, blocked passages, drops, a larger number of obstructions in the current.
<b>IV Very difficult</b>	Passage not always recognisable, scouting mostly necessary, high continuous rapids, powerful stoppers, whirlpools and pressure areas, shifted obstructions in the current, higher drops with tow-backs.
<b>V Extremely difficult</b>	Scouting essential, extreme rapids, stoppers and pressure areas, narrow shoots and obstructed passages, higher drops with difficult launching and landing possibilities.
<b>VI At the limit of navigability</b>	The passage in general is impossible. At certain levels perhaps navigable. High risk.

## 1.4 WHITE-WATER FEATURES AND BASIC TERMS

Rivers can be categorized as glacial rivers (extremely low water levels during the winter), mountain rivers with glacial influence (differs from the previous in the sense that the low water is not as pronounced) and mountain rivers without glacial influence (Raftingverbands, 2015, p. 31). Additionally, classification as pool-drop (difficult rapids followed by a large stretch of calm water; not very common in the Alps) and continuous rivers (like the Inn, where water flows progressively down - the gradient (“steepness”) of the river is similarly steep with no disruption) can also be used.

Following are basic terms which are essential for proper white-water knowledge and river reading:

- **Rapid** – occurs with the narrowing of the river (thus, the increasing speed of flow) or with an increase in the gradient of the section. The nature of the rapid is determined by the obstacles it encounters.
- **Waves** – occur when water is forced to change its direction upon encounter with an obstruction such as a rock. These differ from sea waves as river waves will remain in the same spot until the obstacle moves further downstream or the water level changes.
- **Hydraulics/Stoppers** – known by many different names, hydraulics are commonly referred to as “washing machines” due to its water movement. These happen when significant amounts of water are flowing quickly downstream and, upon encountering a large obstacle, roll backwards (tow-back); merely a small under-current flows downstream.
- **Eddy and eddy lines** – when fast flowing water passes by calm water it forms an eddy. A visible line between the two – the eddy line – grows stronger the higher the water flows. On the line there is the possibility of whirlpools forming which can suck objects under water.
- **Headwall** – a wall that can have a cushion wave on it (water flowing up and away from a rock); it is an extremely dangerous obstacle as it can suck swimmers down on its eddy line (formed between the water hitting



the wall and the one flowing downstream) or even flip a raft. These walls pose an even bigger danger when undercut, meaning they can trap swimmers underwater; it is possible to identify undercut walls as they are less likely to have a cushion wave on it.

- **Boil** – a current that flows upwards, resembling a mushroom. These occur after large sinking currents such as walls or syphons (a place where water flows through or underneath rocks).

On the river, several obstructions can be encountered. These might be manmade (weirs, bridge pillars, ropes, pieces of concrete, etc.) or natural (rapids, waterfalls, rocks, etc.). It is important to know the river section where one is rafting on, so that major accidents can be avoided. Proper knowledge of how to handle such obstacles is key to becoming a good raft guide.

All information can be found in the Österreichischer Rafting Lehrplan V2 (Raftingverbands, 2015, pp. 33–35).

## 1.5 WHITE-WATER RESCUE

Certification in this field is mainly offered by small companies such as Rescue 3 International (<https://rescue3.com/>) or by the companies who choose to offer their own knowledge to guides working for them (Howard, 2009).

During the white-water training course, trainees of the white-water level III only cover the very basics, barely scratching the surface of this matter. First and foremost, guides should try to stop an accident before it happens and be confident in their skills when rescuing someone. According to the Raftingverbands (2015, pp. 91-102), rescue situations and techniques should always go from low risk and simple to high risk and complex. The priority in a rescue situation is the safety of oneself, then of the rest of the crew and guides, and only after the victim.

It is of utmost importance guides are healthy and fit so they can perform or assist in a rescue. Skills like actively swimming in white-water, building a mechanical advantage system (Z-drag), throwing a throw-bag at a distance of 15

m or quickly re-flipping a raft and assisting clients back in are all basic requirements for proper white-water rescue.

## 1.6 MOTIVATIONS FOR INTERNSHIP'S CHOICE

This internship was selected with particular emphasis on location, since Tirol is a world reference in all kind of mountain activities, rafting included. There was an intention of trying something completely new and, at the same time, to step out of my comfort zone and acquire skills which would only enrich my knowledge of outdoor sports.

Before starting work at *Faszinatour*, my expectations were purely based on what I had heard from fellow students who had previously worked for the company. I was told by the company's head that I had to obtain my license in order to work and that I would aid the company in trips for white-water levels I and II and in other required tasks around the base such as mountain biking tours and waitressing in their restaurant.

The remainder of the present report will document the five months spent at *Faszinatour* and present a study made in the canyoning area in this time period.

## 1.7 THE COMPANY

*Faszinatour* is a company founded in 1986, in Germany, focused on adventure travels. Nowadays, there is a second outdoor base in Haiming, Austria, where one can go experience a range of different activities: rafting, canyoning, mountain biking, geocaching and more. In rafting, for example, *Faszinatour* offers several options: Rafting Imster Schlucht, Raft<sup>3</sup>, Rent a Boat, Extrem Rafting Imster & Ötz, Extremrafting Ötztaler Ache, Familien und Kinderrafting and 5-Star Exclusive Rafting. For some years now, the company has downsized significantly in order to provide a more friendly and personal service to its clients. It is focused on providing great and safe experiences in the outdoors while, at the same time, making sure nature is protected ("Faszinatour - Why Faszinatour fascinates," 2019).

*Faszinatour* this season counted with 16 rafting guides being the majority working full-time. On a typical day there would be two trips - one in the morning and one in the afternoon - with 3 boats each. It totalled around 30 clients. On busier days (like weekends or high season), there could be up to 4 trips, each with 2 or 3 boats, or one big trip with 6 boats. On these days, organisation and time management were key to make sure everything went smoothly.

Just like *Faszinatour*, many other companies raft in the Imster Schlucht. Close by one could find *Outdoor Planet* or *Wiggi* and, driving further into the Ötz Valley, *Area 47*.

As previously mentioned, *Faszinatour* offers a variety of different rafting trips. The prices go as follows:

Table 3 Rafting trips and prices at *Faszinatour*

(<https://www.faszinatour-rafting.de/rafting.html>)

<b>RAFTING TRIP</b>	<b>PRICE</b>
Rafting Imster Schlucht (3h – 3.5h)	From 56€
Raft <sup>3</sup> Imster Schlucht (3h – 3.5h)	From 64€
Rent a Boat Imster Schlucht (3h – 3.5h)	From 70€
Extremrafting Imster & Ötz (6.5h)	From 120€
Extremrafting Ötztaler Ache (3h)	From 74€
Extremrafting Sanna (2.5h)	From 99€
Familien und Kinderrafting (3h – 3.5h)	From 36€
Bachelor´s Party Rafting (3h – 3.5h)	From 56€
Prosecco Rafting (Bachelorette) (3h – 3.5h)	From 56€
Rafting Imster Schlucht with Lunch (3h – 3.5h)	From 76€
5-Star Exclusive Rafting (3h – 4h)	From 94€
Rafting Isar (3.5h)	From 39€

## 1.8 THE INN RIVER

The Inn River flows for 510 km, being a major tributary of the Danube River. It passes by three European countries; rising in Switzerland, it crosses western Austria and southern Germany (“Encyclopaedia Britannica,” 2019). Mainly, its water comes from melting glaciers and, as most alpine rivers, is clear and of a bright blue - the continuous flow is naturally filtered along the way and, as it passes over rocks, acquires high concentrations of minerals which give the Inn its colour (“Tirol’s Lifeline: the Inn River,” 2019).

On its western part near the border with Switzerland, the Inn river flows with great power through the Imster Schlucht (“Go With the Flow,” 2019), an ideal section for white-water enthusiasts looking for a good time and an intermediate level of difficulty (level III). This section extends for about 14 km, between the villages of Imst and Haiming and has an average temperature in summer of around 8 degrees Celsius.

## 1.8 INTERNSHIP GOALS

The main goal of this internship was for me to become a certified white-water level III (WWIII) rafting guide by the IRF. For its duration I was also looking forward to developing skills in touristic animation, to learn a new language, to understand how white-water behaves and learn how to read and navigate in it in the hopes of creating more opportunities for myself in the future.

The idea of travelling all the way from Portugal to Austria, a center of active tourism, was to create the opportunity of working with excellent guides and instructors, people who have been rafting in some of the most dangerous and difficult rivers in the world. It is my belief their knowledge is most valuable and that there is much to learn from them.

Tirol is a region with a long-lasting mountain sports' tradition. It is involved in people's everyday lives, from a regular hiking day to the occasional rafting trip down the Inn River. During the winter it is famous for its skiing and snowboarding and, during the summer, for mountain biking, rafting, kayaking, climbing and paragliding.

Innsbruck hosted the Winter Olympics in 1964 and 1976 and was a regular host of the Adidas Sickline (an international kayaking competition) until 2017.



CHAPTER II  
**ACTIVITIES' PLAN**





## 2. ACTIVITIES REPORT

This internship was set for a duration of five months - starting in May 2019 and ending in October 2019. This period can be divided in three stages.

The first stage included the attendance of the rafting course hosted by the IRF in Haiming, the integration into the team at *Faszinatour* and a successful rafting guide exam. This first stage started on the 2nd May with my arrival in Haiming and was concluded on the 3rd of July with the passage of the IRF rafting exam. During that time, I learned the hierarchy of the company and of the guides; I was taught how a trip is structured - from preparing rafts, to greeting customers, to handing out material, to the post-trip cleaning and storing of the gear. I was also taught how to check and repair safety gear. I was allowed to accompany fully qualified rafting guides in river sections difficulty levels II ("Kindertour"), III (Imster Schlucht) and IV (Ötztaler Ache), being able to guide some parts and train important rescue techniques such as throwbaging in moving water. At the end of the initial stage I had a logbook with 93.5 river hours, all supervised by either the instructors at the training course or by guides working at *Faszinatour*. Moreover, I accompanied some mountain biking trips with school groups. This ensured I could lead the mountain biking trip should a guide not be able to go.

The second stage (early July to early September) was mainly outlined by being fully employed by *Faszinatour* with a contract of 25 hours per week (which equaled to about 34 trips in a month). It was marked by becoming more and more independent and not needing as much supervision as in the beginning. I was trusted with bigger tasks, whether it being doing the introduction talk to English speaking clients or the safety talk for a big group. During these months, I guided many groups, from company retreats, to bachelor's parties, to family outings and school classes. At the end of August, I was submitted to a formal evaluation by the company's head to perform a full safety talk in German, having passed with positive feedback.

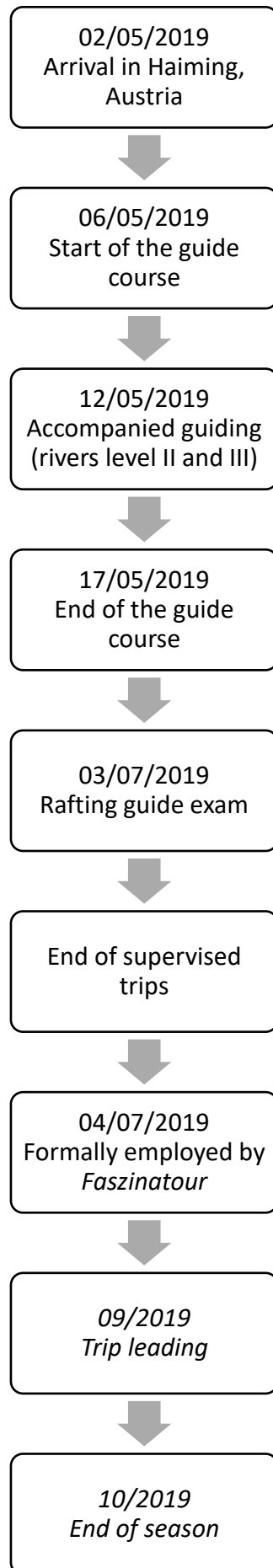
The month of July and early August were considered high season, and, during that time, I worked around 40 trips a month. I got offered extra hours by working in the company's restaurant and for doing maintenance work around the base (such as cutting the grass). The weekend greetings were also a task I was given, which consisted of welcoming weekend guests (those who come for the full weekend and do multiple activities, staying at inns or hotels close by) and explaining how the base works and which activities would take place at what time. It was a good time to practice German skills.

The last stage of the internship was the month of September, the last at *Faszinatour*. During this month, I was given the responsibility of trip leading many trips. As a trip leader (TL), one is responsible for making sure the base is clean and organized for the clients' arrivals, checking the number of clients for the trip (so that it's possible to know how many boats are necessary) and making sure the loading of rafts and paddles is properly done. As the clients arrive, the TL greets them and introduces the base and, as most have never rafted before, briefly explains the sport and the equipment needed for the trip. After the clients have equipped themselves, the TL will do the safety talk for the group, assigning someone to translate if there are non-German speakers in the group. Then, the clients are divided in groups for the taxi ride up to the put in. Once there, they are assigned to the other guides and their boats. As soon as the boats are at the put-in ready to go in the water, the most experienced guide will take over so, in my case, I would only trip lead up to this point. In the same way, as soon as the boats were out of the water at the take-out, my duties as TL would resume. These included making sure the boats and paddles went back to their places and do a debriefing at the end, explaining where the washing up is done and where the equipment goes. After each trip, the TL is responsible for checking if the base is ready for the next one.

As it is possible to see in the above description, my responsibilities at the base and among the remaining guides increased as time went by. By the end of the season, I accounted with more than 100 trips in the *Imster Schlucht* section of the Inn River.

Below is a timetable which marks the most important events for the internship's duration. A logbook can be checked in the attachments.

Table 4 Internship's timetable



## 2.1 THE IRF WHITE-WATER III RAFTING COURSE

The white-water level III rafting guide training provided by the IRF consisted of a 10 day intensive course that took place in the village of Haiming in Tirol, Austria; it was administered by fully qualified instructors with several years of experience in guiding and training. It started on the 6<sup>th</sup> of May 2019 and ended on the 17<sup>th</sup> of May 2019, being that the first week of the course was held at *Feel Free Outdoor Centre* and the second at *Faszinatour Outdoor Centre*. At the end of this period, trainee guides had a 50-hour river logbook, being shy of 10 hours still required for the guide exam; these practice hours were mandatory to be held in a level III river section and signed by a professional raft guide.

Although provided with rafting equipment for the duration of the course, each participant was required to obtain prior to the start of training 2 screw-gate carabiners, 2 pieces of rope for knot training and a long piece of rope or webbing to be used as a flip-line.

During the 10-day course, trainees were taught how to read the river and its dangers, to steer a raft and to throw a throw-bag (a rope used in rescue situations). Guides-to-be were required to swim rapids, to cross the river by swimming from one shore to the other, to climb in the boat unaided and to flip a raft. They were also taught different knots and how to build a Z-drag in order to recover a wrapped raft.

The commands were done in German as it is the official language of the country and was required by the employing companies. It was also mandatory to learn and complete a safety talk before entering the river everyday. Checks on the materials needed and the loading and unloading of rafts were all tasks the trainees had to perform daily. Before undertaking the exam, trainees needed to obtain a first-aid certification or show proof of a previously held one no older than 3 years.

During the course, guides-to-be were separated in teams of around 8 people (plus the instructor) – two German speaking boats and an English speaking one. Most of the instruction time was spent in 10-man boats (16'/4.88

m) with a few occasional trips with 8-mans and twice with “power-rafts” (3-man boats).

The river in which the trainees passed most of their time in was the Inn (a river with glacial influence), in the Imster Schlucht section (about 14 km) and level III in difficulty; there were also two other trips in two other rivers – the Öztaler Ache and the Sanna, both level IV rivers.

The exam consisted of two parts: a written test and practical one; together they totaled around 8 hours. In order to be allowed in the river, one had to mandatorily pass the theoretical examination. In the event of failing the practical test, guides-to-be did not have to sit through the theory again. Once in the river, instructors had a full list of requirements every trainee needed to successfully complete; missing just one would immediately be considered a fail.

Among these requirements one could find:

- safety talk (either in English or in German)
- stroke technique
- river reading
- commands and control of the team
- ferry gliding
- successfully eddy stopping utilizing the different techniques (direct approach, backwards ferry and forwards ferry)
- building a Z-drag and all it entailed in under 5 minutes
- swim test in a rapid
- tossing a throw-bag to a swimmer at least 10 m away, with a recoil throw of 20 seconds
- eddy-line flip in under 2 minutes

Only after proving successful in every single item could one pass the exam.

This summer season was especially marked by the highest water levels the Inn River has seen in the last 30 years (due to cold weather until late May and to the larger amounts of snowfall in the previous winter season), which caused 3

weeks of exams to be postponed to more reasonable levels. According to the *RiverApp* (an app used by river guides which shows water levels of different rivers), at its highest the river was at 6.29 m in Innsbruck, while the cut off for clients is at 4.20 m in Magerbach (for *Faszinatour*). The exams are usually held at under 3.80 m (in Magerbach), but the exam I took part in was held at 3.95 m (in Magerbach), as the river was taking too long to drop and companies were starting to be concerned with the lack of guides.

It is usual that, while reading water levels, a river is checked by its height (in centimetres) and not its volume (in cubic metres per second).

## 2.2 RAFTING AT “FASZI”

After successfully passing the exam, I was fully employed by Faszinatour (kindly referred to as “Faszi” by employers and employees alike) as a raft guide. Before joining the team for the season, it was agreed that I would work 15 hours per week and only guide rivers levels I and II. Nonetheless, right after passing, I was offered a formal contract with the company for 25 hours per week and guiding the Imster Schlucht, a level III river (III+ during high water).

Integration in the establishment was very easy as all the guides were extremely friendly and a crucial help during and after the rafting exam. The team was international, having guides from Portugal, Germany, Austria, the United Kingdom and Greece; communication was relaxed as everybody had a good knowledge of the English language. With the clients, most of the time speaking English was not a problem as most of them had basic knowledge and many of them were fluent. Nevertheless, trying to speak German was the best option; by the end of the season I could perform a basic German safety talk.

On a regular day, each guide would have two trips: one in the morning and one in the afternoon; in very busy weekends, some guides could have up to three trips in a day. Each trip totals around 3 hours (in higher water the trips were faster which compensated for those at the end of the season when levels were lower and therefore slower), including the greeting, handling out equipment, safety talk, drive to the put-in, the trip itself and undressing and washing of equipment at the end.

A typical day schedule:

- 09h00 – arrival of the guides to the base. Upon arrival, guides had to make sure the base was clean for the guests' arrival, filling up the shoe cleaning bucket and neoprene water tank, opening the rafting counter and loading the rafts. The TL is the one responsible for the division of clients in the boats and of deciding the number of rafts necessary for the trip.
- 09h15 – arrival of guests for the morning trip.

- 09h30 – greeting to the guests. Here, the TL does a brief explanation of the base, asks guests after swimming skills and medical conditions and the remaining guides will hand out the equipment.
- 09h55 – safety talk at the base (if the water level is too high, the safety talk takes place at the put-in to ensure clients don't forget any crucial information).
- 10h10 – loading of the clients and guides in the buses and drive to the put-in.
- 10h30 – start of the trip.
- 12h00 – arrival at the base, debrief and organisation of equipment. Clients are responsible for putting back the helmets and PFDs and for cleaning the shoes; the guides spray the wetsuits with soap and water and put them back to get dried, ready for another trip.
- 12h30 – official end of the trip.
- 12h30 – 13h00 – lunch.
- 13h00 – loading of the rafts for the afternoon trip.
- 13h30 – 16h30 – afternoon trip (the same process as for the morning one).

After the last trip, the guides are responsible for closing the rafting counter and for cleaning the showers, leaving everything ready for the next morning. Usually after work the guides would seat at the guide table and have a few beers as they discussed the days' events and the highlights of their trips.

At the beginning of the season, on every Wednesday, there would be a guide-trip for training. This started to be too much once the high-season kicked in, with barely any time or energy for further training. Nevertheless, guides got together sometimes for a "fun trip" – a trip using kayaks, inflatable kayaks or smaller rafts down a different river just for fun and to alleviate the stress from daily work.



## 2.3 GUIDING A RAFT – LEARNT SKILLS

From the moment one becomes a raft guide, the proper steering of a boat as well as the right management of the crew is of extreme importance.

River orientation is determined not by the rafter's point of view but by the direction of water flow. Thus, river left or river right do not change when the paddler faces up or downstream.

This means the guide should always aim for the best line possible for their crew - if a raft is comprised of only children, one opts for the safest line (as they are not powerful paddlers, generally not strong swimmers and have a reduced sense of danger); on the other hand, if the crew includes only physically and mentally strong men and women, it is possible to opt for a more extreme and fun line, never compromising people's safety. Thus, it is always useful to train the crew as soon as they hit the water – the giving of commands and the showing of proper paddle, swimming and rescue techniques will prepare the crew for the upcoming rapids and reduce the likelihood of an accident happening.

Water levels must be checked multiple times a day (even if there are no trips) to ensure that any changes in its levels are taken notice of. With low water, the chances of a raft getting stuck in a shallow or wrapping around a rock are high, meaning that a proper knowledge of the river and its obstacles is key to assuring the safety of the trip. A wrapped raft is not only very dangerous for the crew and guide (as someone can get trapped between the obstacle and the raft) but also a hazard to the upstream boats since it might be necessary to set a mechanical advantage system which will cross a section of the river with a rope. With high water levels, the river becomes faster meaning that moves must be anticipated and precise and any swimmers should be collected as quickly as possible; there are less eddies for emergency stops and its lines become stronger, making it easier for a raft to flip.

When the water levels are unusually high or low, maintaining the line is crucial. On a convoy of 3 boats, the most experienced guide will go first (as there is no downriver safety, the second-most experienced will go last and the least experienced one is placed in between so that assistance can be provided from

both ends. Once the water levels are coming close to the “cut-offs” (when rafting isn’t allowed; differs from company to company unless the government issues a warning) the trip is usually accompanied by a safety kayaker, or in case a boat has to go solo. Safety kayakers are very flexible in their positioning within the convoy and, as such, can cover the first boat downstream in a rapid and still stop in an eddy halfway in case there is a need to intervene with any other rafts.

When overcoming a significantly sized wave, the boat should be angled in a way that the nose of the raft is at a 90° angle with the direction of said wave. If it is not maintained, the raft can very easily flip. In this situation, the guide can give a “alle nach rechts/alle nach links” (over right/over left) command to counterweight the tipping side. The guide should hold tight and not let go of the raft as, in case of an actual flip, he or she is already holding on to the safety line and can quickly climb on the upturned boat and re-flip it. The same command should be given when connecting sideways with an obstacle (bridge pillar, rock, etc.) to avoid a wrap; rafts should hit these with either the nose or the back of the boat to avert this situation.

In case of a flip, the remaining guides should move one or more of their boats downstream in order to catch any swimmers that were not able to swim back to the boat (an instruction given in the safety talk) and be prepared to fling a throw bag to a swimmer, or even climb on the upturned raft if the guide that flipped got injured. It is important at least one boat remains upstream of the upturned raft in case a client gets stuck in an eddy. After “cleaning up” the situation, the convoy should eddy out (stop on the side of the river, in a calmer area), make sure the clients are all okay and discuss what to do next - either keep going, call the base to pick someone up or make an emergency call.

Communication between guides is mainly done through gestures. A whistle should be carried in an easily accessible place (like with a string around the strap of the PFD) so that a quick blow can get someone’s attention; 3 quick repetitive blasts of the whistle mean an emergency and an immediate stop is required.

Information regarding guiding maneuvers and techniques can be further found at the IRF rafting manual (Raftingverbands, 2015).

Following are images acquired from the “Communications and Signals” provided and approved by the IRF (IRF, 2015). It is important to mention that, although commonly used in Europe, the signals can differ from country to country or paddler to paddler and, as such, it is worth a rundown of the river signals before the start of a trip with a new guide.



Figure 14 River signal for "Yes"

“Yes”, meaning:

- I confirm
- I’m ready
- I understand



Figure 15514 River signal for "No"

“No”, meaning:

- Negative
- Stop immediately



“Swimmer”

Figure 16 River Signal for "Swimmer"



“First-Aid”

Figure 17 River Signal for "First-Aid"



Figure 18 River signal for "Flip"



“Flip”

The sitting position of the paddlers in a boat is worth taking into consideration. It is key to keep an equal amount of weight on both sides of the raft to ensure as smooth of a ride as possible. The strongest people should be seated at the front as these will pull the most water; such seats should also be offered to clients looking for more action (as they get the biggest impact). Those that are scared or are not strong swimmers should sit in the back, close to the guide. Children can seat between their parents or close to the guide, as he or she can catch them before they fall in or simply reassure them with their presence. Heavier people should be placed in the middle seats in order to keep the balance of the raft.

One should always be aware of the clients in one's boat, meaning that if a member of the crew has a physical or mental disability, it is of extreme importance to know how to deal with the situation. For example, during the season there were two cases of people with physical disabilities that I had to guide which I believe are worth sharing.

Early on after passing my rafting exam, I was confronted with a first major decision: a group came for a bachelor's party and brought an additional member - a man who could not move one of his arms. The matter is that a person who is not capable of moving an arm and falls into the water in a rapid might not be able to keep themselves afloat or to swim back to the boat. The client was allowed to come in the condition he would sit inside the raft (not on the seats), holding on to a strap; he could swim in calm stretches of water, always close to the boat. There were no incidents and the group was very pleased.

The second situation happened further into the season when a family of four - mum, dad and their two children - came for a fun day on the river. Upon welcoming them I learned none of them spoke German and their English was not very strong. The concern here was that both parents were hearing impaired and, once in the water, they would have to remove the hearing aids, leaving both completely deaf. The situation was handled by placing two other clients in the front seats, the children in the middle and their parents at the back so they could mimic the commands from the people in front of them. Although a very challenging trip, with other disruptions along the way, the family was extremely pleased and grateful for the great time they had on the river.



CHAPTER III

**CHARACTERIZATION OF  
CANYONING GUIDES IN AUSTRIA**





### 3. Characterization of Canyoning Guides in Austria

#### 3.1 Abstract

Canyoning is a highly practiced adventure sport in Tirol, with many companies working in the area. Canyoning guides need to have a recognized guiding ability to operate in this area. The purpose of the present study was to characterize canyoning guides in Austria, specifically in Tirol's region. An online survey with questions regarding anthropometric measures, physical activity, diet, smoking and drinking habits, education and canyoning certificates was taken by 22 canyoning guides and 2 trainees – 17 males ( $32.45 \pm 7.83$  yo) and 7 females ( $27.40 \pm 7.40$  yo) was presented to the guides.

We found evidences that canyoning guides in Austria/Tirol have a *Tiroler Schluchtenführer* certificate. Their fitness level and the amount of physical activity can be characterized as above average of a normal population. Moreover, more men (70.8%) are working as canyoning guides than women (29.2%). A large percentage of guides (91.7%) drink alcohol at least once per week and 37.5% smokes. Furthermore, the population studied has a healthy diet, including fruits and vegetables. One can find all educational degrees among the guides with highest percentage found in a high school degree (37.5%). In conclusion, the study has the potential of becoming a pertinent tool to be used by companies and instructors in order to characterize their employees/students. Questions should be better placed so that more information can be obtained. Further studies should be made in this field.

Keywords: canyoning, characterization, guide, Tirol.



### 3.2 Resumo

Canyoning é um desporto popular praticado na área do Tirol. O objetivo do presente estudo foi caracterizar guias de *canyoning* na Áustria, especificamente na região do Tirol. Para isso foi realizado um questionário *on-line* com perguntas acerca de medidas antropométricas, nível de atividade física, dieta, hábitos tabágicos, consumo de álcool educação e tipo de certificação de *canyoning*, a 22 guias de *canyoning* e a 2 *guides-to-be* – 17 homens ( $32,45 \pm 7,83$  anos) e 7 mulheres ( $27,40 \pm 7,40$  anos).

Os resultados encontrados mostram que os guias de *canyoning* na Áustria/Tirol possuem o certificado de *Tiroler Schluchtenführer*. O seu nível de condicionamento físico e a quantidade de atividade física praticada podem ser considerados como acima da média. Além disso, mais homens (70,8%) trabalham como guias do que mulheres (29,2%). Uma grande percentagem dos guias (91,7%) consome álcool pelo menos uma vez por semana e 37,5% dos inquiridos fuma. O estudo mostra que a população tem uma dieta saudável, incluindo o consumo regular de frutas e legumes. É possível encontrar todos os graus educacionais entre os guias, a maioria (37,5%) possuindo um diploma para a escola secundária. Concluindo, existe potencial de tornar o presente estudo numa ferramenta pertinente que poderá a ser utilizada por empresas e instrutores para caracterizar os seus guias/alunos. As perguntas deverão ser melhor cuidadas para que mais informações possam ser obtidas. Mais estudos devem ser feitos neste campo.

Palavras-chave: *canyoning*, caracterização, guia, Tirol.

### 3.3 Introduction

The bearing of risk in adventure recreation and adventure tourism is differentiated by McKay (2014). The author refers that when an individual wants to go on an adventure (adventure recreation), he or she is the one responsible of shouldering the risk; the same does not happen when that same individual decides to do an activity in a tourism concept – the majority of the risk is now carried by the guide or service provider (adventure tourism). Therefore, one can say that adventure tourism is the commercialisation of adventure recreation.

Canyoning is characterized by a controlled progression on a riverbed situated in the mountains, applying different skills and techniques to overcome the obstacles along the way (Brandão, Marques, Pereira, Coelho, & Quaresma, 2018). Silva (2010), describes such combination of techniques as those generally used by climbers and speleologists in an aquatic environment, surrounded by great beauty, where accesses are usually difficult. Costa (2019) agrees, pointing out in his work that this activity requires very particular but beautiful surroundings, many times of notably hard access.

In order to progress in the canyon, practitioners resort to basic skills such as walking, swimming, jumping, sliding and down climbing, requiring also the knowledge of ropes techniques like rappelling to overcome bigger and tougher obstacles (Brandão, Pereira, et al., 2018; Costa, 2019; M. Silva, 2010).

Knowing that canyoning is considered to be a risky activity (M. Silva, 2010) – isolated locations, progression in vertical means, difficult access – and taking into account the rising number of companies dedicated to active tourism, it is essential that there is proper knowledge and training to maximize security and minimize errors. According to the author, this is especially true in cases where guides are leading clients through the canyon as, regardless of the company, the activity should not jeopardize the clients' mental and physical integrity.

This sport can be divided in four categories: sportive (no need for a guide), commercial (with a guide), exploration (such as unveiling new canyons) or competition canyoning (Costa, 2019).

According to Brandão, Pereira, et al. (2018), an accident may occur when two variables interact: human and environmental factors. In order to reduce the

human variable to its minimum, practitioners and guides must try to achieve excellence in physical, emotional, behavioural and technical terms. Thus, continual and specific training are crucial.

Everyone will have their own reasons to practice canyoning. Nonetheless, it is possible to recognize some cross-cutting reasons to practice it. The main reason would probably be the ludic aspect of it, the playfulness of the activity – the canyon can be considered a big natural aquatic park (Stahl, Rocourt, & Durand, 2003): exciting jumps in protected basins, abseiling down stunning waterfalls and sliding into clear water; all under the impression of calculated risk.

The typical nature sports participant is much more likely to be male than female; the average age is around 30 years old, with a study pointing out that the participation in these sports decreases with age (Melo & Gomes, 2017). Most participants are well educated individuals (bachelors' and masters' degrees), employed, with high incomes. This goes in accordance with different studies that point out the average canyoneer possesses those characteristics (Hardiman & Burgin, 2010, 2011). The majority participates in small groups (two to five people) such as with friends and family, this seldom being a solo activity.

With the rising number of practitioners, the possible environmental impact is a crucial issue to consider. It is of extreme importance that practitioners are aware of this matter. Many are the studies that touch the subject of nature sports/outdoor recreation and the impacts caused in nature by them. If properly executed, canyoning can cause minimum impact on nature (F. Silva & Almeida, 2011). Costa (2019) believes people are becoming more aware of the matter, concerning themselves with the importance of nature's conservation and biodiversity to ecosystems.

As mentioned above, canyoning guides must be knowledgeable and skilful when leading clients. Carvalhinho, Rosa, Rodrigues e Nunes (2015) refer that professionals, in a NAS context, value more a hands-on approach, the “know how to do”, the safety skills and knowledge of the environment surrounding them.

Professional certification in this field varies according to the country or even the region in which the guide is working, leading to acquiring different certifications for different working places. In the region of Tirol, it is offered by the Tiroler Bergsportführerverband, a federation which provides high level training

courses for hiking, canyoning, sport climbing, skiing and mountain guiding. The Tiroler Bergsportführerverband is split up into sections in which a fully qualified guide must join in in order to guide. In Haiming, the area the study takes place in, a canyoning guide must join the *Wildspitze* section. It does not apply if one is a foreign citizen working in Austria. In this case, one must join the Innsbruck section. Being a professional public association, the federation provides all the guides with working insurance and, additionally, provides several free annual training courses to make sure guides are up to date with the latest standards (“Tiroler Bergsportführerverband,” 2019a).

In order to become a *Tiroler Schluchtenführer* (canyoning license), and before being accepted in the course, participants need to follow some prerequisites: being at least 18 years old; having successfully passed the aptitude test, have a report of the canyons one has previously joined in and a sports medical examination certificate.

During the aptitude assessment, the testing goes as follows:

- Basic rope technique (like a variety of knots and the building of two different anchor points with a given amount of material);
- Active and passive rappelling;
- Climbing up a rope with a rope ascender;
- Lead climbing a difficulty 3 to 4 via in complete canyoning equipment (including ankle high shoes);
- White-water swimming level 2 to 3.

All the information can be found in the Tiroler Bergsportführerverband website (“Tiroler Bergsportführerverband,” 2019b).

After successfully passing the entrance exam, a series of practice hours and theoretical and practical exams follow. In total, the process takes about 5 months, meaning that the entry exam takes place in April and the final exam in September. There is also the possibility to complete the course within two years (some of it in the first year and the rest in the following one). If the trainee successfully passes all the tests, he or she will be allowed to guide canyons by

themselves or even teach individuals who do not plan on guiding commercial trips.

The aim of this research is to briefly characterize canyoning guides in the Tyrolean area and compare the results with previous studies about practitioners of outdoor sports and other fitness guidelines.

## 3.4 Methods

### 3.4.1 Participants

The sample consisted of 24 canyoning guides working in Tirol, Austria. Of the total number of participants, 17 (age  $32.45 \pm 7.83$ ) were male and 7 (age  $27.40 \pm 7.70$ ) female with an average age of 31 years-old ( $30.8 \pm 7.55$ ). These included 22 (91.7%) fully qualified guides and 2 (8.3%) training in order to become one.

The companies the guides worked at were not considered.

### 3.4.2 Materials and Procedures

The participants answered anonymously an online survey (Google Forms) in which the data collected was not to be used for any purpose except the making of the study.

It was opted for an online survey in which each participant provided their own data. The decision for this type of survey was made as it was the best option to keep the guides and guides-to-be full attention, the best option for time management (as many would not have the time for a more thorough questioning) and because traveling to different parts of Tirol to meet guides that worked in different companies at different times would be very hard to accomplish.

The survey consisted of mostly direct and closed-ended questions to avoid their non-answering, with direct and straightforward language. It was done in English as most guides are required to speak it for tourism purposes. It was based on a pre-existing one by Faria (2018) who questioned and assessed rafting guides in the north of Portugal. A few changes were made to adapt the survey from rafting to canyoning and, being an online survey, physical tests were not performed in loco; it was the participants' responsibility to provide information about oneself (e.g. weight and height).

As a quick analysis, questions included data about personal traits such as age and gender. Inquiry about lifestyle (nutrition, physical activity and fitness, and smoking habits), canyoning certification and education were also present.

The data was processed using the Statistical Package for the Social Sciences (SPSS) on a descriptive analysis, with measures of central tendency and dispersion.



### 3.5 Results

In the first and second tables are presented the minimum, maximum, mean and standard deviation values of, respectively, female and male basic anthropometric measures.

*Table 5 Minimum, maximum, mean and standard deviation values of female anthropometric measures*

<b>N=7</b>	<b>Min.</b>	<b>Max.</b>	<b>Mean</b>	<b>SD</b>
<b>Weight (kg)</b>	58	68	62.80	4.87
<b>Height (cm)</b>	158	172	167.60	5.68
<b>BMI (kg/m<sup>2</sup>)</b>	20.76	24.46	22.07	7.53

Female guides' weight has values between 58 kg and 68 kg, with an average of  $62.8 \pm 4.87$  kg. Their height is between 150 cm and 172 cm, averaging at  $167.6 \pm 5.68$  cm. Body mass index (BMI) values can be found in between 20.76 kg/m<sup>2</sup> and 24.46 kg/m<sup>2</sup> with an average of  $22.07 \pm 7.53$  kg/m<sup>2</sup>.

*Table 6 Minimum, maximum, mean and standard deviation values of male anthropometric measures*

<b>N=17</b>	<b>Min.</b>	<b>Max.</b>	<b>Mean</b>	<b>SD</b>
<b>Weight (kg)</b>	60	89	76.73	10.02
<b>Height (cm)</b>	165	182	176.18	5.67
<b>BMI (kg/m<sup>2</sup>)</b>	20.28	27.17	24.55	2.17

Men's weight is situated between 60 kg and 89 kg ( $76.73 \pm 10.02$  kg). Their height varies between 165 cm and 182 cm tall, which averages at  $176.18 \pm 5.67$  cm. BMI values can be found between 20.28 kg/m<sup>2</sup> and 27.17 kg/m<sup>2</sup> with an average of  $24.55 \pm 2.17$  kg/m<sup>2</sup>.

The following tables present the highest level of education possessed by the participants, as well as the certifications obtained by them in order to work as canyoning guides, specifically in Tirol's region.

Table 7 Highest level of education found among the study's population N=24

Level of Education	N (%)
Middle school or under	4 (16.7%)
High School/Matura/Abitur	9 (37.5%)
Technical school	4 (16.7%)
Bachelors	6 (25.0%)
Doctorate	1 (4.2%)

The highest level of education found among the participants is a doctorate (4.2%), with 37.5 % possessing a high school diploma. 25% of the guides have a bachelor's degree, 16.7% technical school and the remaining 16.7% middle school or under. All the guides (100%) own a *Tiroler Schluchtenführer* canyoning license.

Table 8 Canyoning certification possessed by the study's population. CIC – Comission Internationale de Canyon; IFMGA | IVBV | UIAGM – International Mountain Guide Association

Canyoning Certification	N (%)
CIC	0 (0%)
IFMGA   IVBV   UIAGM	0 (0%)
Tiroler Schluchtenführer	24 (100%)

Next are presented several tables regarding the physical activity and fitness levels of the study's population. Among them one finds minimum, maximum, mean and standard deviation values for push-ups and pull-ups.

Table 9 Minimum, maximum, mean and standard deviation values for push-up repetitions among the study's population N=21

Push-ups (reps.)	Min.	Max.	Mean	SD
N = 21	15	100	37.05	22.78
f	17	100	39.40	34.38
m	20	85	37.73	21.61

As seen on the table above, female guides achieve an average of 39.40 ± 34.38 push-ups (minimum of 17 and maximum of 100) and males an average of

37.73 ± 21.61 (minimum of 20 and maximum of 85). The total number of participants drops from 24 to 21 as 1 female and 2 male participants did not indicate their performance.

*Table 10 Minimum, maximum, mean and standard deviation values for pull-up repetitions among the study's population N=22*

<b>Pull-ups (reps.)</b>	<b>Min.</b>	<b>Max.</b>	<b>Mean</b>	<b>SD</b>
<b>N = 22</b>	3	50	13.36	11.10
<b>f</b>	3	20	10.60	6.23
<b>m</b>	5	50	16.36	14.36

As far as pull-up values go, females execute a minimum of 3 and a maximum of 20 (10.60 ± 6.23). Male values are situated between 5 and 50, with an average of 16.36 ± 14.36. For this variable, 22 participants provided their results, as 1 female and 1 male did not give information.

In general, 62.5% of participants practice physical activity everyday, with 37.5% exercising between 2 and 6 times per week.

*Table 11 Physical activity levels of the study's population N=24*

<b>Physical activity</b>	<b>N (%)</b>
<b>Rarely</b>	0 (0%)
<b>Once a week</b>	0 (0%)
<b>2 to 6 times a week</b>	9 (37.5%)
<b>Everyday</b>	15 (62.5%)

As far as lifestyle goes, participants answered questions regarding nutrition, smoking and drinking habits.

Table 12 Diet of the study's population N=24

Type of Diet	N (%)
Omnivore	22 (91.7%)
Vegetarian	2 (8.3%)
Pescatarian	0 (0%)
Vegan	0(0%)

Table 13 Frequency of vegetable and fruit consumption of the study's population N=24

Consumption (times per week)	Vegetables	Fruit
Once or less	2 (8.3%)	0 (0%)
2 to 6	10 (41%)	13 (54%)
More than 6	12 (50%)	11 (46%)

From the 24 study participants', 22 (91.7%) have an omnivore diet and 2 (8.3%) are vegetarian. Vegetable consumption is at 50% and fruit at 46% for more than 6 times per week. 41% eat vegetables and 54% have fruit 2 to 6 times per week. Two individuals (8.3%) have vegetables once or less a week. The table below shows alcohol consumption among the participants. 8.3% refer that they rarely have alcohol; 29.2% drink once a week, 45.8% have it 2 to 6 times per week and 16.7% consume it everyday.

Table 14 Alcohol consumption of the study's population N=24

Alcohol consumption	N (%)
Rarely	2 (8.3%)
Once a week	7 (29.2%)
2 to 6 times a week	11 (45.8%)
Everyday	4 (16.7%)

The following table displays the smoking habits of the guides. Of the 24 participants, 15 (62.5%) do not smoke while 9 (37.5%) do. From these, 4 (44.4%)

smoke 1 to 5 times a day, 3 (33.3%) smoke 6 to 10 times a day and 2 (22.2%) smoke 11 to 15 times a day.

*Table 15 Smoking habits of the study's population N=24*

<b>Smoking Habits</b>	<b>N (%)</b>		
<b>Non-Smoker</b>	<b>15 (62.5%)</b>		
<b>Smoker</b>	<b>9 (37.5%)</b>	<b>FREQUENCY</b>	<b>N (%)</b>
		1 TO 5	4 (44.4%)
		6 TO 10	3 (33.3%)
		11 TO 15	2 (22.2%)

### 3.6 Discussion

Canyoning guides must be fit in order to safely lead a group of clients. The main reason for this is that guides should always be prepared to act in a rescue. The carrying of a backpack full of material during a difficult approach (the walking to the start of the canyon) and for the duration of the trip, the setting up of rope systems in the sun or in the cold water and the rappelling of clients with the assistance of your own body is bound to be physically tiring and, as such, good physical fitness is key.

As previously presented by Melo and Gomes (2017), the average nature sports' participant in Portugal is far more likely to be a male than a female. The present study shows a similar result with 70.8% males and 29.2% females. The average age of 31 years-old of the current study falls short of 3 years from the average age in the previously mentioned study. Hardiman and Burgin (2011) additionally found that males tend to be older than females, a reality also demonstrated here - females  $27.40 \pm 7.70$  years-old and males  $32.45 \pm 7.83$  years-old.

Excess body fat is associated with complications such as hypertension, type 2 diabetes mellitus, metabolic syndrome or cardiovascular disease, particularly when placed around the abdomen (Pescatello, Arena, Riebe, & Thompson, 2014, p. 62). Individuals who have a BMI between  $18.5 \text{ kg/m}^2$  and  $24.9 \text{ kg/m}^2$  are considered to be of normal weight, while  $25 \text{ kg/m}^2$  or more is considered overweight (obese when  $> 30 \text{ kg/m}^2$ ); below  $18.5 \text{ kg/m}^2$  a person is considered to be underweight (Flegal, Kit, Orpana, & Graubard, 2016). Hence, both female and male guides presented in the study are, on average, within the healthy limits. As canyoning is an active sport, it is likely that the few considered to be overweight are in the category since the index does not take into consideration the person's gender nor does it differentiate between body fat, bone and muscle mass. Thus, the latter is likely to contribute to the placing of some guides in the  $25.0\text{-}29.9 \text{ kg/m}^2$  BMI category.

By observing the result tables, it is possible to see that the majority of guides (37.5%) has a high-school diploma and only 29.2% a bachelor's degree or more. This goes against findings in studies done by Melo & Gomes, (2017), which mention canyoning participants are well educated, mainly possessing bachelor and masters' degrees.

Canyoning certification obtained among the present population is not a surprise as guides who wish to work in Tirol are expected to attain such license (*Tiroler Schluchtenführer*).

Regarding the guides' fitness levels, they all appear to be healthy and fit. This may happen because most guides will also have a physically active job during the winter months, most being ski and snowboard instructors, which forces them to be active all year round.

Comparing the results obtained in the present study with values from Pescatello et al. (2014, p. 101) for push-ups, both female (39 repetitions) and male's (38 repetitions) average score marks "excellent" (27yo, woman, *excellent* for minimum 30 repetitions / 33yo, man, *excellent* for minimum 30 repetitions.) in their age groups' charts. With a minimum of 17 repetitions for the women and 20 for the male, both can be fitted in the "good" category; the maximum number of repetitions is not possible to compare as the values are not present in the board (85 for male and 100 for female).

It is hard to find in the literature charts used simply as guideline for pull-up values. Nevertheless, the pull-up test done by the U.S. Marine Corps can be used as a reference as it provides values for different age groups and is selected by gender. The minimum and maximum values for a 33-year-old male marine are between 5 and 23 pull-ups; the average value in the current study can be found at 16 repetitions, which can be perceived, once again, as physically fit. For the women, a 27 year-old should be able to perform between 4 and 12 pull-ups in the Marine Corps, placing the average of 11 performed by the female guides on the top of the chart. Marinho and Marins (2012) have a similar chart which could also be used as a reference; however, the values for females are set not for a regular pull-up but for the amount of time one can hang on a bar, by the hands and with

arms flexed. Another disadvantage would be that the study does not specify results for older people, only presenting it as  $\geq 17$  years old.

The cardiorespiratory capacity of a canyoning guide is as important as their muscle strength as endurance is needed to be able to work under extreme conditions, needed for a long run in case the need arises (e.g. to get help in a remote place that has no phone reception) or even when one of the guides must go back to the starting point to get the van used to transport the clients there.

According to Nelson, Rejeski, Blair, Duncan and Judge (2007), adults should do a minimum of 150 minutes of aerobic physical activity per week of moderate intensity, or 75 minutes per week of high intensity. For example, at *Faszinatour*, an average canyoning trip with clients can last from 3 up to 6h, which corresponds around 1.5 h - 4.5 h of actual physical activity. Under the consideration of the survey, and admitting companies take about the same time (since trips in the area are done mostly in the same canyons) as *Faszinatour*, one can say that the average canyoning guide in Tirol gets above the recommended minimum of physical activity.

When it comes to nutrition, eating habits are key to maintaining a healthy lifestyle. The metabolic syndrome is characterized by high quantities of abdominal adipose tissue, low high-density lipoprotein (HDL) cholesterol levels and high levels of triglycerides (TG) (Huang et al., 2015). According to the author, physical activity and proper nutrition are major factors in its prevention. Smoking habits (lower HDL, higher TG, abdominal obesity) and excessive alcohol drinking are factors that may contribute to the development of the metabolic syndrome.

By observing the results of the survey on the consumption of vegetables and fruit, one can expect the guides' diets to be varied and complete, with the majority ingesting vegetables more than 6 times per week (50%) and fruit 2 to 6 times per week (54%). From the 24 participants, 22 had an omnivore diet, meaning that access to macros should not pose a problem. In his study, Faria (2018) found that guides with the highest consumption of fruit, soup and vegetables had, in general, a better physical performance.



Regarding drinking habits, outdoor guides are known to grab a few drinks after work (Filho, 2019). This reality can be observed in the present study as 45.8% of the population consumed alcohol 2 to 6 times a week, with 16.7% actually consuming it everyday. Faria (2018) found that alcohol consumption affected the rafting guides' performance, believing it to be essential to bring up the negative effects of drinking.

From the 24 guides questioned in this study, 9 (37.5%) were smokers with the majority smoking 1 to 5 times a day (44.4%), leaving 62.5% as non-smokers. The findings match those from Faria (2018), where it was found that 70% of the rafting guides in the North of Portugal did not smoke. Of those who did, the highest percentage could be found among the ones who smoked the least.

### 3.7 Conclusions

The present study was important to characterize the canyoning guide community in Tirol. Although not a very large sample, the results obtained demonstrate it is a fit and healthy population, where female and younger generations' presence could benefit from an increase.

If improved with more questions and formal fitness tests, the survey could be used by companies in order to characterize guides working for them so as to detect any improvement needed, making it also possible to apply to other activities such as rafting.

By obtaining information related to fitness levels, companies and instructors can define guides and use the data for improvements in safety and rescue situations.

The objectivity of the study could be raised by not allowing the participants to simply answer an online survey, but to execute the tests at the same time as someone analyses the performance.

Extra exploration regarding the forming of performance questions and their guidelines should have taken place in order to be possible to bring out more pertinent information.



CHAPTER IV

**INTERNSHIP'S SUMMARY**



#### 4. INTERNSHIP'S SUMMARY (Conclusion)

It is said that great things never come out of comfort zones. In my opinion, no sentence could more accurately describe my experience over the last summer season. During my internship I was able to not only learn about a modern outdoor sport and a foreign country but also about myself, including my strengths and weaknesses on a physically as well as on a psychological level. I gained skills I never thought I could develop. I went from never having set foot on a raft, to be able to flip a boat heavier than myself, and from a complete lacking experience of white-water swimming, to crossing a river rapid with full rafting gear on. Although having gone through a tough time, from freezing temperatures to high levels of anxiety and stress, quitting was never an option and I am grateful to everybody that helped me through it.

Throughout this experience I was able to obtain new knowledge and skills about rafting, a sport I had never had the opportunity to take part in before my time in Austria. Nevertheless, I believe it made me grow in many ways as it allowed me to meet new people, to learn a new language and to gain professional skills that will accompany me through the rest of my career. It showed me beauty in places I had never thought of looking and that people can be kind and helpful when you need them. Moreover, it evoked enough curiosity within me that I will go back to Austria, not only for rafting but to experience the next winter season.

I am also grateful I was given the opportunity to work as a full-time "real" employee and not just an intern as it enabled me to experience how a raft guide is seen, how they work and train, and embrace their lifestyle for a few months. It was also a fulfilling experience in the sense that it opened some doors for my future, having already been offered work for the next summer season.

It was a huge privilege to learn from and work with world class guides, who have rafted some of the toughest rivers in the world was a truly humbling

experience. Although their knowledge of white-water is extensive, they are always ready to help whenever one needs it.

If I had any doubts about taking a master's degree in Nature Sport, now I know how important this experience was as it allowed me to get to know the commercial outdoors' world and to get new and valid personal and technical skills. I would advise anybody who is considering taking a master's degree in Nature Sport, I advise you to go through with it as it will only make you grow and learn. The Internship Format will be very valuable, specially in Tirol's region. Not only am I aiming for the degree, I have now also an outdoor certification to enrich my professional career.





CHAPTER V  
BIBLIOGRAPHY



# BIBLIOGRAPHY

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# CHAPTER VI



## 5. ATTACHMENTS








## 5.1 Attachment I – Logbook

		<b>CW</b>	
		24/06/2019 - 30/06/2019	
Fri	Platschnass Stadl	2	
Sat	Platschnass Stadl	2.5	
<b>Total</b>		<b>4.5</b>	

		<b>CW</b>	
		01/07/2019 - 07/07/2019	
Sat	Imster Schlucht, Rent a Boat	7	
Sun	Imster Schlucht	3.5	
<b>Total</b>		<b>10.5</b>	

		<b>CW</b>	
		08/07/2019 - 14/07/2019	
Thu	Imster	7	
Sat	Imster Schlucht	6	
Sun	Imster Schlucht	3.5	
<b>Total</b>		<b>16.5</b>	

**CW**

15/07/2019 - 21/07/2019



Tue	Imster Schlucht	7	✓
Wed	Imster Schlucht	7	✓
Thu	Imster Schlucht	7	✓
Fri	Kinderrafting, Wochenendbetreuung	5.5	✓
Sat	Imster Schlucht	8	✓
Sun	Imster Schlucht	3.5	✓
Total		38.0	



**CW**

22/07/2019 - 28/07/2019



Tue	Imster Schlucht	7	✓
Wed	Imster Schlucht, Kinderrafting	7	✓
Thu	Imster Schlucht	3.5	✓
Fri	Imster Schlucht	7	✓
Sat	Imster Schlucht	7	✓
Sun	Kinderrafting	3.5	✓
Total		35.0	

<b>CW</b>		
	29/07/2019 - 04/08/2019	
Tue	Imster Schlucht	3.5 ✓
Wed	Kinderrafting	3.5 ✓
Thu	Imster Schlucht, Kinderrafting	7 ✓
Fri	Exklusiv Raft, Imster Schlucht,	8 ✓
Wochenendbetreuung		
Sat	Imster Schlucht	7 ✓
<b>Total</b>		<b>29.0</b>

<b>CW</b>		
	05/08/2019 - 11/08/2019	
Mo	Kinderrafting	7 ✓
Tue	Imster Schlucht	7 ✓
Wed	Imster Schlucht	7 ✓
Sat	Imster Schlucht	7 ✓
Sun	Imster Schlucht	7 ✓
<b>Total</b>		<b>35.0</b>

<b>CW</b>		12/08/2019 - 18/08/2019	
Tue	Kinderrafting	3.5	✓
Sat	Imster Schlucht	3.5	✓
Sun	Imster Schlucht	3.5	✓
<b>Total</b>		<b>10.5</b>	

<b>CW</b>		19/08/2019 - 25/08/2019	
Mo	Kinderrafting	3.5	✓
Tue	Imster Schlucht	3.5	✓
Sat	Exklusiv Raft, Stadlgaudi	6.5	✓
<b>Total</b>		<b>13.5</b>	

<b>CW</b>		
26/08/2019 - 01/09/2019		
Fri	Imster Schlucht, Wochenendbetreuung	5 ✓
Sat	Imster Schlucht	7 ✓
Sun	Imster Schlucht	3.5 ✓
<b>Total</b>		<b>15.5</b>

<b>CW</b>		
02/09/2019 - 08/09/2019		
Thu	Exklusiv Raft, Imster Schlucht	7.5 ✓
Fri	Exklusiv Raft	3.5 ✓
Sat	Imster Schlucht	3.5 ✓
Sun	Imster Schlucht	3.5 ✓
<b>Total</b>		<b>18.0</b>

<b>CW</b>		09/09/2019 - 15/09/2019	
Thu	Hausmeistertätigkeit, Imster Schlucht	6.5	✓
Sat	Imster Schlucht	7	✓
Sun	Imster Schlucht	3.5	✓
<b>Total</b>		<b>17.0</b>	

<b>CW</b>		16/09/2019 - 22/09/2019	
Tue	Imster Schlucht	7	✓
Thu	Imster Schlucht	3.5	✓
<b>Total</b>		<b>10.5</b>	✓



## 5.2 Attachment II – Rafting Exam's requisites



### Voraussetzungen und Inhalte Prüfung Raftguide gemäß IRF Standard

#### Voraussetzungen

- Anmeldung über das Online Formular auf der Webseite des Tiroler Raftingverbandes
- Prüfungsgebühr bezahlt
- Nachweis von 30 Fahrten oder 60 Stunden **auf WW3<sup>1</sup>** oder höher (Prüfung WW3) oder 50 Fahrten oder 100 Stunden **auf WW4<sup>1</sup>** oder höher (Prüfung WW4) per offizielles Logbuch<sup>2</sup>, **im Original und 1 Kopie zur Prüfung mitzubringen !** (Logbuch kann [hier](#) als PDF heruntergeladen werden)
- Nachweis Erste-Hilfe Kurs 8 Stunden, nicht älter als 3 Jahre, **im Original und 1 Kopie zur Prüfung mitzubringen !**
- Kugelschreiber für den schriftlichen Test

#### Schriftlicher Test

- 28 Fragen zu **allen** Themen, die im Österreichischen Raftinglehrplan V2 stehen
- Multiply Choice Verfahren, d.h. mindestens **eine** oder **mehrere** Antworten können richtig sein
- Maximal 72 Pkt. können erreicht werden, mindesten 58 Pkt. nötig, um Test zu bestehen.

#### Praktischer Test (im Anschluss vom schriftlichen Test)

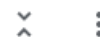
- Nur wer den schriftlichen Test bestanden hat, darf am praktischen teilnehmen
- Persönliche Guideausrüstung: Helm, Schwimmweste, Wurfsack mindestens 15m (am Körper zu tragen), Fliepleine, Messer, Pfeife, 3 Karabiner, 2 Prusikschlaufen, 1 Umlenkrolle, Kälteschutzbekleidung und relevante Schuhe. (Siehe auch Kapitel 5.2.3 Österreichischer Raftinglehrplan V2)
- Beherrschung **aller Inhalte** der Sicherheitseinweisung (Kapitel 7.1 Österreichischer Raftinglehrplan V2)
- Beherrschung sicheres An- und Ablanden des Rafts
- Beherrschung aller relevanten Paddelschläge, Vorwärts- und Rückwärtsschlag, Bogenschlag vor- und rückwärts, Ziehschlag und Steuerschlag
- Beherrschung Seilfähre, vor- und rückwärts (Kapitel 4.7 Österreichischer Raftinglehrplan V2)
- Beherrschung Kehrwasertechnik, Direkt- und Seilfährentechnik (Kapitel 4.7 Österreichischer Raftinglehrplan V2)
- Beherrschung Erkennens und Beurteilung der verschiedenen Strömungsformen und Hindernisse im Fluss und die entsprechende Wahl der Fahrtroute
- Beherrschung der Knoten, die im Kapitel 6 des Österreichischen Raftinglehrplan V2 beschrieben sind
- Innerhalb von maximal 5 Minuten Aufbau und Demonstration eines 3:1 Flaschenzugsystem mit 3-fach Ausgleichsverankerung am Raft (Kapitel 9.5 Österreichischer Raftinglehrplan V2)
- Erfolgreiches Bestehen des Schwimmtests, (2x queren des Flusses durch aktives Schwimmen)
- Erfolgreiches Bestehen des Wurfsacktests, maximal 3 Versuche (Details dazu [hier](#))
- Erfolgreiches Bestehen des Kehrwasserfliepteests, maximal 2 Versuche: 1 Minute Zeit um (mit Paddel in der Hand) aus der Strömung an das angebundene Raft (**Aufrecht** im Kehrwasser) zu Schwimmen und einzusteigen. Danach die Fliepleine anbringen und gegebenenfalls mit Hilfestellung das Raft zur Strömung umwerfen (Flip). Sobald das Raft umgekippt ist, hat der Prüfling **maximal 1,5 - 2 Minuten** Zeit um: Von der Flussseite her auf das umgedrehte Raft eigenständig aufzusteigen, die Fliepleine von der Flussseite auf die Uferseite zu wechseln, den sogenannten "Headcount" zu machen, d.h. dem Prüfer signalisieren, dass alle Passagiere (gedacht) am Raft sind, danach das Raft zurück drehen (Re-Flip) und wieder eigenständig ins Raft einsteigen. Das Anbringen von eigenen Auf- und Einstiegshilfen am Raft ist nicht erlaubt, zu dem ist der Zustieg immer nur an der Längsseite des Rafts, die zum Fluss zeigt, erlaubt. (Bilder dazu [hier](#))
- Alles Tests müssen in vollständiger Guideausrüstung absolviert werden.

<sup>1</sup>Definition WW: Der Tiroler Raftingverband akzeptiert nur Fahrten, die auf **natürlichen Gewässern** in dem betreffenden WW Schwierigkeitsgrad stattfanden. Grundlage hierfür bilden offizielle Flussführer wie z.B. der DKV Auslandsführer Zentral Europa.

<sup>2</sup>Definition Logbuch: Der Tiroler Raftingverband akzeptiert nur Logbücher mit Fahrten, die entweder von **Besitzer/Geschäftsführer** der Raftfirma per **Firmenstempel**, Name in Druckschrift und Unterschrift **oder** vom jeweiligen **Tripleader/Headguide** mit Namen in Druckschrift und Unterschrift abgezeichnet sind. Zudem muss eine ausgedruckte Bescheinigung (Email) von der Raftfirma vorliegen die Bestätigt, dass abzeichnender **Tripleader/Headguide** der Raftfirma bei aufgeführten Fahrt(en) im Einsatz war. Es werden nur die Stunden anerkannt, die ein kommerzieller Trip auf den jeweiligen Flüssen auch dauern. Zeiten von Ausbildungsfahrten, die länger als normale kommerzielle Trips dauern, werden nur anerkannt, wenn speziell als Ausbildungsfahrt eingetragen und von einem aktiven IRF Ausbilder mit seiner IRF Nummer, Name in Druckschrift **oder** Besitzer/Geschäftsführer der Raftfirma per Firmenstempel, Name in Druckschrift mit Unterschrift abgezeichnet sind. **Fahrten und Stunden, die unvollständig oder fehlerhaft im Logbuch aufgeführt/ abgezeichnet sind, werden vom Tiroler Raftingverband korrigiert oder nicht anerkannt und können zum Ausschluss von der Prüfung führen !**

## 5.3 Attachment III – Online Survey

# Characterization of canyoning guides in Austria



This survey's purpose is to do a general characterization of canyoning guides working in Austria, particularly in Tirol. It can be answered both by guides or guides-in-training.

The information provided will be anonymous and only used for a master's thesis in Nature Sports. It takes less than 5 minutes to answer!

Thank you very much for your help!

Schöne Grüße,  
Ana Corrêa Mendes

---

Gender \*

Female

Male

Other

Age \*

Texto de resposta curta

---

Nationality \*

Austrian

Swiss

German

Italian

UK

Outros...

Weight (kg) \*

Texto de resposta curta

---

Height (cm) \*

Texto de resposta curta

---

What is your highest level of education? \*

- Middle school or under
- High school/Matura/Abitur
- Technical school
- Bachelor's
- Master's
- Doctorate
- Outros...

Are you a fully qualified guide or still in training? \*

- Guide
- In training

Which canyoning certification(s) do you possess or are in the process of obtaining? \*

- CIC
- IFMGA | IVBV | UIAGM
- Tiroler Schluchtenfuehrer
- Outros...

How many pull ups can you do? \*

Texto de resposta curta

---

How many push ups can you do? \*

Texto de resposta curta

---

Do you smoke or vaporize? \*

- Yes
- No

In case of yes, please specify:

- 1 to 5 times a day
- 6 to 10 times a day
- 11 to 15 times a day
- More than 16 times a day

Fruit consumption \*

- Once or less a week
- 2 to 6 times a week
- More than 6 times a week

Vegetable consumption (meal or snack) \*

- Once or less a week
- 2 to 6 times a week
- More than 6 times a week

Alcohol consumption \*

- Rarely
- Once a week
- 2 to 6 times a week
- Everyday

Diet \*

- Omnivore
- Vegetarian
- Pescatarian
- Vegan
- Outros...

Physical Activity (guiding included) \*

- Rarely
- Once a week
- 2 to 6 times a week
- Everyday

## 5.4 Attachment IV – Survey's Data

		Gender	Age	Nacionality	Weight (kg)	Height (cm)	Highest Level of Education	GuideGuide intraining
N	Valid	24	24	24	24	24	24	24
	Missing	0	0	0	0	0	0	0
Mean			30,83		73,04	174,29	2,83	1,92
Median			30,00		70,00	174,00	2,00	2,00
Mode			28 <sup>a</sup>		68 <sup>a</sup>	170 <sup>a</sup>	2	2
Std. Deviation			7,545		11,024	7,000	1,173	0,282
Variance			56,928		121,520	48,998	1,375	0,080
Minimum			19		58	158	1	1
Maximum			48		98	186	5	2

### Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	f	7	29,2	29,2	29,2
	m	17	70,8	70,8	100,0
	Total	24	100,0	100,0	

### Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	19	1	4,2	4,2	4,2
	20	1	4,2	4,2	8,3
	21	2	8,3	8,3	16,7
	22	1	4,2	4,2	20,8
	27	1	4,2	4,2	25,0
	28	4	16,7	16,7	41,7
	29	1	4,2	4,2	45,8
	30	2	8,3	8,3	54,2
	31	1	4,2	4,2	58,3
	32	1	4,2	4,2	62,5
	33	2	8,3	8,3	70,8
	35	1	4,2	4,2	75,0
	38	4	16,7	16,7	91,7
	45	1	4,2	4,2	95,8
	48	1	4,2	4,2	100,0
	Total	24	100,0	100,0	

### Nacionality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Austrian	10	41,7	41,7	41,7
	Czech Republic	1	4,2	4,2	45,8
	German	8	33,3	33,3	79,2
	Italian	2	8,3	8,3	87,5
	UK	3	12,5	12,5	100,0
	Total	24	100,0	100,0	

### Nacionality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Austrian	10	41,7	41,7	41,7
	Czech Republic	1	4,2	4,2	45,8
	German	8	33,3	33,3	79,2
	Italian	2	8,3	8,3	87,5
	UK	3	12,5	12,5	100,0
	Total	24	100,0	100,0	

### Weight (kg)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	58	1	4,2	4,2	4,2
	59	1	4,2	4,2	8,3
	60	2	8,3	8,3	16,7
	61	1	4,2	4,2	20,8
	65	2	8,3	8,3	29,2
	68	3	12,5	12,5	41,7
	70	3	12,5	12,5	54,2
	72	1	4,2	4,2	58,3
	74	1	4,2	4,2	62,5
	75	1	4,2	4,2	66,7
	80	2	8,3	8,3	75,0
	82	1	4,2	4,2	79,2
	85	1	4,2	4,2	83,3
	87	1	4,2	4,2	87,5
	89	2	8,3	8,3	95,8
	98	1	4,2	4,2	100,0
	Total	24	100,0	100,0	

### Height (cm)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	158	1	4,2	4,2	4,2
	163	1	4,2	4,2	8,3
	165	1	4,2	4,2	12,5
	167	1	4,2	4,2	16,7
	170	4	16,7	16,7	33,3
	171	1	4,2	4,2	37,5
	172	2	8,3	8,3	45,8
	173	1	4,2	4,2	50,0
	175	1	4,2	4,2	54,2
	177	1	4,2	4,2	58,3
	178	1	4,2	4,2	62,5
	180	4	16,7	16,7	79,2
	181	2	8,3	8,3	87,5
	182	2	8,3	8,3	95,8
	186	1	4,2	4,2	100,0
	Total	24	100,0	100,0	

### Highest Level of Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Middle school or under	4	16,7	16,7	16,7
	High school/Matura/Abitur	9	37,5	37,5	54,2
	Technical school	4	16,7	16,7	70,8
	Bachelor's	6	25,0	25,0	95,8
	Doctorate	1	4,2	4,2	100,0
	Total	24	100,0	100,0	

### Guide training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	In training	2	8,3	8,3	8,3
	Guide	22	91,7	91,7	100,0
	Total	24	100,0	100,0	

### Canyoning certification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tiroler Schluchtenführer	24	100,0	100,0	100,0

### Pull-ups

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	2	8,3	9,1	9,1
	5	3	12,5	13,6	22,7
	6	1	4,2	4,5	27,3
	8	2	8,3	9,1	36,4
	10	5	20,8	22,7	59,1
	12	3	12,5	13,6	72,7
	20	4	16,7	18,2	90,9
	35	1	4,2	4,5	95,5
	50	1	4,2	4,5	100,0
	Total	22	91,7	100,0	
Missing	N/A	2	8,3		
Total		24	100,0		



### Push-ups

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15	1	4,2	4,8	4,8
	17	1	4,2	4,8	9,5
	20	7	29,2	33,3	42,9
	30	3	12,5	14,3	57,1
	40	2	8,3	9,5	66,7
	42	1	4,2	4,8	71,4
	49	1	4,2	4,8	76,2
	50	2	8,3	9,5	85,7
	60	1	4,2	4,8	90,5
	85	1	4,2	4,8	95,2
	100	1	4,2	4,8	100,0
	Total	21	87,5	100,0	
Missing	N/A	3	12,5		
Total		24	100,0		

### Guide\_G IT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Guide	22	91,7	91,7	91,7
	In training	2	8,3	8,3	100,0
	Total	24	100,0	100,0	

### Smoke

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	15	62,5	62,5	62,5
	Yes	9	37,5	37,5	100,0
	Total	24	100,0	100,0	

### Smoke\_ day

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 to 5	4	16,7	16,7	16,7

11 to 15	2	8,3	8,3	25,0
6 to 10	3	12,5	12,5	37,5
N/A	15	62,5	62,5	100,0
Total	24	100,0	100,0	

### Fruit\_consumption

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	24	100,0	100,0	100,0
> 6	11	46%		
2 to 6	13	54%		
total	24	1,0		

### Vegetable\_consumption

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid > 6	12	50,0	50,0	50,0
2 to 6	10	41,7	41,7	91,7
Once or less	2	8,3	8,3	100,0
Total	24	100,0	100,0	

### Alcohol\_consumption

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2 to 6	11	45,8	45,8	45,8
Everyday	4	16,7	16,7	62,5
Once a week	7	29,2	29,2	91,7
Rarely	2	8,3	8,3	100,0
Total	24	100,0	100,0	

### Diets

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Omnivore	22	91,7	91,7	91,7
Vegetarian	2	8,3	8,3	100,0
Total	24	100,0	100,0	

### PA

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2 to 6 times a week	9	37,5	37,5	37,5
Everyday	15	62,5	62,5	100,0
Total	24	100,0	100,0	

## 5.5 Attachment V – Photographs



*Figure 19 Fun trip to the Upper Isar*



*Figure 5150 First trip after guide exam*





*Figure 516 Convoy of rafts on a regular trip*





Figure 517 Safety talk at the put-in



Figure 518 Rafting Memminger rapid with a full boat





Figure 519 Training trip to help fellow guide before her exam day

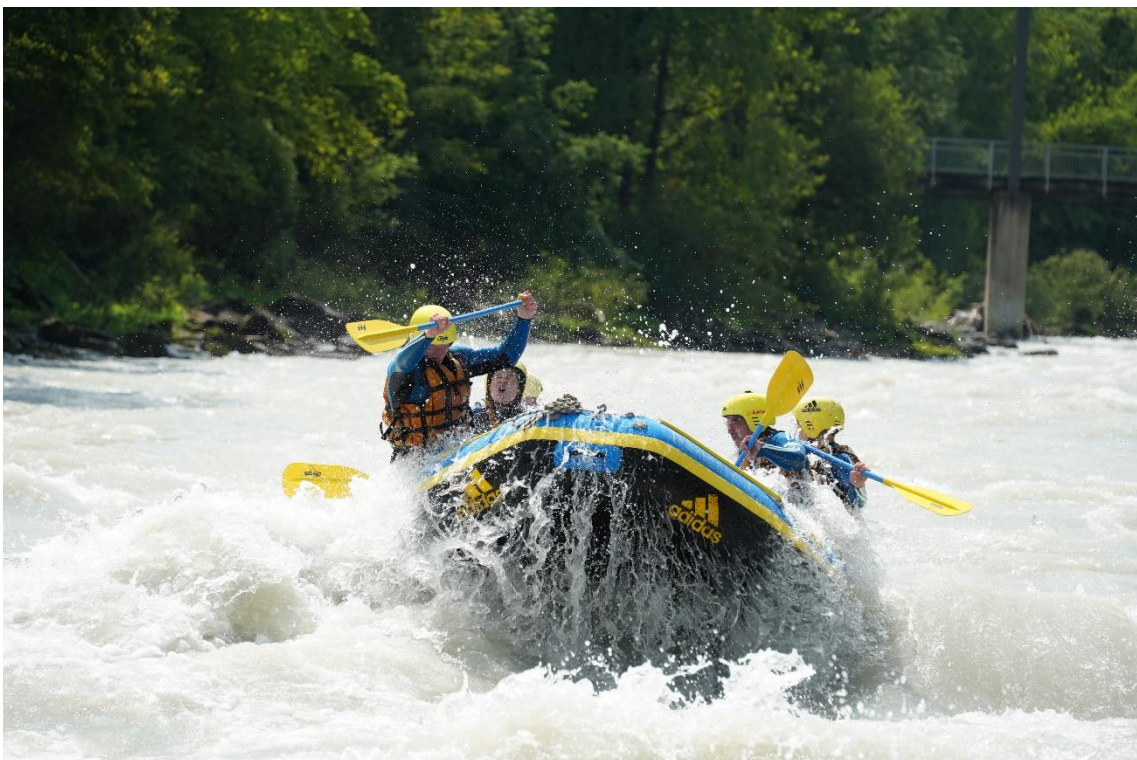


Figure 520 Fotografien-Schwall part 1





Figure 521 Fotografhen-Schwall part 2



Figure 522 People overboard at play section





Figure 523 Safety talk at the base



Figure 524 Adapted seating technique for a full boat





Figure 30 Faszinatour team summer season 2019

## 5.6 Attachment VI – The company's evaluation

 Instituto Politécnico de Viana do Castelo	<h3>CERTIFICATE OF ATTENDANCE AND EVALUATION FOR WORK PLACEMENTS</h3>
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This certificate confirms that the student: Ana Gentil Berger Corrêa Mendes, from **Instituto Politécnico de Viana do Castelo - IPVC**, Portugal, was a full-time intern at Faszinatour, from **10-05-2019** to **01-10-2019**.

Duration of Work Placement: 5 months Select weeks

The Work Placement has been completed according to the terms of the student's Training Agreement: Yes  No

**Quantitative evaluation of trainee** (according to the criteria set below, using 1 fail - 5 excellent scale)

	Scale	1	2	3	4	5
Responsibility		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Initiative		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Communication skills		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Self-confidence		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Creativity and Innovative skills		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ability to work effectively under pressure		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Overcoming difficult situations		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Teamwork		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Positive attitude and interest towards work		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ability to work fast and efficiently		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding/Management of situations		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Average score of achieved results:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Qualitative assessment

1. What were the student's main strengths? Clique aqui para introduzir texto.
2. What were the student's main weaknesses? Clique aqui para introduzir texto.
3. Would you accept other students on Erasmus placements from Instituto Politécnico de Viana do Castelo IPVC? YES  NO  Why? Clique aqui para introduzir texto.
4. Any other comments? Clique aqui para introduzir texto.

Supervisor / Mentor's Signature: \_\_\_\_\_

Please include the company stamp

Name and function: PACHLER MARCEL

Date: 01/10/2019

**Thank you very much for completing this evaluation form and for providing our student(s) with an internship opportunity.**

*This certificate must be returned at the end of the Work Placement abroad. The completed form needs to be returned emailed as a scanned copy to [internacional@ipvc.pt](mailto:internacional@ipvc.pt) or posted to International Office, Instituto Politécnico de Viana do Castelo, Rua Escola Industrial e Comercial de Nun'Álvares, n.º 34, 4900-347 Viana do Castelo, Portugal.*