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I want to become an Aquapreneur
A case study from an entrepreneurship training
program for aquaculture in Mozambique

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Entrepreneurship and Innovation

Preface

During the fall of 2019 I started to look for an interesting topic to write my master thesis about. When I met supervisor Bernt Aarset, he said *«you can do it easy and interview some people in Oslo, or since it is your last semester you should do something really exciting!»*. Then he put me in touch with Morten Høyum who told me about a project he had been working on in Mozambique. With my background from social sciences and a master in entrepreneurship and innovation it felt natural to write a thesis on a topic between those intersections. A half year later I sat on a plane on my way to a small town called Hokwé in Mozambique to write my master thesis about an entrepreneurial training facility for aquaculture called Papa Pescá Limitada.

The last half year has contributed to personal and educational growth, and I have definitely stepped out of my comfort zone. In addition to new knowledge on entrepreneurship in international context, I have also had an exciting meeting with new culture and wonderful people! For that reason I would like to to thank Morten Høyum, Pieter de Klerk and everyone at Papa Pescá who gave me the opportunity to do something different last semester and who took good care of me during my stay. A big thank you to Kelvin E. Mahumane and José Vilanculo for being my guides and support, and all the informants who participated in this study. Without you this would not be possible!

This dissertation represents the end of two exciting and hectic years at master program of entrepreneurship and innovation at NMBU. These two years have been an adventure, and have contributed to develop me as a professional as well as a person. The study has also fulfilled its purpose; in addition to give knowledge, skills and tools to become a potential entrepreneur, it has exposed me for a specter of emotions I did not knew existed. This program has opened many doors, and I am grateful for having the opportunity of being a part of this wonderful race.

I also would like to thank my supervisor Bernt Aarset for guiding me through the process and putting me in touch with Morten Høyum. Without you I would not have this opportunity. Thank you Elin Kubberød for being supportive. You are a lifesaver and my idol! Thank you to my significant other Erik Øyan, for being my rock. I also would like to thank my flatmates and friends. Last, but most I would like to thank Ann-Kristin Roulund and Frøydis Pettersen Jensen for your critical view, your honesty, and your ability to ask good questions.

Enjoy!

Oslo, June 2020

Inna Marie Dahlen

Abstract

Background: Aquaculture and tilapia farming in Mozambique are new markets and business opportunities. Papa Pescá is a private Mozambican company that has proven fish farming is a profitable business. In 2016 Papa Pescá started a collaboration with a Norwegian NGO and developed an entrepreneurial training program with the aim to train participants to become aquapreneurs, and in 2018 the program took in its first participants. Two years and 36 participants later, no students have started their own business within aquaculture.

Purpose: This dissertation has three purposes. First, it seeks to shed light on *«Which factors limit the participants in the training program to start their own business within aquaculture?* Secondly, this dissertation seeks to help Papa Pescá to improve and adapt their training program to prepare participants for meeting entrepreneurial challenges and opportunities. Researchers on entrepreneurship in Africa also call for more geographically specific research, and more research on entrepreneurship education and training. The third purpose of this dissertation is therefore to contribute to filling in those gaps.

Method: To answer the research question qualitative ethnographic methods have been used, among those methods in-depth interviews and observations. The informants in this dissertation are current and former participants at Papa Pescá´s entrepreneurship training program for aquaculture. The aim of the program is to give students experience of fish farming and relevant entrepreneurial knowledge and skills.

Findings: The research shows that participants have two career ambitions; employability and entrepreneurial intentions. Interestingly, they only fulfill employability. Research reveals that the program targets two different participant groups and program content is not adapted towards both groups. Additionally, the program is shown to lack relevant training input to prepare the students for entrepreneurial activity. Despite the shortcoming of the training program, the students express the will to become entrepreneurs. This ambition is further limited by contextual challenges like cultural attitudes towards entrepreneurship, financial challenges and inefficient bureaucracy.

Content

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1. Introduction

Researchers link economy and entrepreneurship closely together and state that entrepreneurship is an engine behind economic growth, and a creator of jobs within communities, regions, and nations (Meric, 2013, p. 75; Minniti & Lévesque, 2008, p. 605). Entrepreneurship can be defined as the process of designing, launching, and running a new business (Mabogunje, Hansen, & Berg, 2018, p. 60; Foss & Klein, 2012). Entrepreneurial training programs (ET programs) is one way to encourage entrepreneurship. ET programs seeks to empower individuals with tools, attributes, knowledge and skills that is needed to start entrepreneurial activity and keep the business running (Robb et. al., 2014, p. 7; Mbeteh & Pellegrini, 2018, p. 92; Huber, Sloof and Van Praag, 2014, p. 2). One way these programs are used is to help vulnerable groups to change their life situation (Valerio, et. al. 2014, p. 34).

Junne (2018 p. 121) argues that low levels of education in most African countries creates a bottleneck for entrepreneur. Therefore, many African governments has started with entrepreneurial education and training programs, (EET programs) (Ratten & Jones 2018, p. 19). Africa is the second largest continent in the world, consisting of 54 countries diversified by culture, values, politics and religions. In 2015 the population of the continent reached 1,2 billion people. Despite 15% of the world population, Africa plays a relatively small role in the world economy representing only 2,78% of the world's total GDP (Worldometers, GDP by Region, 2019). Even though education and training programs have become a common part of governments facilitation strategy for entrepreneurship, there has been done little research on entrepreneurial education in Africa (Igwe and Icha-Ituma, 2020, p. 343) and as the use of these programs are becoming more widespread the need for more research increases. This dissertation is a case-study of an entrepreneurial training program in Mozambique at an aquaculture facility named Papa Pescá Limitada. The facility seeks to train young people, and equip them with knowledge, skills, and attributes to start their own aquacultural business. However, after program completion no students have started their own business in aquaculture. This dissertation seeks to supplement existing literature in Mozambique and shed light on following research question:

«Which factors limit participants from the training program to start their own business within aquaculture?»

To answer this question, I will focus on three factors; personal characteristics of the participants, the characteristics of the program and the political, economic and cultural context in which the program takes place. Through these factor I will explore how motivational factors may influence the outcomes of the training program. Furthermore, I will examine if the training program gives participants the necessary tools and knowledge in order to start own entrepreneurial business within aquaculture. Does the program have the necessary elements in place? Finally, I also want to examine the contextual barriers that participants face in order to start own aquacultural business.

1.2 Significance of the dissertation

A common trait for many research studies on Africa, is that Africa is seen as one geographic region with the same business practices, when in reality, this is not the case. This means that research should take the geographical differences into consideration (Ratten & Jones, 2018, p. 23). The literature review of entrepreneurship in Mozambique that will be presented later on, shows that more local research on the field of entrepreneurship is needed.

Igwe and Icha-Ituma (2020, p. 343) also identify several research gaps and call for more research on entrepreneurship education. The most comprehensive study on entrepreneurship and training programs in Mozambique was done in 2014 by Robb, Valerio and Parton. In six years, many things can change and it is therefore important to do new research.

Last, but most importantly, is that the findings may help Papa Pescá Limitada to improve their training program in order to help potential entrepreneurs to start new entrepreneurial activity within aquaculture.

2. Background

In this chapter I will start to present a small overview of research gap on entrepreneurship in Africa, and this dissertation seeks to contribute to some of this gaps. In next section I will present some context from Mozambique and research on entrepreneurship in Mozambique. The last section is devoted to the case of Papa Pescá. This section is a construction from secondary data, interviews with Morten Høyum, from now on referred to as FIAS, the administration at Papa Pescá and supervisors at the program.

2.1 Research gaps in Africa

Despite the long tradition of entrepreneurship in Africa (Nafukoho & Muyia, 2010, p. 99), entrepreneurial activity in Africa have been lower compared to other parts of the world (Ratten & Jones, 2014, p. 17). Today, research on entrepreneurship in Africa encompass topics such as relationships between income and entrepreneurship, African entrepreneurship related to global trade, entrepreneurial clusters, entrepreneurial networks and relationships between financial constraints, and entrepreneurial success (Naude & Havenga, 2005; Nafziger, 1970; Kilby, 1983). In addition, research on the field of women and entrepreneurial development has also grown. Statistics from 2015 indicate that 17% of women are actively engaged in early stage entrepreneurial activity, and the activity rate was ranked as one of the highest in the world (Udong, 2013; Nyakudya, Simba, & Herrington, 2018, p. 294; Ratten & Jones, 2018, p. 14). However, what is common for many research studies on Africa, is that Africa has been seen as one geographic region with same business practices. In reality there are different cultural values that influence entrepreneurship. Additionally, a literature review on African entrepreneurship done by Igwe and Icha-Ituma (2020, p. 343) shows that there is a research gap on topics like; ethnic entrepreneurship, artisans, cultural influence on entrepreneurship, and entrepreneurship education.

2.2 Introduction to Mozambique

Mozambique is a republic in Sub-Saharan Africa at the east coast of the continent, with a population of around 38 million people (UNDP, Mozambique). Mozambique is one of the 15 most linguistically diverse countries in Africa, with Portuguese as the official language (Lopes, 1998, p. 446). Lopes (1998, p. 440) highlights that the linguistic diversity has created political and educational tensions, where there has been a disagreement between different society segments and

research institutions whether to commit to multilingualism or have one official language. The same study also raises a question regarding linguistic diversity and business development. It seems that business leads to an increased of use of English.

Even though Mozambique is one the of the most rapidly growing economies in Africa, the country is considered to suffer from poverty. In 2015 almost half of the population were living below the poverty line (UNDP, Mozambique). Mozambique also ranks low on international indicators of competitiveness and business environment (Robb et al., 2014, p. 22). A large part of the Mozambican economy consisting of small, informal business operating outside public registers (Kaufmann & Parlmeyer, 2006, p. 203). The formal employment sector comprises 11,1% of the total labor force, while 52,3% work in the informal sector (Libombo, Dinis, & Franco, 2015, p. 122). Agriculture is estimated to stand for 31.5% of Mozambique's GDP with sugar and cotton as the biggest export products (Robb et. al. 2014, p. 19).

2.3 Entrepreneurship in Mozambique

According to Dana and Galbraith (2006), entrepreneurial development in Mozambique must be seen in the context of country's history as a colonial state and a country characterized by war, political unrest and poor economy. Until 1975 Mozambique was a colony subjected to Portuguese rule (UNDP, Mozambique). After Portugal withdrew their power, the country fell into turbulent times with a civil war that ended in 1992 (Dana, & Galbraith, 2006, p. 192). In 1992, Dana documented formal challenges of entrepreneurial development in Mozambique (Dana, & Galbraith, 2006). The research showed that 80 % of the Mozambican population belonged to black economy and crime. The government took a 50% tax from formal companies in addition to being corrupt. Furthermore, it has been difficult to obtain loans from local banks, as citizens of Mozambique have no collateral to offer in return for the loans they receive (Dana & Galbraith, 2006, p. 192).

Today we see much of the same challenges. Unfortunately, uncertainties as corruption, conflicts, crime, competition and climate are factors that create barriers for entrepreneurship in most African countries (Junne 2018, p. 119). The top four entrepreneurship problems in Mozambique are access to finance, inefficient government bureaucracy, corruption and inadequate supply of infrastructure (Robb et. al. 2014, p. 25). Additionally, deep-rooted cultural values seem to hinder entrepreneurial success. In Robb, Valerio and Parton´s study, informants express that they experience that their entrepreneurial career choice are not respected. They also experience lack of support from their families and peer´s (Robb, et. al. 2014, p. 22). Another study on entrepreneurship

in Mozambique confirms the lack of governmental involvement of entrepreneurship promotion, and public institutional facilitation for entrepreneurship (Pereira & Maia, 2019).

As mentioned earlier, large part of the Mozambican economy consisting of small, informal business operating outside public registers (Kaufmann & Parlmeyer, 2006, p. 203). This is not unique to Mozambique. Research on African entrepreneurs reveals two main types of entrepreneurs divided into two sectors; on one hand you have the informal sector of necessity-driven entrepreneurs, and on the other hand there is an formal sector with opportunity driven entrepreneurs (Ratten & Jones, 2018, p. 14; Junne 2018, p. 118). The informal sector and necessity-driven entrepreneurs dominate African entrepreneurial landscape and stands for 80% of the employments in Africa. This type of entrepreneurs is also referred to as; individual entrepreneurs, small and medium-sized enterprises, and family businesses, also called SME´s. SME often appear unofficial and unregistered (Ratten & Jones, 2018, p. 13-14; Amoako, 2019, p. 10; African Economic Outlook 2017, 2017). Similar to the rest of Africa, the relationship between informal SMEs and the formal, large scale enterprises is also prevalent in Mozambique (Kaufmann & Parlmeyer, 2006, p. 204-205).

I've not succeeded to find any study of what factors creates the skewed distribution between formal and informal sector in Mozambique, but Amoako (2019) made a research on *Trust, Institutions and Managing Entrepreneurial Relationships in Africa: An SME Perspective.* The book illustrates how a lack of trust towards formal institutions affect the entrepreneurial landscape in Africa. Researchers also argue that strong position of formal sector enterprises creates strong competition and deprive empowerment and motivation from people to start their own business, or to scale existed small business (Ratten & Jones, 2018, p. 10).

2.4 The case of Papa Pescá Limitada

2.4.1 About Papa Pesca Limitada

Papa Pescá Limitada was established by Pieter and Christina de Klerk and is located in the Chockwé area in the Province of Gaza, Mozambique. It was established in 2011. However, it was officially registered as an enterprise in 2016 in accordance with Mozambican law. Papa Pescá consists of three enterprises; Papa Pecuária that farms animals like goats and chicken; Papa Alevino that breed Nile Tilapia fry and fingerlings; and the mother company Papa Pescá Limitada that work within aquaculture and farm Nile Tilapia. This dissertation focuses only on the mother company Papa Pescá and the entrepreneurial training program they provide.

In 2016 Papa Pescá entered into a collaboration with a Norwegian NGO to establish an entrepreneurial training program for teaching how to breed tilapia and start businesses within the aquacultural sector. The Norwegian NGO wish to be anonymous, and will therefore only be referred to as Norwegian NGO in this dissertation. The entrepreneurial training program is a practical training program where participants learn how to farm tilapia and make a business out of it.

2.4.2 Program content and execution

The duration of the training program at Papa Pescá is four months, but students who needed more practice can get the opportunity to extend their stay up till eight months. Participants arrive at different times during the program cycle. They receive no salary, but a dietary allowance while they are in the program. While they stay in the program, they are also provided with housing and the minimal requirements for living.

The program involves both practical training and theoretical classes. The aim of the practical activities is to give understanding of how aquaculture works in practice. The practical part involves activities like; preparing and disinfecting the ponds, feed of the fish, measure water quality, estimate body mass of the fish by making samples, maintain ponds during the cycle, cut the grass, look after predators, harvest and sell the fish.

FIGURE: 1. A POND AT PAPA PESCÁ

Hokwé, Mozambique. 13th. February 2020.
One pond. In the background you can see the houses where students live during the stay. Each student have own house.

There are a totally 24 ponds at the facility, and each pond is 2000m². The ponds are distributed among 12 trainees. In addition to being responsible for two ponds, participants also collaborate to help each other and to repeat the activities. Repetitive activities are considered to improve students' aquacultural skills. The participants are also involved in the whole production cycle, from pond preparation and set out of fingerlings, till the harvest and sales of the fish.

FIGURE 2: DRONE VIEW OF THE TRAINING PROGRAM AREA

Hokwé, Mozambique. 13th. February 2020.
A drone picture of the Papa Pescá. In front you can see the 24 ponds that belongs to the training program. Behind is ponds that belongs to a new project called «entrepreneurial platform». The picture is taken during the time of raining In Mozambique. Governmental company Hicep are responsible for water supply and maintenance of water channels. Modest maintenance lead to high water level that threats ponds.

The theoretical classes are supposed to equip students with tools in economy, marketing and business. The classes take place on Fridays or when the supervisors feel there is a need to go through different topics. Different protocols for fish growing and tasks are used as curriculum.

The program does also provide necessary tools and measurement equipment. However, work clothes, except from boots, participants must provide themselves.

2.4.3 Recruitment of participants

When Papa Pescá recruit participants for a new cycle they put up posters in local area. Those who want to participate have to send a CV. After the CV´s are received, the administration of Papa Pescá summon all applicants for a preselection. The potential candidates are invited for an interview at the facility. During the interview the interviewer tries to understand the candidate's background. The second thing they are looking for is that the candidate is open to be taught about aquaculture. The candidates have to acknowledge that the program is a hands-on training program, not a job.

Then they try to understand what is a candidate's dreams, their motivation and passion. The program recruits students with different level of education, but participants needs to possess literal and numerical skills.

The participants' demographics vary and they come from different areas of Mozambique. In additions participants are:

- ○ between 18 - 35 years old.
- ○ their education level vary from 7th grade to a completed bachelor in aquaculture, or similar studies.
- ○ Literal and numerical skills are a requirement to participate in the training program

2.4.4 Outcomes of training program

The program has two goals. First, to prove that tilapia farming is a profitable business in Mozambique; ant the second to give trainees knowledge and skills that are needed to succeed as an aquacultural entrepreneur.

According to Food and Agriculture Organization of the United Nations (2020) aquaculture in Mozambique started with cultivation of tilapia in the 1950s, but aquaculture is still considered as a new business activity to Mozambique. In 2003 fisheries contributed with around 4% of the country's GDP. At the same time aquaculture faces many issues like small scale producers, no local fish food production, inefficient resource utilization and an undeveloped market. In order to counteract the issues, development of aquaculture is highly prioritized by the government and they are now formulating policies for development of the sector (Food and Agriculture organization of United Nations, 2020). An unpublished KPMG report commissioned by Papa Pescá Limitada and Norwegian NGO show that in this company´s case the gross margin was estimated to 38%, thus being profitable (KPMG, 2019).

Regarding the second goal; since 2016 36 trainees have fulfilled their training at the facility. During my stay at Papa Pescá nine new students started training at the program. However, none of the 36 former participants has started their own business within aquaculture.

3. Theoretical framework

This chapter is divided into two main sections. In section one I will explain what entrepreneurial education and training programs are, and distinctions between education and training. In the second section I will explore a theoretical framework for understanding outcomes of entrepreneurship training programs. This section is divided into four additional sub sections. In the first sub section I will explain the relevance of the framework, and in the three next sections I will present the three main factors of the framework. Supplementary literature will be used to elaborate the framework. Each of the sections regarding the factors will lead to sub-research questions that I consider relevant to explore in order to answer my main research question: *«Which factors limit participants from the training program to start their own business within aquaculture?»*

3.1 What is entrepreneurial education and training programs?

Researchers argue that one way to encourage economic development is to stimulate entrepreneurship and innovation through entrepreneurial education and training (Mbeteh & Pellegrini, 2018, p. 90). The idea of entrepreneurial education programs springs out of research showing that behaviors associated with entrepreneurship can be taught and learned. The research indicated that some entrepreneurial skills are learned in early youth, while others are a result of practice of entrepreneurial activities (Robb et. al., 2014, p. 7; Kuratko, 2005, p. 580). Haase and Lautenschläger (2011, p. 157), argue that entrepreneurial soft-skills as leadership, teamwork and creativity are harder to learn than hard-facts as business creation, marketing and finance. However, despite educators viewing entrepreneurship as complicated to teach, entrepreneurial education programs have a positive impact on individuals, their entrepreneurial skills and future entrepreneurial activity (Mbeteh & Pellegrini, 2018, p. 93-95). Mbeteh and Pellegrini (2018, p. 95) are referring that a study from 2012 showed that students who were engaged in entrepreneurial education started their own business within 0.7 years after graduation, while students who was not engaged in programs used 2.8 year to start their own business. This finding can also be true in developing countries (Mbeteh & Pellegrini, 2018, p. 95).

Entrepreneurship education and training programs (EET) can be divided into two categories; education programs (EE) and training programs (ET). Both types of programs seek to empower individuals with tools, attributes, knowledge and skills that are needed to start entrepreneurial activity and keep a business running (Robb et. al., 2014, p. 7; Mbeteh & Pellegrini, 2018, p. 92;

Huber, Sloof and Van Praag, 2014, p. 2). However, what separates the two categories is their target groups and program objectives (Valerio, et. al., 2014, p. 33).

The aim of EE programs is to modify mindsets, attitudes and behaviors of individuals, seeking to make the participants more innovative (Mbeteh & Pellegrini, 2018, p. 93-95). In that way the EE programs builds general knowledge and skills about entrepreneurship and for the purpose of entrepreneurship. This education is provided to students who are enrolled into formal education programs and degree-granting programs, and target group like, for instance, secondary school pupils and higher education students (Valerio, et. al. 2014, p. 34; Friedrich & Visser, 2006, p. 358; Huber, Sloof & Van Praag, 2014).

FIGURE 3: OVERVIEW OF EET PROGRAMS
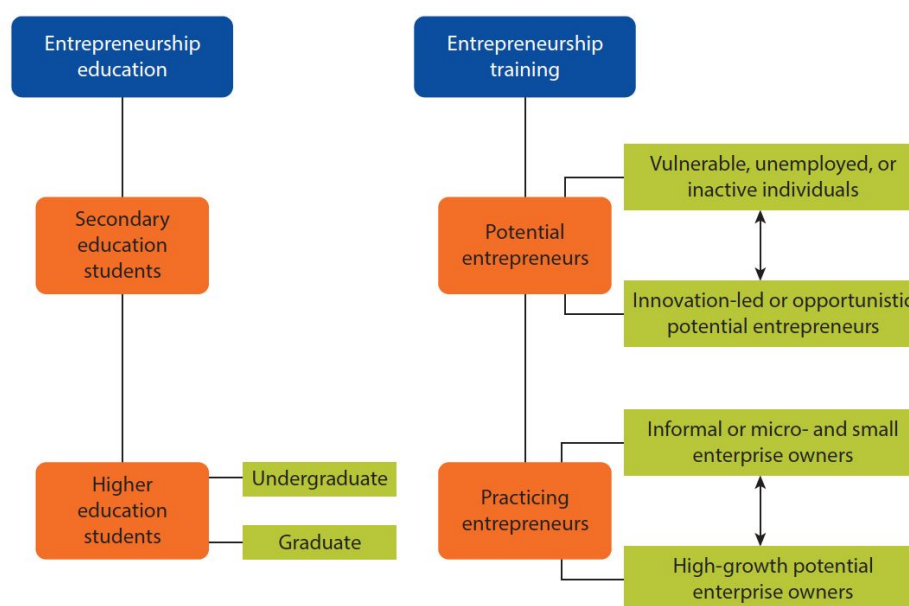
Retrieved from: «Entrepreneurship Education and Training Around the World: Dimensions of Success» by Valero, Parton & Robb, (2014). The World Bank.

Entrepreneurship training programs (ET) seek to build knowledge and skills and prepare individuals for creating start-ups and for running businesses. ET programs target potential and already practicing entrepreneurs who are not part of a degree-granting program. Thus, the specter of potential participants is wide. On one side of the specter, ET programs can target people from vulnerable, unemployed, and inactive groups, and on the other side, there are ET programs that target accomplished and innovative leading entrepreneurs (Robb et. al., p. 14). Moreover, participants vary in age, prior experience and level of education. Because of the wide variety in target audience, the goal of these programs vary as well, from encouraging vulnerable groups to

become entrepreneurs, to helping current entrepreneurs to become higher performing entrepreneurs (Valerio, et. al. 2014, p. 34).

Students in EE programs can also be considered as potential entrepreneurs. If they wish to improve their practical skills for future entrepreneurial activity, they could be considered as potential participators in ET programs. At the same time, vulnerable participants who are taking part in ET programs can in the future be enrolled into formal educational courses (Valerio, et. al. 2014, p. 34). It is therefore important to distinguish precisely between EE programs and ET programs. EE programs and ET programs will appeal to participants with different needs of knowledge. It is therefore interesting to examine which participant group Papa Pescá target, and if the content of the program are adapted towards target groups.

3.2 Framework for understanding education and training programs

In order to better understand the reasons why the participants do not start independent businesses after ending the training program we need to take a closer look at the variables that affect outcomes of such programs. A framework developed by Valerio, Parton and Robb (2014) outlines the main factors that affect the outcomes of education and training programs. The framework has been used in several comprehensive studies on entrepreneurship and training programs and is therefore arguably well suited for analyzing the program at Papa Pesca. The framework explain that there are three main factors, or dimensions, that have an impact on the outcome of EET programs. The three dimensions are the program characteristics, the participants and the context.

FIGURE 4: CONCEPTUAL FRAMEWORK
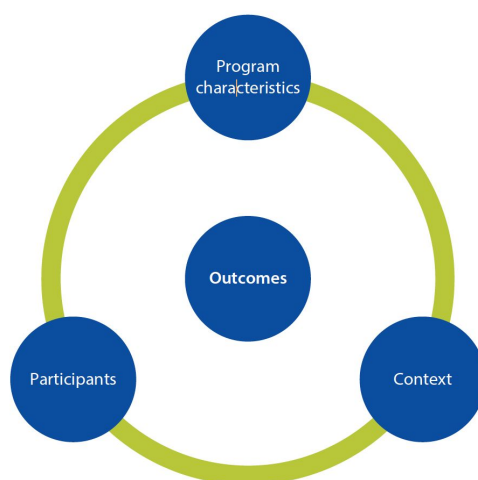
Retrieved from: «Entrepreneurship Education and Training Around the World: Dimensions of Success» by Valero, Parton & Robb, (2014). The World Bank.

The framework also talks about different outcomes of training programs. The outcomes are categorized into four main domains, regarding changes in 1) entrepreneurial mindset, 2) entrepreneurial capabilities, 3) entrepreneurial status, and 4) entrepreneurial performance (Valerio, et. al. 2014, p. 36). In this dissertation I have limited the focus on outcomes to only entail change in entrepreneurial status. Change in entrepreneurial status' refers to the extent to which participants have gone from being students to entrepreneurs (Valerio, et. al. 2014, p. 38). In this case; whether participants have started an entrepreneurial activity in aquaculture or not. As previously mentioned, none of the participants that has completed the program has started their own businesses. It is therefore interesting to examine how the three dimensions have affected this outcome.

3.2.2 Context

According to the framework context of the program refers to economic, political and cultural context of the place in which the program is carried out (Valerio, et. al. 2014 p. 41). Which in this research in economic, political and cultural context in Mozambique. These elements will have an influence on an individual's success as entrepreneurs by creating both opportunities and potential barriers (Robb, et. al. 2014 p. 17).

The economic context represents economic factors that will have an impact on an entrepreneur's success. Economic factors that influence outcomes of EET programs are conditions like investment environment, access to financial infrastructure, access to market and tax-regulations for new businesses. Lack of access to economic infrastructure and financial resources limit entrepreneurial outcomes and opportunities for starting new businesses, even for skilled entrepreneurs (Valerio, et.al., 2014 p. 40; Madichie and Ayasi, 2018, p. 144).

The political context refers to both the stability of the local society and institutions, as well as the leadership and political will to promote entrepreneurship through policies and local institutions (Valerio, et. al., 2014, p. 41). To create entrepreneurial development, governments need to facilitate and encourage entrepreneurship among the population. This can be done through, for example, political actions, removal of bureaucratic barriers and subsidization and promotion of EET programs. One way to promote EET programs is through public education systems (Valerio, et. al. 2014 p. 41).

Governments can also shape the economic context and initiate a financial structure that benefits entrepreneurs (Robb, et. al., 2014, p. 20). Secondary information retrieved for this

dissertation indicates that banks in Mozambique do have financial programs for entrepreneurs within agriculture, but they have no such offers for the aquaculture sector. Despite rapid economic growth in Mozambique, the country is still ranked poorly concerning international indicators of competitiveness and business environment. Fragmentation in government policy and in the regulatory institutions for economic management, corruption, crime, and insecurity are believed to create barriers for entrepreneurs in the informal sector (Robb, et. al. 2014 p. 22).

FIGURE 5: CONTEXTUAL FACTORS
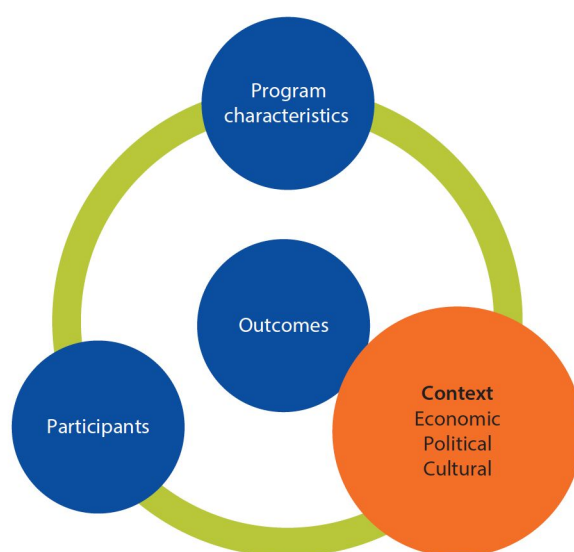
Retrieved from: «Entrepreneurship Education and Training Around the World: Dimensions of Success» by Valero, Parton & Robb, (2014). The World Bank.

The cultural context refers to cultural conceptions of entrepreneurship, attitudes towards entrepreneurship, success and traditional roles in society. Cultural norms affect attitudes towards entrepreneurship and there is a link between norms and level of entrepreneurial development. Cultural patterns in a society create an expectation about certain behavior and acts, and might limit encouragement of entrepreneurial activity (Valerio, et. al. 2014 p. 42). Cultures that are considered to facilitate entrepreneurship are often high on individualism, have low uncertainty avoidance, have low power distance and are highly masculin. The bigger the cultural distance is from this ideal, the lower are entrepreneurship activity levels (Hayton, George, & Zahra, 2002 p. 34). In regards to the culture of Mozambique, the country faces several challenges like lack of support from family, and cultural values that thwart entrepreneurial success (Robb, et. al. 2014 p. 22).

Neither economy, politics or culture exist in a vacuum in a society, and their influence on entrepreneurial outcomes must be seen in relation to each other. Together they shape the environment for entrepreneurship, and it is within this environment EET programs takes place (Robb, et. al. 2014 p. 17). In this dissertation I would like to explore how contextual factors influence Papa Pescás´ participants possibility to start entrepreneurship in aquaculture, not just post-training but also in general. Since politics, economic and cultural factors might be a broad topic to explore, in the analysis I will only focus on the factors that participants addressed as limiting. I dress this through following sub research question; *«What contextual factors do participants highlight as barriers that affect lack of entrepreneurship in aquaculture?»*

3.2.3 Program characteristics

Valerio, Parton and Robb (2014 p. 47) describes program characteristics as the different features of EET programs. There are four main characteristics: program design, trainers and delivery, content and curriculum, and wrap around services. For this case study, I find trainers and delivery, content and curriculum as the most relevant, and will therefore pay most attention to these characteristics. Assuming that students of training programs want to become entrepreneurs, but do not possess the necessary knowledge and entrepreneurial tools, a worst case scenario of poor program characteristics could be that business start-ups end in failure, or that participants will not start entrepreneurial development at all. Program characteristics are therefore important (Mayombe, 2017, p. 100). Any EET program will be placed within a particular context, and should therefore take economic, political and cultural variables that dominates the entrepreneurial landscape into consideration. This means that the program need to equip participants with skills and tools that is required to navigate in the contextual landscape (Valerio, et. al. 2014 p. 40). Indeed, some context barriers may create implementation challenges, and no matter how good the training program is, it will still be difficult for post-trained participants to start a new venture (Valerio, et. al. 2014, p. 40).

Program design entails how an EET program is shaped, how the program is financed, what it provides and what the goals of the program is. Program design also involves collaboration partners, like institutions in local communities (Valerio, et. al. 2014 p. 47).

Trainers and delivery refer to those who deliver the content of the program, and how they deliver this content. Studies shows that instructors with a combined theoretical knowledge and practical experience background are the most suitable to teach at EET programs. Additionally, the duration of a program, size of the class and personal contact in learning situation is aspects that affect learning outcomes positively (Valerio, et. al. 2014 p. 48). In order to secure participant

learning, supervisors at the facility need to shape the learning situation to fit participant needs. In addition it is important that they have relevant experience and knowledge for the sector they are training participants to start entrepreneurial activity in (Valerio, et. al, 2014, p. 48).

FIGURE 6: PROGRAM CHARACTERISTICS
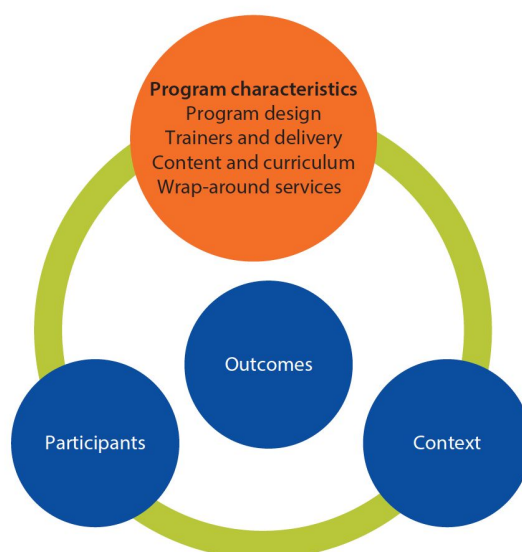
Obtained from: «Entrepreneurship Education and Training Around the World: Dimensions of Success» by Valero, Parton & Robb, (2014). The World Bank.

Content and curriculum refer to the topics which are a part of the program and how these topics are relevant to entrepreneurship. Additionally, content and curriculum also include teaching practices. Varying practices as, for example, practical exercises, literature, and group work as well as implementation of how students learn best is considered to have positive influence on outcomes (Valerio, et. al. 2014 p. 49).

A training program need to have a clear distinction on whether it trains self-employed entrepreneurs, or people that are meant to become employee in an entrepreneurial enterprise (Mayombe, 2017, p. 99). In case of Papa Pescá, the purpose of the program is to train potential entrepreneurs. To succeed as future entrepreneurs, a training program need to map participants learning needs, followed by vocational skills training, practical skill experience and entrepreneurial skills training (Mayombe, 2017, p. 92). In this matter, training program of Papa Pescá should have a content that is adjusted to participants needs. Since the training is regarded aquaculture, participants need practical experience and knowledge about aquaculture. In addition, participants need entrepreneurial knowledge and practice in topics like; financial control, risk management,

marketing, innovation and strategic planning (McGee, Peterson, Mueller & Sequeira, 2009, p. 969). In other words, the training program need to equip participants with enough tools, knowledge and entrepreneurial skills so it in the end releases their entrepreneurial self-efficacy, or self confidence, in a way that they are able to start and run own business in the future (McGee, Peterson, Mueller & Sequeira, 2009, p. 970; Adekiya & Ibrahim, 2016, p. 120). Entrepreneurial self-efficacy are a factor that may release entrepreneurial intentions (McGee, Peterson, Mueller & Sequeira, 2009, p. 982).

Wrap around services is activities that is meant to supply content and curriculum, and can help participants on their way to become entrepreneurs. Activities like this can be networking events, access to financial resources, access to technical advisement, incubator programs, mentoring and guest speakers (Valerio, et. al. 2014 p. 49).

As illustrated in this section, the outcomes of the program, or whether participants start with entrepreneurial activity or not are also dependent on program characteristics. For example, does the program provide participants with necessary knowledge? Are training program adapted toward their target audience? This is addressed through formulation of second sub-research question: *«In which way does the program characteristics affect the lack of entrepreneurial activity?»*

3.2.4 Participant characteristics

Participants personal characteristics are considered to be important in order to moderate the outcomes which in our case are referred to start of aquacultural business. Researchers consider that characteristics can in some way predict if a student is more likely to start business after the program completion. Some particular personal characteristics advance the probability of starting business (Valerio, et. al. 2014 p. 43), for example intentions and motivation to participate in a training program (Adekiya & Ibrahim, 2016, p. 118). Valerio, Parton and Robb (2014) have identified five personal characteristics that moderate the outcomes; individual profile, education, experience, interest and intentions, and participant behavior.

An individual's profile refers to both demographic and personal factors. Demographics can be age, gender and parental background. Evaluation of demographics are considered to be important, for example if it shows that students come from less favorable families ET programs have possibility to facilitate their education and training, and in that way help them to succeed as entrepreneurs. In addition, personal factors refers to personal characteristics such as self-confidence, risk propensity, resilience, and teamwork. Those factors are associated with positive outcomes and business creation (Valerio, et. al. 2014 p. 43-44).

Education level refers to the actually level of participants education. The literacy and numeracy skills that is acquired through education influences the outcomes. Researchers argue that participants who possess this skills are more likely to business (Valerio, Parton & Robb, 2014 p. 44-45). Another purpose of mapping participants education level, is that it makes it possible for a training program to adapt their content towards participants existing knowledge (Valerio, et. al., p. 43). The same also applies to participants work experience. Researchers argue that students with prior work experience has better prerequisites to understand which entrepreneurial soft skills and technical skills that is needed to become an entrepreneur. This consciousness enables students to reflect over their existing skills and develop those further (Valerio, Parton & Robb, 2014 p. 45).

FIGURE 7: PARTICIPANT CHARACTERISTICS

Obtained from: «Entrepreneurship Education and Training Around the World: Dimensions of Success» by Valero, Parton & Robb, (2014). The World Bank.

Interest and intentions refers to participants motivation to participate in a program. Valerio *et. al.*, (2014 p. 45) argue that the most reliable prediction of actions is presence of intention to become entrepreneur. They are supported by a statistical study from 2014 that show a correlation between intention behind participation in entrepreneurial education and presence of entrepreneurial intention (Bae, Qian, Miao & Fiet, 2014, 238; Adekiya & Ibrahim, 2016, p. 118). However, findings in Bae, *et.al,* (2014) statistical analysis show that pre-educated participants makes this relation significant. Thus, after controlling for pre-educated participants, study showed a weak relation between post-educated participants and entrepreneurial intentions (Bae, Qian, Miao & Fiet,

2014, 238). It is therefore interesting to see if this is applicable to former participants at Papa Pescá too.

Another intention to participate in an entrepreneurship training program are increase of employability. Entrepreneurship education strengths students employability, either through increasing their value as an employe or enabling student to create own employment as a self-employed person, or entrepreneur (Matlay, Rae & Woodier-Harris, 2013, p 927). Both, entrepreneurial intentions and employability can be referred to as career ambitions.

Behavior relates to how participants respond to training and education a programs offers; whether participants complete the whole program or choose to drop out, in addition to what actions participants do after program completion (Valerio, Parton & Robb, 2014 p. 46). In other words, behavior is related to participants intentions, and what they choose to do with their intentions. If intention and motivation to start a venture is strong enough, participants will start entrepreneurial activity or make other actions that will lead them to their final goal (Adekiya & Ibrahim, 2016, p. 118).

As illustrated in this section, entrepreneurial activity are dependent on participants individual profile, their motivation and intention to become an entrepreneur. If intention to become entrepreneur are not present the entrepreneurial development are likely not to happen. So how does participants individual profile influence their intention to participate in training program?, and do they have entrepreneurial intentions at all? Therefore, a last sub question is formulated ; *«In which way does the personal characteristics of the participants affected the lack of aquapreneurial activity?»*

4. Methodology

In this chapter I will justify my research method, and explain what I have done and why. During the filed studies I traveled and collected data with a fellow student, but since this dissertation is written independently of this student, this chapter revolves around my assessments regarding method and data collection. In the first section I will present the contextual challenges I met during the studies, followed by my role as researcher. The second section will present research design and method, followed by the third section on how I obtained data. These sections will be followed by informant recruitment and informant characteristics. The last two sections are about the analysis method and ethical considerations. Reliability and validity have been important from the beginning of field study planning. Therefore, no separate section will be devoted to these aspects. Rather, reliability and validity are aspects that will float through the whole chapter.

4.1 Contextual challenges

Bell, Bryman and Harley (2019, p. 408) argue that getting the access to a research field through a gatekeeper, might create expectations from the gatekeeper to get something in return. A gatekeeper may direct a researcher to the information they would like researcher to illuminate (Bell, Bryman & Harley, 2019, p. 408). The pitfall of using a gatekeeper and being directed to certain information, is that social reality will be described from the eyes of informants the researcher was directed to (Bell, et. al., 2019, p. 413).

The aspects described above illustrates the situation I were in when I arrived the facility. FIAS stood for access to the facility, organizing of departure to Mozambique, and stay at Papa Pescá. When I arrived at the facility, the administration at Papa Pescá and FIAS gave a list of informants they wanted me and my student fellow to talk to. To avoid biases regarding which eyes the social reality are seen through, I distinguish between primary informants and secondary informants. The informants that Papa Pescá directed to are secondary informants, while primary informants are current and former participants from the training program. In this dissertation secondary data obtained from those informants are used for explanatory purpose and contextual description. Section two about «The case of Papa Pescá Limitada» in chapter two are an example of how the secondary data have been used. In addition, the secondary data is also used to substantiate the primary data narratives in the analysis. The secondary informants are: administration of Papa Pescá, FIAS and three supervisors at the training program, ISPG University in Chokwé, a local

bank in Chokwé, Chief Hokwé, and HICEP - a governmental entity which manages land and water supply in the province of Gaza.

Another contextual challenge is regarding doing field studies abroad. The problem of being a foreigner is the lack of network, knowledge about Mozambican culture, and lacking Portuguese language skills. This triggered the need of a translator, and FIAS was responsible for making a translator available. In an early dialogue with FIAS, I expressed a concern about having a translator which was not independent of Papa Pescá. In the explanation of my concern, I emphasized that having a translator that is not independent will put the research in an ethical dilemma. If the translator is not independent, there is a risk that the primary data is not credible, or that sensitive information from interviews goes astray. Despite the expression of concern, I later learned that our translator and FIAS had a previous employment relation, and that our translator also had been giving lectures at a local university. However, this translator was the best option, as the other translator candidates had a current employment relation at the facility. Our translator also promised confidentiality.

4.2 My role as researcher

Considering that I had connections to FIAS and the administration, and that I was eating lunch, dinner and spent spare time with people from the management, there is a risk that informants saw me as an instrument of the administration. My relation to the administration might have created a notion for the informants that what they said and did would be reported back to the administration (Bell, et. al., 2019, p. 411). In addition, Kvale & Brinkmann (2017, p. 52) argue that there is a power relation between the researcher and informants, where I as researcher have the power position. It is conceivable that in the interview situation informants left out true information to avoid creating trouble for themselves, or that informants may have seen me as a way to gain benefits, for example by creating a specific representation of themselves. I have therefore been clear towards both parties, the participants and the administration, that I write a master's thesis and all the obtained information will be presented anonymously in the thesis. I also expressed that I am committed by the law of Norwegian Center for Data Research and NESH to keep confidentiality towards both parties.

4.3 Research design and methods

From the start of planning the research reliability and validity have been important aspects. Reliability is defined as credibility of the research and whether finding in this research can be recreated in a later occasion (Kvale & Brinkmann, 2017, p. 276). While validity is about quality of data and whether the data is suitable to answer the research question I seek to answer (Kvale & Brinkmann, 2017, p. 276). Due to the foreign context of the research, and to ensure reliability and validity of the research, different challenges were considered in advance (Kvale & Brinkmann, 2017, p. 173; 277). Use of translator, validation of data, and the researchers role are all factors that may influence the quality of the data. Therefore, the goal was to design research methods to increase the reliability and validity of the research.

This dissertation is a case-study of a single organization, and it seeks to give voice to the participants in the training program at Papa Pescá. This study can resemble a revelatory case study, where I have an inductive approach to the research and seek to reveal phenomena from the data (Bell, et.al. 2019, p. 66). A qualitative approach has been used to gain the data (Bell, et al. 2019, p. 65; Ragin & Amoroso, 2011, p. 113). During four weeks of field studies at the training facility of Papa Pescá different types of ethnographic methods have been used (Kvale, 2009, p. 61; Bell. et. al., 2019, p. 404), among these: in-depth interviews, informal interviews, observation, and participant observation.

In-depth interviews has been used to reveal different topics, ideas, and phenomena that participants were talking about (Ragin & Amoroso, 2011, p. 122). Since the majority of the informants spoke Portuguese, a translator has been used. To validate and control that the translation during in-depth interviews was correct, informal interviews in the training field with English speaking informants was used. In addition, these informal interviews were used to reveal and understand the learning situation of the participants, both in the field of training and in the classroom (Formelle og uformelle intervju, 2019).

Understanding of the relation between what students tell in the interviews and what they actually do has been an important part of this study. Observations and participant observation had a function to understand the participants' behavior and validate that what they told in the interview was the same as they did in practice (Ragin & Amoroso, 2011, p. 14).

This combination of methods has provided me with the ability to have a «flexible approach» and gave a good overview of the research field. By «flexible approach» I refer to the ability to be

open minded about what could be found in the field, and in that way discover traces that was more interesting to follow than what the original research plan suggested (Bell et. al., 2019, p. 11; Loseke, 2017, p. 24). In that way I avoided to miss important information that could make a difference in the analysis.

In most cases, by using different methods the same findings were found. It is therefore considered that the combination of methods strengthens both the reliability and validity of the data and makes the data suitable to shed light on the research question. This combination of methods is the strength of this research.

4.4 Interview and observation situations

Primary data is based on 12 semi structured in-depth interviews, where one interview is a double interview with two former participants, eight observations, and two participating observations. The interviews with the students are between one to one and a half hours long. All interviews were recorded and later transcribed.

Some of the observations were made before the interviews, some during the interview process, and some after the interview process was finished. This approach had several functions. The purpose of the observations prior to the interview was for contextual understanding of the research field and for trust creation between me and the participants. The observations post interview and during the interview process had validation purpose to confirm that what was said in the interviews matched the actual practice. The observations took place under different learning circumstances; in the classroom situation, and teaching situations in the field. As researcher, I acted mostly like a fly on the wall, and only asked questions to clarify the learning situation, or validate the information that already was known. In addition, two participant observations of fish harvest and fish selling situation were completed. This was done to understand the physical work the participants went through during their training. During the observations it was also natural to have informal interviews, both with the students and the supervisors. Those interviews were not recorded, but brief notes were made. The informal interviews were used to understand the situation that was observed, and to validate the obtained data.

In advance of the interviews I drafted a semi structured interview guide (Kvale & Brinkmann, 2017 p. 162). The interview guide contained repetitive questions, which were designed a little bit differently. This ensured the consistency of the answers. The guide was also divided in different topics. Some of the interview guides were adapted to the person who was interviewed, for example

students who I knew had tried to start their own aquaculture business prior program participation got supplementary questions. In addition, during the interview situation it was also natural to make follow up questions. The follow up questions were a way to explore different topics that were found to be interesting. To verify the informants´ narratives and that I understood them correctly, in some cases I repeated their statements (Kvale & Brinkmann, 2017 p. 170-171).

After the first interview at the facility, it became clear that the informant did not feel we were talking in private. Therefore, the rest of the interviews were carried out in the house where my student fellow and I lived. The interviews were conducted by me, my student fellow, and our translator. My student fellow asked questions from the interview guide, while I made notes and asked follow-up questions.

According to Kvale and Brinkmann (2017 p. 173) when researchers conduct interviews with informants from other cultures it can be difficult to get a sense of cultural factors that are unfolded in an interview situation. For example, it is unknown how participants actually felt when they were interviewed by three strangers who recorded the interview and had connection to to the administration. Informal follow-up questions however functioned to comfort the students and make the interview situation feel somewhat more like a conversation rather than an interrogation.

4.5 Use of translator

In this research a translator has been used. Kvale and Brinkmann (2017 p. 173) have emphasized that studies in foreign cultures might offer some challenges around verbal and nonverbal communication, and social codes. Kapborg and Berterö (2002 p. 52) argue that:

«Different languages create and express different realities, and language is a way of organizing the world. One cannot understand another culture without understanding the language of the people in the culture».

To compensate for my lack of the cultural understanding, our translator was asked to tell about his impression of the interview situation after an interview was finished. This was to ensure that I correctly understood the underlying social codes in the narratives that participants told. Our translator was natively Mozambican and spoke Portuguese, but he studied in South America and had international experience. His cultural background and international experience helped me to interpret the situation and the cultural codes in the interviews.

On the other hand, use of a translator is a threat to validity, and therefore has to be taken into consideration. To conduct valid research the researcher must be aware of translators personal perspectives or biases (Kapborg & Berterö, 2002 p. 54). To make sure that too much personal opinions were not added to the translator's interpretation of the interview, the informal interviews and a reliable third source were used to validate the translator's contribution. According to students the third source was a person they could rely on, who knew students well, and could validate if the information from the interviews was correct. When cross checking the data no personal information was revealed, but sometimes the third party on own initiatives told stories about the participants that were already revealed through the interview. In that way I could also rely on that the translation was correct.

4.6 Recruitment of informants

Both former and current students participated in the study and were recruited with help from supervisors at the training program. By including both former and current participants, the dissertation illuminates both challenges students face in the training program, and structural challenges that participants may face when they eventually start their own business. In this way the dissertation sheds light on the whole process from entering the training facility, their stay and education, until they begin considering starting a business within aquaculture and make their intentions into action.

In front of the recruitment process I gave the supervisors instructions regarding selection of former and current participants. To have a representative participant selection, the instructions for selection were: participants had to have different educational backgrounds, be both men and women, and be at different age. Then the supervisors took contact with former students and arranged a schedule on our behalf. Current participants at the facility had responsibilities for specific tasks they had to fulfill during a day. Therefore, the supervisors were responsible for managing the participants' schedule for the interviews. It is up for debate whether the first informants participated voluntarily. It is an aspect that I will talk about later in the «ethical consideration» section.

The weakness of not having selected participants by ourselves, is the risk that the informants that were chosen by the supervisors were too homogeneous. In addition, several former practicants come from different areas of Mozambique. Due to those participants traveling distances, the selection of students for this research are characterized by little local variation.

4.7 Presentation of informants

Totally, 13 informants in the age between 18 to 35 participated in the study. Five of the informants were men and eight were women. According to the information from the facility, the Norwegian NGO has emphasized training of women. This might be the reason why women are overrepresented among the informants. Out of 36 former students, seven participated in the research. Out of nine current students, six participated in research. Participants´ education level varied from completed seventh grade in primary school, to started or completed a four year education at a university. Two of the informants have tried to start their own aquacultural businesses prior to participation in the training program. The informants who participated in the study currently lived in the province of Gaza (Bell, et.al. 2019 p. 397-399). The different background in age, education, and former experience gave a broad overview on the field.

4.8 Analysis

All interviews were recorded and transcribed. In the original records, the translator had translated the informants' statements to «he said that», instead of using first person term «I». When transcribing the interviews, all «he and she said» were adjusted to «I». After completing transcription, all primary data was coded and put into an Excel file. To distinguish between the participants' background, color codes were used. In that way it was possible to see differences and similarities in participants' narratives.

The analysis itself is inspired by Johannessen, Rafoss and Rassmussen (2018) narrative and categorical analysis method. Since this dissertation seeks to give the participants a voice, the analysis is rendered from the participants´ point of view, and how they experience their reality. In addition, to find differences and similarities in the data, the data was categorized into different concepts taken from the theoretical framework used in this dissertation (Johannessen, et. al. 2018, p. 152). The combination of the analysis methods gave me an ability to follow certain themes in the data, simultaneously as concepts emerged.

4.9 Transferability

This dissertation is a case-study and cannot be generalized to other training programs. Instead this case study should be seen as transfer of knowledge to similar training programs; of how to do, or not to do things (Kvale & Brinkmann, 2017, p. 200).

It is a way for Papa Pescá and the Norwegian NGO to adjust and improve the program. Further, the contextual section in the analysis reveals some of the challenges participants meet outside the facility. Those findings can be used as a clue for further research.

4.10 Ethical considerations

When doing research in a foreign context, and when the research is of qualitative character ethical considerations must be an important part of all stages of the research (Kvale & Brinkmann, 2017, p. 95). The ethical considerations have been considered in relation to NESHs´ guidelines for ethical aspects (NESH). Because a recorder was used, and personal information was stored till the filing date of the dissertation, the research project was reported to Norwegian Center for Research Data (NSD) and approved before departure to Mozambique.

A declaration of consent was developed, and then translated to portuguese. Before the research, all participating students and the informants who gave background information signed their consent and got a copy of their rights. In this declaration students were informed about the purpose of the project, the way the data was supposed to be treated, and their right to withdraw their consent. The contact information was made available in the declaration in case they wished to withdraw their consent.

In addition, participants were given verbal information by me and my research fellow about the research and its goal. Before interviews started students were given declaration of consent where information about the project were written. However, as researcher in a foreign context I can never be too sure whether students perceive the opportunity to withdraw their consent as real, or they still felt obligated to participate. It is therefore up for debate whether the participants participated voluntarily in the study or they participated because they felt they had to. During the interviews with six current students there was also observed a change in students´ behavior. The last three students spoke more freely than the first three. These last participants told that they volunteered to the interview after speaking to the first students who participated. After speaking to the first participants, they were assured they would not be asked question that would put them in a

difficult position. On the other hand, the differences in the interview situation between the first three and the last three current students might have been caused by the participants personal relation to the translator. The translator has be a guest speaker at lectures for two of the participants, while the last informant knew him from an earlier employment situation.

To safeguard personal data and due to confidentiality, all the primary informants are anonymized in the dissertation. All personal information that can identify primary informants directly has been removed. The data was then processed and stored in accordance with GDPR. All personal data was stored in a secure database before it was deleted from the tape recorders and personal computer.

5. Presentation of findings and analysis

In this chapter I will present and analyze the findings from the interviews and observations. Narrative analysis has been used to interpret the data, and find similarities and differences among the data material. The structure of this chapters are divided into three section, where each section are based on one of the central thematics, or dimensions, from the theoretical framework; participant characteristics, program characteristics and economic, political and cultural context. Each section will lead to a discussion section where I will clarify an associated sub-question, that in the end will lead us to the final conclusion of this research study.

5.1 Participant characteristics

5.1.1 Family background and education level

From the data material we find strong indicators that family background and education level have an effect on the participants intention to enter the program. The participants in the study can naturally be categorized into two groups, *«low educated»* and *«high educated»*. *«Low educated»* participants are here referred to those who has started or completed primary school, but does not have higher education. *«High educated»* participants are those who have started or completed a four year of theoretical education within aquaculture or a similar field of study.

The interviews revealed that low educated participants come from families who do not support getting a higher education, either because the families doesn't want to or because they are not able to. As will be discussed more in depth in a later chapter, one of the reasons is related to negative attitudes towards educations and entrepreneurship. However the data also indicates that the families also lack the monetary resources to support their children's intentions of getting a higher education. For example, one participants explain:

> *«[…] my father was poor, I am the man in my home because all my brothers ran away from home. […] they started working in other cities, and they didn't come back».*

As these participants does not have families that support them economically, it is likely that they will never get a formal higher education. It seems that for these families having a job is considered as more valuable than getting an education. Therefore the participants needed to find an alternative way to get an education. Papa Pesca is a free training program and it is likely that low

educated participants enter it as a way to obtain an education without needing the support from their families. One example of this is this participant:

«Father became angry and told me that I cannot leave the official work. But I have this dream to become an aquaculture man. So I felt like doing this program because my father will never pay for my university».

This participant entered the training program at Papa Pesca because he wants an education, but he could not enter university because his father did want to pay for it and he could not pay for it himself.

On the other hand, there are strong indications that high educated participants have families who support their children in their endeavor to obtain a higher education and that they are also able and willing to pay for this education. Although few of the high educated participant talked about their family background in the interviews, one can assume that these families had the monetary resources to support the participants getting a formal education. In regards to these families attitudes towards education, there is not enough data to draw any conclusions.

We see that the different family backgrounds of the participants leads to them having different opportunities when it comes to getting an education. Moving forward we shall take a closer look at how this leads to different intentions to entering the program at Papa Pesca and how it might affect the outcome of the program.

5.1.2 Intentions for program participation: knowledge attainment

Through the analysis we find that one of the intentions all participants had in common when entering the program was the wish to increase their competency and knowledge. However, there are differences in what type of knowledge and competence the participants want to attain from being in the program, the reasons they want that competence and also what they want to use this competence for when they are finished with the program.

High educated participants considered the program as way to fill the practical knowledge gap they were left with after finishing their university degree. One participant illustrated it like this:

«During the class in the university I didn't […] have hands on training. So I came here to get the hands on part, the practical part. It is different the hands on training compared to the theoretical part. […] In the university we learn much more of the theoretical part».

The high education participants reveal that they've had different degrees of practical experience during their studies, where some participants already have completed several training programs and others don't have any practical experience at all. One can therefore presume that the theoretical knowledge they gained at university was not considered as enough to understand how aquaculture works in practice.. They explain that the Papa Pesca program is a way of taking the theoretical knowledge learned in university and put it into practice. Trough practice they can develop skills they need to possess if they want to succeed as entrepreneurs within aquaculture. Practical experience in a training program is a way of filling the knowledge gap and is therefore considered valuable.

Low educated participants see the training program as a way of educating themselves in aquaculture, both practice and theory. As one participant express it:

«My objective was to know how to grow the fish. So the first was not to become Papa Pesca employee, I went to the training to get the scientific knowledge of how to grow the fish. I also wanted to become a aquaculture man».

Moreover, low education participants seem to perceive the program as an actual education, replacing the university degree they were not able to get. It is conceivable to think that for low educated participation the program is their only option to formally increase their knowledge, creating higher expectation of what they can get from participating in the program. They don't only want to learn the practical aspects of aquaculture. They also want to know the theoretical knowledge behind it. As discussed earlier, it is not likely that these participants will be able to obtain this information in other ways than entering the program at Papa Pescá.

5.1.3 Intentions for program participation: career ambitions

The analysis uncovers that another intention to participate in the program is career ambitions. Based on observational data one can argue that the Papa Pescá training program can be described as

an exhibition where Papa Pescá and other local enterprises can look for potential candidates to fill vacant positions in their companies. On indicator of this is that five previous students have gotten jobs at Papa Pescá after finishing the program.

 At the same time, for the participants of the program, being in the program is an opportunity to showcase their skills, knowledge and motivation to work for Papa Pescá and other local entreprises. Both high educated and low educated participants expressed a belief that participation in the program will increase their opportunity to get jobs in the future. Indeed, one of the former students who is now employed at Papa Pescá was a low education participant and this is likely to strengthen the conception of increased employability for all the students, not only high educated participants.

Beyond becoming more employable, nearly all the current participants in the program have expressed intentions to become entrepreneurs in aquaculture, which from now on will be referred to as *aquapreneurship*. Obtaining the experience and knowledge to become an aquapreneur seems to be the overall goal for the participants in the program. A participant expresses:

«I am getting more experience and I in the future I can create my own business in aquaculture fish farm».

They are convinced that this program will give them *«knowledge about entrepreneurship»* and *«develop the agribusiness spirit»*.Thus, entering the program seems to be a strategic choice in the quest to reach their overall goal.

5.1.4 Motivation behind aquapreneurial intensions

When looking closer at what the participants see as attractive about starting with entrepreneurship several motivations appears. Three main motivations behind aquapreneurial intentions have been identified; independence, job creation and to support family. The motivations does not seem to have any connection to educational or family background, as participants expresses the same motivations across the two groups.

First, some participants expressed that becoming an aquapreneur was a way of gaining independence. They are aware that if they want to makes this dream possible they must obtain knowledge. Here is one example *«I want to be independent. That is why I invest in myself; to do something, and to get my own money».* For the participants being independent refers to being one's

own master and not being dependent of getting money from others or be dependent of a job in governments.

Secondly, there seems to be few jobs for people who have a background or education on aquaculture. One student explained:

«they have many people in Hokwé and Shilene that graduate in aquaculture area, but the work for this people is low».

As there are many people who have an education in aquaculture but there are few job, the competition for getting these jobs are though. The participants are aware of this and thus becoming an aqauapreneur and creating their own jobs seems to be an attractive option to become employed.

Lastly, aquapreneurship is also a way for the participants to support family, through gaining own money and giving them something in return.

«I want to become an entrepreneur […] *I would like to help my grandmother and make something beautiful for her. Because she is special to me!».*

This type of statement was often repeated in the interviews. At the same time it seems that participants feel a need to show unsupportive family members that entering the program was a smart choice leading to growth and occupational success.

5.1.5 Financial strategies for future aquapreneurial activity

As the theoretical framework explained, personal background and intentions are closely related to behaviors and actions after program completion. In this case the data has also revealed how background relate to how the participants are intending to get the funds needed to start their own ventures. The interviews with both current and previous participants revealed that there are two main strategies the participants use or are planning to use in order to raise funds. In the next paragraphs we will explore those strategies.

The first strategy for raising funds entails applying for financial support by submitting a project plan to a business incubator at the local university. For a project to get approved and receive support the participants are required to enter a business plan containing an overview of what are the

project is and how much money is needed, a budget and who will be involved in the project. This strategy is mostly known to high educated participants.

«There is an entity you can draw your project, you submit and if they approve they can give you the money to finance the project».

It is not surprising that the high educated students know about this option as the incubator is located at the university they graduated from. The low educated participants did not talk about the incubator as a possible strategy.

Receiving financial support from an external party is not limited to the local business incubator. For example, it is possible to find a private donor. This is the strategy for one of the low educated participants. This participant had former experience from running their own business where a similar fundraising strategy had been used.

«So, after that because, when I implement the project I can call the donor or the financial part to see how I am doing with the money I borrowed».

Despite not being familiar with the incubator system, he knows that an donor to the project might be a possibility for finances. As illustrated in the theoretical framework, work experience can have an positive impact on participants ability to orientate themself in actions that has to be made in order to start a new venture.

The second strategy entails saving up money to start a aquaculture venture in the future by doing other work in the meantime, either by starting another business in another business sector or by entering an already established job. This strategy was highlighted mostly by low educated participants, but has also been employed by high educated participants. One current participant illustrates his plan to save up money for starting business in aquaculture:

«I´m gonna start planting rice, […] I think I can get something from there.[…] From 100%, I think I am going to get 15% back».

A participant who has now finished the program explains that he has taken a temporary job:

«After the training I didn't have the opportunity to start my own business. I got a job, […] *but I wanted to do my own business.* […]. *The main problem was financial problem, that I couldn't afford to start own business*. […] *I am here* [at her current work place] *doing the job is not limiting me, I still dream of getting my own business»*.

While low educated participants were more likely to start, or plan to start business in another sector, high educated participants were more likely to enter already established job.

5.1.6 Discussion: *«In which way does the personal characteristics of the participants affected the lack of aquapreneurial activity?»*

From the analysis it is evident that personal characteristics has an influence on the outcome of the training program. On first look, it seems clear that the participants have the intention to become aquapreneurs through participating in the program. It would therefore be natural to assume that the participants will indeed start their own aqaprenerual business when the program is over. As previously mentioned, this is not the case. It is therefore relevant to ask if the participants actually have aquapreneurial intentions, or of there are other characteristics that are hindering them in starting their aquaprenurial activity.

The analysis shows that one of the intentions to participate in the training program is knowledge gaining. High educated participants expressed that despite their theoretical knowledge from university, they had a practical knowledge gap. Participation in the training program was an excellent way to fill this gap. For low educated participants participation in the training program was their only option to get an education at all, and through the program they got in touch with aquaculture for the first time. Due to low educated participants lack of required theoretical knowledge to operate an aquacultural facility it is understandable that low educated participant did not start their own businesses after the training was finished. High educated participants on the other hand, possess both theoretical knowledge and practical training. One can assume that they are therefore the group that would be more likely to start their own aquaprenerial business. However, as addressed in the introduction chapter, not even high educated participants started aquacultural businesses. Is it possible that career ambitions is the reason why none of the participants started aquacultural businesses?

Career ambitions appears as the participants' underlying motivation towards knowledge attainment. In the analysis we see that knowledge gaining hopefully will increase the participants

employability and at the same time help to fulfill their aquapreneurial intentions. Interestingly, despite aquapreneurial intentions no participants have become aquapreneurship so far. It is therefore logical to ask if the entrepreneurial intentions are real, or is the participants expression of aquapreneurial intentions a consequence of my role as a researcher. Did they tell me what they thought I would like to hear based on what they knew about my research topic?

The findings show that that families' willingness to economically support the participants in getting a higher education also comes with expectation when it comes to the participants' career choices. The families expect that the participants find a permanent job after graduation. Low educated participants families valuated working higher than education, which is arguably logical if you can not afford to study. These findings supports Valerio, Parton and Robb´s (2014, p. 45) argument that family influence participants intentions to participate in training programs. It is therefore conceivable that program participation is not only a way of increasing employability but also a way to get a foot inside of Papa Pescá and potentially get a job there in the future. Interestingly, there is also evidence of participants who had a permanent job which they quit, and thereby defying their families wishes in order to start training in aquaculture. This shows that despite family support and expectations, not all participants obey their families wishes.

Entrepreneurial intentions are rooted in motivational factors such as; independence, family support and job creation. Independence can be viewed as the primary reason behind why people choose to become entrepreneurs (Valerio, et. al. 2014, p. 46). For the participants becoming an entrepreneur is also a way to make ones family proud and gives them the possibility to take care of their relatives. In addition, because there are many educated people in aquaculture and few jobs, there is competition to get available jobs within this field. When taking these motivational factors in consideration, one can make the argument that the participants indeed have entrepreneurial inentions. For participants becoming an aquapreneur is an alternative way to create their own income, and make their own life decisions.

However, according to the framework if entrepreneurial intentions are strong enough, participants should have made their intentions into actions a long time ago (Adekiya & Ibrahim, 2016, p. 118), which we now have seen is no the case. Previous participants have either taken jobs at already existing companies or they have started their own businesses, but in a field not related to aquaculture. Thus it seems that the lack of aqueapreneurial activity is due to the participants intention to become more employable in general is more important than becoming aquapreneur.

However, this does not necessarily mean that the participants do not have aquapreneurial intentions. As the participants explained, they already have thought through strategies for financing

their future aquacultural businesses, indicating that they, indeed, wish to start businesses in aquaculture. The former participants who are now employed in other businesses still talk about how they want to fund their future aquacultural businesses, making it more plausible that the participants do have the intentions of becoming aquapreneurs.

Indeed, we see that not only do the participants want to become more employable, they also express credible aquapreneurial intentions. As explained by the framework, this should lead to aquapreneurial activity. It is therefore necessary to look at other reasons. May it be that the lack of aquapreneruail activity can be explained by program characteristics or contextual factors in which the program exists? The educational background of the participants does not seem to influence their aquapreneurial intentions. However, it is necessary to examine how educational background might influence how the participants respond the characteristics of the program.

5.2 Program characteristics

5.2.1 Content and design of the training program

From observational data we can argue that the program at Papa Pescá is an aquacultural training program. The participants in the program learn about biological processes in aquaculture and fish farming in general. They days mainly consists of fish farming in practice, but there are also some classes meant to increase the participants understanding of the practical operations.

The program gives insight into how the daily life of an aquapreneur. During the interviews participants revealed that they had learned how to grow fish and handle challenges that appear during a farm cycle. In addition, they learned about pond preparations, natural predators, how to estimate the body mass of the fish and why these things are important. The practical training in the program prepares participants for the practical aspects that await them if they start their own businesses. This includes nine to ten hour workdays, continuous protection against predators, evaluation of how to improve the farming process, including improving water quality, fertilization and so on. Thus, participants get a vast insight into the technical knowledge and skills needed to grow tilapia.

On the other hand, we see that the program only scratches the surface when it comes to teaching about the business aspects of aquapreneurship. The data indicates that the program pays limited attention toward teaching entrepreneurship related topics such as; the economy and cash

flow, risk management, marketing and strategic planning. This also becomes especially evident in the interviews with the participants, as they had difficulties explaining these concepts. Because the study took place around the time new participants arrived, it is possible that we did not get the chance to observe entrepreneurial training that would take place later. However, former participants did express that that: *«We didn't learn the financial part in the training program»,* referring to business training.

It should be noted that Papa Pescá claim that they offer the participants a complete curriculum of relevant books. However, the participants express that they do not have access to these books physically. The training program is taught by three supervisor, from now on referred to as instructors, former, high educated participants with entrepreneurial experience, and two subject matter experts, where the first have a background from aquaculture in Mozambique, and the last from the Philippines. The training is mainly in portuguese. However, at some points there is also an interpreter involved as not all the instructors are fluent in portuguese.

5.2.2 Learning outcomes

In the data it appears that high and low educated participants respond differently towards the content of the training program. For participants with higher education, the training program is an excellent way to explore the practical side of aquaculture, and put they theory they have learned at the university into practice.

> *«In university I learned more theoretical part, and here I try the theoretical part with the practical part».*

High educated participants already have an academic understanding of aquauculture. In the program they try, fail and learn with guidance from the programs' supervisors. They have an idea of how to farm tilapia fish *«because I had this theoretical background».*

For most of the low educated participants this is their first meeting with aquaculture. As a high educated participant observed, low educated participants had difficulties in understanding the underlying theory behind the practice:

«There is some person for example when we are measuring the water quality they don't know what is the most important to do in that activity. So if they increase their theoretical class, to directly explain this person how they should do the task, that would be good».

Low educated participants express similar thoughts, saying that they need theoretical classes and wished that supervisors would spend more time the theory behind aquaculture. Despite expressing that practical training being the preferable learning method, low educated participants assume that theoretical classes will improve their ability to take the best decisions when solving farming problems. This participant illustrates that the practical knowledge they get from the training is not enough, and is inspired to take higher education after the program is complete.

«Now I understand that I can grow the fish without problem. But I need to go to university in the future to increase the knowledge».

It seems evident that the participants educational background have an effect on learning outcomes. High educated participants seem more confident and had more to tell about fish farming compared to their low educated counterpart, indicating that high educated participants had a lot more knowledge about the topic. They also seems more confident in their ability to solve practical farming challenges. Low educated participants did not seem to have fewer reflections around what they learned in the training, and rather just did what they were instructed to do. The findings indicate the training program do not take low educated participants knowledge limitations into consideration. One can therefore question on what level low educated participants actually understand what they are being thought in the program, and if this understanding is enough to eventually start a successful aquapreneurial business.

5.2.3 Barriers towards learning

When looking at the data we see that the content and layout of the training program provides several barriers for learning, thereby possibly having an effect on the lack of entrepreneurial activity among former participants. First, the lack of access to a curriculum makes it harder for low education participants to learn the theory behind aquaculture. One participant argue that books will help low educated participants to understand what to do and when:

«some trainees inside the program has no basic knowledge about aquaculture. So, they are doing [what they do]*, because someone asking them to do, but they have a minimum idea of why they are doing it. If they* [the program] *can provide some manual books, so they can read and learn a bit».*

High educated participants have argued that access to books will increase low education participants understanding of the training, making them able to make independent decisions instead of only taking instructions. Low educated participants express the same wish, saying: *«if they can give us books, maybe we can read in our spare time».* They express that looking up subjects they went through during a day will make it easier for them to understand why they are doing what they are doing.

The interviews reveal that communication is another major barrier for learning. Since books are not used during the program, all teaching happens through oral communication, both in class and when farming. The data reveals three aspects of communication that creates learning barriers for both high educated and low educated participants.

Firstly, in the interviews language between the participants and one of the supervisors seem to create difficulties. The participants express that having to use a translator to understand the instructor is problematic for properly understanding what is being taught.

«[...] *if we had a capacity to understand directly,* [hear it directly from the supervisor, not translator] *it would be better. We want to hear it directly from the source».*

The participants experience uncertainty around if they understand what is being said correctly, and fear that they will not catch important instructions.

In addition, there is indications that the language barrier have an effect on the relationship between the non-portuguese speaking instructor and the participants. Observation data show that participants prefer to consult and discuss with the supervisor that speak their native language. It is conceivable that not speaking the same language makes the participants more nervous when interaction with the instructor. However, the fact that the participants talked more with the native instructor might also be a cultural thing. Either way not being able to properly interact with an instructor will arguably make it more difficult to learn from that person.

Secondly, data, peer-to-peer teaching is experienced as being an excellent way to learn. However, this is only the case for the ones who are teaching their peer, as this is a way to repeat what they have already learned:

«It's good [when trainees teach each other] *because the trainees are learning more when they are trying to explain for the new trainees.*

For the peers who are being taught, on the other hand, seem to experience problems with the the information they are being given. The information that is being passed on by their peer is not necessarily correct. This participant gives an example:

«It is also not good, because when the information pass the third person, it will not reach the objective of the information very well. So it will be better if the teacher is teaching again».

Again we see that disturbances in the communication creates learning barriers. The information from a peer is not seen as reliable compared to the information that the participants get from the instructors. The participants therefore seem unsure if they can trust what they are being taught by their peers, thereby hindering their learning.

The third communication barrier in learning is the participants experience of lack of consistency in what is being communicated by the instructors. This was also observed when interviewing the instructors. They were asked the same question but all of them answered differently. Lack of consistency in what participants are being taught created confusion for the participants and they are not sure which teachings are right and which are wrong, and leads to uncertainty when they face practical problems.

The last learning barrier I find relates to differences in what high educated participants was taught at university and what they are being taught at Papa Pescá. When studying in the university the high educated participants books were: *« from Brazil. Most of the things that we know, we learned from Brazilians».* Brazilian books are written in portuguese, and the content of these books are based on brazilian research. High educated participants expected that the training they receive in the training program would be based on the same theory. Instead what they learn at Papa Pescá is based the experiences of the instructors:

«The experience of one of the supervisors is from Philippines and different from the Brazilian experience. So that the things that make confusion for us».

It should be noted that former participants did not experience this discrepancy in what is being taught, as there was a brazilian instructor in the program previous to the filipino instructor. For the current high educated participants, the difference between the theory learned at university and practice in the program creates confusion and makes it harder to learn. Instead of testing theory from university in practice, they are now learning a new practice that is not in accordance with their existing knowledge from university.

5.2.4 Discussion: *«In which way does the program characteristics affect the lack of entrepreneurial activity?»*

Based on the findings presented in this section it seems easy to argue that the characteristics of the program at Papa Pescá creates barriers for optimal learning, which in turn can have an effect on entrepreneurial activity and the participant's behavior after program completion. The analysis have shown that the training program provide knowledge that is required to operate an aquapreneurial farm. The content of the training programs directs attention to biological processes, training on how operate a fish farm, and give insight of a life as an aquapreneur. Indeed, this is considered as important experience and it prepares the participants for what is to come if they eventually become aquapreneurs. In addition, it seems that the training program also gives an realistic presentation of how it means to be an aquapreneur. Simultaneously, the program can also prevent the less motivated participants from starting aquaprenurial business, because they realize the effort it takes to become successful. Bae, *et. al.,* (2014, 238) claims that it is not unusual that participants loose their entrepreneurial intention after completing a program.

It seems that the content of the program at Papa Pescá entails all the practical knowledge needed. However, since none of the former participants have started their own businesses is seems necessary to question the quality of the teachings and also if having both low educated and high educated participants in the same program is good for optimal learning. It is evident that for the low educated participant the training and teaching practices is not good enough to help them obtain the required knowledge and skills to be able to run a fish farm on their own. After completing the program the low educated participants realize that they need more knowledge about the aquaculture field, and therefore they seek to start studies at an university. On the other hand, high educated

participants get their knowledge gap filled with the practical training. The findings showed that high educated participants benefited the most from the training because it builds on their previous knowledge from university. It is then logical to assume that high educated participants are more likely to possess the knowledge that is required to start their own businesses. In other words, it can be argued that the quality of content of the program varies is not suitable for all the participants. The different education levels of the participant influences their how they are able to respond to the content and thereby also their learning outcomes.

According to the framework, in order to adapt the content of training to fit the target audiences, a training program need in first place be consistent on who is their target audience is (Valerio, et. al., 2014, p.34). As we can see, obviously the training program has not been consistent enough when they picked out their participants. Moreover, it can also be argued that program content favors the high educated participants and is not suitable for filling the low educated participants knowledge gaps.

However, does this mean that high educated participants learning outcomes are much better than the outcomes of the low educated participants? Although the high educated participants have a notion of how to farm tilapia, the analysis have shown that the high educated participants also experiences learning barriers. At the university their education was based on brazilian practices and research, while in the training program they are exposed to practices from the Philippines which are new to them. Since the new filipino practices are not in accordance with the theory they learned at the university, it is conceivable that those practices makes the high educated participants insecure about what the right and wrong way is when solving a problem in aquaculture. One can therefore conclude, that neither high educated participants nor low educated participants acquire the knowledge they actually need to operate a fish farm.

Mayombe (2017, p. 92) argue that an entrepreneurial training programs needs to contain not only practical training from relevant the sector, but it also needs to teach relevant entrepreneurial skills. However, the analysis have shown that the training program have not directed enough attention toward the entrepreneurial teaching; economy and cash-flow, risk management, marketing and others topics that is relevant for business running. Thus, it can be argued that the participants are not truly prepared to start their own business.

The lack of entrepreneurial focus in the training program can be argued to influence the participants entrepreneurial self-efficacy. Researcher suggest that participants own evaluation on quality of skills and tools they possess affect their self confidence.(McGee, et. al., 2009, p. 969). The degree of confidence, or entrepreneurial self-efficacy determines whether participants choose to

start a venture or not (McGee, Peterson, Mueller & Sequeira, 2009, p. 983). In the case of Papa Pescá, it is conceivable that the quality of the training is not good enough, and make participants doubt how well they masters the skills that are required to start and run a business. Indeed, there is more focus on the aquacultural knowledge. It can therefore be argued that the training program at Papa Pescá resembles vocational training for fish farming more than an entrepreneurial training program for aquaculture. The content of the program is more suitable for work training, rather than aquapreneurship. This is in accordance to what Mayombe (2017, 99) found in they study; training programs do often forget to put weight on the entrepreneurial part of the training.

5.3 Context

5.3.1 Cultural attitudes towards entrepreneurship

In the interviews with the participants in training program at Papa Pescá we get information about culturally conditioned attitudes towards entrepreneurship in Mozambique. The interviews reveal that both low and high educated participants have experience that the local society and their families have negative attitudes towards entrepreneurship. More specifically, the attitudes entail resistance against aquapreneurship, but also against entrepreneurship in general. Almost all the participants experience lack of support when expressing their desire to become aquapreneurs. Here is an example of an participant who talks about wanting to break through as an aquapreneur.

> *«The aquaculture is not a considerable activity in Mozambique. We are in the first stem we are fighting to grow and to develop this activity».*

As was described in the background chapter, aquaculture and land-based fish farming are new sector business sectors in Mozambique, and all aspects of this business have not yet been explored. As one participants expresses it; *«they thought that aquaculture have no economical sustainability».* In other words, participants meet an attitude from people outside the program, who think that aquaculture is a risky business. Participants from the program appears as pilots in the field where they try to battle against the established attitudes and skepticism towards aquacultural business. It seems that the participants are trying to fight these negative attitudes by wanting to start aquapreneurial businesses. Through this, they also defend their educational choices.

Participants do also experience negative attitudes against entrepreneurship in general. Entrepreneurship is depicted as something unachievable. As one participant describe it:

«when you come with an idea within entrepreneurship, they look at you as a dreamer. They say: you will not go far».

Big scale entrepreneurship is shunned, and when someone have an idea of creating a new venture the people in question are seen as dreamers, because creating new venture is seen as something impossible.

In the data, we learn that the participants express other and more positive attitudes towards entrepreneurship.This becomes evident when participants talk about their aquapreneurial intentions, and motivation behind those intentions. As mentioned in the chapter about personal characteristics, they believe starting aquaprenurship is possible. Indeed, when participants spoke of these topics their body language was more confident and they seemed more engaged. Almost all the participants express that: *«I have a dream of becoming an entrepreneur»,* followed by a story about what inspired their dream, and what motivates them.

5.3.2 Cultural rooted conception of entrepreneurship

In this section we will take a deeper look into the participants conceptions of entrepreneurship and how these conceptions are rooted in the culture. The data reveals that there is a distinction between how low and high educated participants define an entrepreneur. Low educated participants expresses that anyone can become an entrepreneur:

«The mozambican people have a culture of entrepreneurship. […] *even in Chowké there are persons that grow rice for example».*

The participant argues that entrepreneurship is common and that it is rooted in Mozambican culture and that starting any type of activity can be seen as entrepreneurship.

High educated participants seem question the concept of an entrepreneur as more than a small scale producer. This is how one high educated participants look at entrepreneurs in Mozambique:

«Mozambican people, there are some entrepreneurs, but I can not say like entrepreneurship. […] I can say mini entrepreneurship.[…] It is a small view. Entrepreneurship are a small view for the company. And only related to sustainability for the family, not for big business».

As we can see this participant addresses an underlying question of whether or not those mini entrepreneurs can be called entrepreneurs at all. If the intention for entrepreneurship is the ability to support one's family, it does not mean that there is any intention of developing a big business or company. Also, other high educated participants express that they wish to create a big scale company so they can supply the market in Maputo, the capital of Mozambique, and the local community with fish.

This illustrates that high and low educated participants have two different conceptions of what it means to be an entrepreneur. For low educated participants entrepreneurship is related to strating and running any type of business. High educated participants, on the other hand, mean that entrepreneurship should be related to creating big scale activity.

5.3.2 Economic disempowerment

In the analysis of personal characteristics we saw that the participants have different funding strategies for an eventual start-up of an aquacultural business. The limitations due to lack of finances was highlighted in all the interviews with former participants. The participants exclaimed:

«The main problem was financial problem, that I couldn't afford to start own business».

Indeed, limited financial capital restricts the possibilities to start aquaprenurial business and through the data it become evident that aquaculture is an expensive sector to start business in:

«If I want to start in agriculture business I can start in area of 10 meter […] and I do not need   a lot of money. But to do aquaculture for example I will need a lot of money, and […] 90%   of the aquaculture fish farm costs goes to buy feed».

Despite participants own strategies to fund aquapreneurship they are aware that their level of income will make it hard to start. High educated participants seem to be even more aware of start-up costs and highlights big scale production as necessary to make the business profitable.

The interviews gives an overview of the actual costs of starting aquapreneurship, and the list of expenses is extensive. Not only must the aquaprenurs pay big money to dig a pond, they must also pay for fingerlings (small young fish) to put in the pond, water supply, fish food and transportation of fish to the markets. In addition there is a registration fee for new companies. it is therefore conceivable that aquaprenurship can be more expensive than entrepreneurship within other sectors.

Indeed, the data reveals that banks and other financial institutions do not prioritize aquaculture as a field of investment. It is easier to obtain loans for starting businesses in other sector, for example agriculture:

«It depends on […] *which business* [sector] *you will start to do.*[...] *the financial is not the big problem. I can get any financial today and I start the business in fall».*

Aquaculture in Mozambique is still new sector of business (Food and Agriculture organization of United Nations, 2020) and might therefore not be acknowledged as a profitable field of entrepreneurship.

As illustrated in this section the aquaculture is expensive business to start in, and limited economic capital creates economic disempowerment among the participants. Despite the participants creating alternative strategies to fund their start-ups, they express that more finances are needed to succeed.

5.3.3 Dysfunctional support systems

While banks do not have financial lines for starting aquacultural businesses in place, submission of projects to an business incubator at the the local university one possible option for obtaining a loan for a start-up project. However, this is not necessarily an realistic option for many. In the research two participants with experience from the business incubator system participated. Data show that lending terms at the incubator trapped participants with debt they were not able to pay off:

«For example, they give you 700 000 MZ and you have an interest of 12%. […] *We need to return around 800 000 thousand MZ in three years. If you need to pay, for example next february, and you can not pay, the interest will increase* […] *We have teachers that are*

receiving, […] 8 000 -11 000 thousand [a month] *thats the average. I can not pay, even with a salary. In 10 or 20 years I think I can not».*

Here we can see participant trying to illustrate the difficulty of repaying the loan. The interest is too high, and it is not possible for the participant to pay 800 000 MZ back in three years. It takes time before businesses to become profitable, and with all the expenses related to aquaculture, it is unlikely that one could earn the whole amount of the loan in that period of time. The fact that it is difficult to repay the loan and the uncertainties around what will happen if you can not repay it seem to keep some former high educated participant away from submitting a project to the local incubator:

«An example is my colleague from the university, when I studied he said: «oh, no! You can not [take the loan]*, because it's so difficult to return the money and all this things will happen if you carry on».*.

The business incubator and lending arrangements can here be described as a dysfunctional supportive system. On one side it seeks to help high educated participants to fulfill their dream, and in that way stimulate for entrepreneurial development. On the other side, the terms of the loan is insurmountable for the participants. However, it is not enough data to conclude where in the process from project submissions till repayment of the loan the system fails. Therefore, this is an aspect that can be addressed for further research.

5.3.4 Public systems as a preventer of entrepreneurship

The theoretical framework also points out that there can exist public systems that creates barriers for entrepreneurship. According to the participants the mozambican government try to facilitate entrepreneurship by announcing opportunities to finances entrepreneurial activity. At the same time, it appears that a specific population groups are kept away from taking part in these financial opportunies:

«Sometimes the government publish the concourse, so some people can apply for the financial to become entrepreneurs. [...] People without the high school may not apply because one of the requirements is to have high school. They [governments] *see that they*

need the people with these and these specifications, so if you do not have these specialisation you can not apply. [...] for example in the minister in science and technology, they minimum need a grade 12 [to apply for finances]*».*

According to the government, entrepreneurial activity is reserved for participants with higher education. Literacy and numeracy skills is a requirement to apply and to start and run businesses. In this way governments keep low educated participants away from starting their own formal businesses.

The unfair distribution of benefits is not the only problem. Mozambique's bureaucratic public system that is difficult to navigate seem to create barriers too:

«it is not the money, or the financial part. But [...] *people do not know where to go to get approvement of the project. If someone know where to start and submit the project, when you reach the place you submit the project, the staff difficult* [hampers] *you to have a permission and all these bureaucratic things».*

Participants have a hard time finding information about standard procedures for how to get project allowance from governments in order to start businesses. In addition, when one finally reaches the institution that is supposed to approve a project there is no guarantee that project gets an allowance. This findings are also supported by secondary data obtained for this dissertation.

Moreover, in Mozambique all land is state owned. To start formal businesses one must submit a project description to public institutions in order to apply for land that is needed to start entrepreneurial activity. In order to do this numerical and literacy skills is required, and there are many in Mozambique who do not possess these skills. In addition, *«the documents you need to apply with are very costly».* The application process is also lengthy. First governments need to get consent from the local community, stating that the local community approves the project. Further, a sustainability analysis of the land where the project is supposed to take place must be carried out. The analysis needs to show that the project will not cause harm to that particular land area or land areas nearby. If a project gets approved, the project activity must start within a period of two years. If a project has not started within this certain period, the project owner will get a warning from the public institution that the land area and consent will be withdrawn if no activity start within a period of one more year. A land area can therefore stay untouched for up to three years, before the approval is withdrawn. This bureaucratic process is likely to keep participants without money,

without reading and writing skills, and without understanding of how the bureaucracy works, away from starting legal entrepreneurial start-up projects.

5.3.5 Discussion: *«What contextual factors do participants highlight as barriers that affect lack of entrepreneurship in aquaculture?»*

From the analysis of the contextual factors we see that is possible that there are other variables than the personal characteristics of the participants and the characteristics of the program that has had an effect on the outcome of the training program at Papa Pescá. First, regarding cultural aspects, the attitudes of the participant's families and the local society are different than the attitudes of the participants themself. Robb *et.al.* (2014, p 22) argue in Mozambique cultural and family values are very important. Interestingly, a finding that argues against Robb *et.al.* (2014, p 22) findings is that not all participants adhere to their families expectations. One explicit example, is a participant who chose to defy the family's wishes, quit a permanent job and started in the training program to become aquapreneur instead. Similarly we see examples of participants who tried to start aquacultural business prior to program participation. It is therefore natural to assume that the attitudes of families and society might have an influence on some of the participants lack of entrepreneurial activity, but that these attitudes do not influence all participants.

Even though findings show that low educated participants describes entrepreneurship as something everyone can do and that entrepreneurs are everywhere, no participants have so far started any aquapreneurial activity. This addresses an interesting point regarding the Mozambican entrepreneurial landscape and the economic development of the country. Kaufmann and Parlmeyer (2006 p. 203) argue that most of the entrepreneurial landscape and economy in Mozambique is dominated by small and medium enterprises and not large scale businesses (Robb et al., 2014, p. 22). However, as we have found, aquaprenurship requires a lot of resources and efforts, and thus the notion that everyone can be an entrepreneur may not be as realistic when it comes to starting a business in aquaculture. High educated participants conception of entrepreneurs, on the other hand, claiming that entrepreneurship is about big scale business, might give them an inflated view of that it takes to succeed. It may be that these potentially skewed conceptions have an impact on why the no one has started their own aquaprenurial business yet. However, this needs to be research further.

In addition to cultural values, attitudes and conceptions, we also see that the financial and political context is very influential. Madichie and Ayasi (2018 p. 144) argue that lack of access to finances and financial systems can limit groups of people from starting their own businesses. This is

also a finding we see in this research. Banks do not provide a financial line for aquapreneurship, but some governmental entities do. However, those financial programs are reserved for participants with higher education only, and the low educated participants are therefore left out. However, despite the high educated participants being able to obtain loans from financial programs, there is evidence that they are afraid that the lending terms are too difficult to uphold. For the low educated participants this financial system is already unaccessible, while for high educated participants it is a matter of taking a big financial risks. This confirms Robb, *et. al.* (2015, p. 25) findings, where they argue that one of the main barriers toward entrepreneurship in Mozambique is lack of access to finances. The Mozambican government is the one who can initiate a financial structure for entrepreneurship (Robb, et. Al. 2014 p. 20). It therefore seem that the government needs to initiate a lot of changes if they want to facilitate the start-up of aquacultural business by the participants at the Papa Pescá program.

Moreover, economic disempowerment might also give an answer to why it is not easy to start aquapreneurship. Aquaculture is an expensive sector to start business in, and a financial loan must be obtained in order to cover start-up costs. In order to enough profit to repay the loan one must facilitate for big scale aquacultural production. One can discuss if low educated participants are aware of the investment one must make in order to start an aquacultural business. If they are not aware of the amount of required investments to start business in aquaculture, it becomes even more evident that the training program does not give low educated participants the business knowledge that is required to succeed.

However, access to finances in not the only challenge that participants addressed as a barrier in order to start aquapreneurship. In analysis there is evidence of inefficient government bureaucracy, and limited access to information regarding application procedures for entrepreneurial start-ups. Again, the finding from this study is in accordance with what Robb *et. al.* (2014 p. 25) found in their research. Although participants had fair access to financial systems, it would still be difficult for them to navigate in Mozambican bureaucratic system. It can therefore be assumed that this is another factor that keeps participants away from starting business in the aquacultural sector.

6. Conclusion

In this dissertation it has been explored how personal characteristics, program characteristics and the cultural, economic and political context of Mozambique limits the high and low educated participants in the training program at Papa Pescá from becoming aquapreneurs. We have seen that family have an influence on participants intentions to participate in the training program, and that these expectations shape the participants career ambition towards wanting to become more employable. However, even though becoming more employable seems to be the main goal, the participants also have aquapreneurial ambitions. This did not give the whole explanation to why there has not been any start-ups after program completion.

It is indeed questionable if the training program equips participants with necessary skills and knowledge to succeed as aquapreneurs. The analysis has shown clear evidence that the content of the training program is not adapted for the low educated participants. The low educated participants are therefore the group that benefits the least from the training. In addition, limited attention to entrepreneurial topics limits all participants abilities to start and run businesses as well, leading to low entrepreneurial self-efficacy. Moreover we see that there are many learning barriers that can lead to poorer learning quality and confusion for all participants. However, the challenges related to the program characteristics were not the only barrieres. The larger context in which the program takes place also has a lot to say for the lack of aquaprenurial activity.

The attitudes in the local society and families of the participants seems to have an influence on lack of aquapreneurial activity, but only for some participants. Indeed, attitudes does not seem to be the most influential contextual factor related to the lack of aquapreneurial activity. Financial systems for aquapreneurship economic support, on the other hand, appears to be a determining factor. These systems are not developed in a way that benefits participants and stimulates aquapreneurship. Instead, the system prevents participants from obtaining loans, and if they are able to get a loan, it is not realistic they can meet the unrealistic lending terms. Lastly, a complicated bureaucracy governmental system makes it hard to start up any formal business, even if you have the finances in place.

It is evident that the government in Mozambique must develop a more functional system for aquapreneurship in Mozambique. Aquaculture is a profitable business and if the government did more to facilitate startups within this sector, it could potentially help the economy of the country as a whole. In the meantime, Papa Pescá should seek to improve their training program in order to prepare the participants for their future aquapreneurial adventure.

6.2 Practical implication and further research

Even though it is not possible to generalize the findings regarding personal characteristics and program characteristics in this case study to other populations, it is likely that the contextual findings can be reflected in similar studies in Mozambique. In that matter this dissertation contributes to research on entrepreneurship and training programs in Mozambique. In addition this dissertation is also a contribution to research on aquaculture business in Mozambique in general.

This research might appear as bad marketing towards training program of Papa Pescá. However, finding in this dissertation should be seens encouragement for improvement, rather than critique. The training program and the instructors are already on the track to success in teaching future potential entrepreneur about how to start and operate business in aquaculture.

The findings in this dissertation addresses the following topics for further research:

- The loans that can be obtained through business incubators and governmental institutions does not seem to be realistic options for funding start-up activity. More research is needed to understand, in order to improve the funding opportunities for entrepreneurs in Mozambique.
- More research on opportunities and challenges for aquapreners in Mozambique is also needed. What does it take to succeed? How can one change the cultural values that works against entrepreneurs? Is it possible to stimulate for more aquapreneurial activity through other methods than training programs?

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Appendixes

Primary informant

Participants in the training program

Introduction questions:
- Can you start to tell a bit about yourself?
- What kind of prior education do you have?
- What did you do before you started in this program?
- Do you live here during the whole program?
- Do you get any benefits of the stay? Compensation etc.

Questions related to selection and participation in the education program
- How did you find this training program?
- Do you remember what made you apply for the program? (motivation)
- How long have you been in the program?
- What do you think of your stay so far?
- Do you remember if you were into an interview here at the farm?
- What do you think made the farm choose you as a participant?

Motivation
- Can you tell about what motivated you to participate in the training program?
- When you finish the training program, what is your plan further?
- Where do you see yourself in 10 years?

Expectations
- What expectations did you have to the training program?
- What expectations do you have to what you will do after ended program?
- Which expectations have been fulfilled?
- Which haven't been fulfilled?
- Why do you think they was not fulfilled?
- What do you think are needed to fulfill this expectations?

A day at the aquaculture facility
- What do you find as interesting about the training program?
- What is your main tasks during a day?
- What is your experience of being responsible for two pounds?
- How many hours a day do you work? Do you work in the weekends?

Learning and training situation
- Can you tell about a casual lecture situation?
- Is there anything in lectures that can be improved?
- How do you like to learn/ How do you learn best?
- How do you use theory in practice?
- Do you have any plan of how you will use your new knowledge in future work situation?
- What do you think of the working methods here in the program?

The tasks at the training facility
- We would like to learn more about how to farm fish. Can you draw for us the process, and tell us about what we have to think of?
- Can you schedule your day for us?
- How do you feed the fish, and what do you have to think of during their feeding?
- How do you get care of the fish?
- How do you check on fish growing?
- Is there any routines you have to follow?
- The economical part of this program. What is the incomes and the expenses.
- Is there things in the program you find as challenging?

Relations at the facility:
- Do you get help from the others participants?
  - Oppfølgingsspørsmål: and what type of help do you get?

Entrepreneurial development:
- Have you thought of starting on your own company in the future?
- What do you think of your future entrepreneurial opportunities?
- By your opinion, what does it takes to become an entrepreneur?
- In what way does the culture in Mozambique adapt to entrepreneurial activity?
- How does authorities facilitate for entrepreneurial development?
- Which else factors do you need help with to succeed as entrepreneurs?

Other things:
- What associations do you have to "work ethics"?
- Is there things at the program that you think should be improved?
- Other things you would like to tell us about the facility and the program?

Questions to participants with former entrepreneurship experience:
Entrepreneurial development:
- Can you tell us about your entrepreneurial experience?
- What do you think is the main reason it went wrong?
- What do you think of your future entrepreneurial opportunities?
- By your opinion, what does it takes to become an entrepreneur?
- In what way does the culture in Mozambique adapt to entrepreneurial activity?
- How does authorities facilitate for entrepreneurial development?
- Which else factors do you need help with to succeed as entrepreneurs?

Additional Questions to former participants
Graduation:
- When did you graduate from the program?
- Was there other students at the program who started at the same time as you?
- What is your experience of training program?

Secondary informant

Administration of Papa Pescá

We would like an overview of the potential participants who apply to the training program, and an overview of their educational background.

Introduction
- Can you tell us about your role in Papa Pesca?
- Could you tell about how all started at Papa Pesca?
- What is the main goal of the training program?
- Who is involved in the project?
- How did you come up with idea of training program?
- Can you tell if the program have changed since we started?
- What are your dream scenario for the participants after they are finished with the training program?

Participant selection:
- How are the participants recruited?
- How is the recruiting process?
- What do you look for when you decide who to take into the program?
- Do you have any criteria to their education, abilities, or personalities?
- What do you expect that they learn during their stay?

Entrepreneurial development:
- By your opinion, what does it take to become an entrepreneur?
- What challenges will your future student meet on their way to become entrepreneurs?
- In what way does the culture in Mozambique adapt to entrepreneurial activity?
- How does authorities facilitate for entrepreneurial development?
- Which else factors do you need help with to succeed as entrepreneurs?

Supervisors at the training facility

Background
- ○ Can you start to tell a bit about yourself and your role?

Expectations
- ○ What do you think the new students find as challenging?
- ○ What do you do to make students more robust to face the challenges?
- ○ What do you think are students expectations to the program?
- ○ What do you do to fulfill their expectations?
- ○ What do you expect that they learn during their stay?

A day at the aquaculture facility
- ○ What is the main tasks during a day?
- ○ What are the rules here at the program?
- ○ Does all students follow those rules?

Learning and training situation
- ○ Can you tell about a casual lecture situation?
- ○ Is there anything you think could be done to improve the learning situation?

The tasks at the training facility (a drawing exercise).
- ○ We would like to learn more about how to farm fish. Can you draw for us the process, and tell us about what we have to think of?
- ○ Can you schedule a typical day for us?
- ○ How do you feed the fish, and what do we have to think of during feeding?
- ○ How do students care of the fish?
- ○ How do you check on fish growing?
- ○ Is there any routines students have to follow?
- ○ The economical part of this program. What is the incomes and the expenses.
- ○ Is there anything else we need to know?

- ○ Is there any participants who do better than others? (If yes, what differences is there between those who do well, and those who don't do well?
- ○ What abilities does your students need to succeed at the farm?

The future of participants
- ○ What abilities does your students need to succeed at the farm?
- ○ In what way does the culture in Mozambique adapt to entrepreneurial activity?
- ○ Which other factors does the participants need help with to succeed as entrepreneurs?
- ○ How does authorities facilitate for entrepreneurial development?
- ○ How does the bank help with loans?

- ○ Anything else you would like to tell us?