Boundaries of Knowledge
Foreign-Local Knowledge Exchange through Community Cooperation in Rural Guatemala

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ABSTRACT

This thesis studies the learning process between foreign and local knowledge in a community of organic farmers by the name Atitlán Organics in Tzununa, rural Guatemala. Foreign settlers with formal education and contemporary farming experience work alongside indigenous local Guatemalan farmers in this community, which also takes on international volunteer workers. These people of various background and differing intentions cooperate to develop the community and its business of organic food production while learning from each other. The foreigners bring global theories that relate to farming such as permaculture designs and scientific knowledge while the Guatemalans know the local land and how to work with it. This thesis outlines the learning process between these different competencies and presents a nuanced discussion on how these types of knowledge exchange can be beneficial for the people and the community. Diverse competencies can complement each other and enhance collaborative work but limitations can also occur due to difficulties of understanding other socio-cultural contexts, while risks of neo-colonial tendencies and western knowledge hegemony lure in these situations. The discussion in this thesis highlights the importance of mutual consciousness about this process in the community and what that can be done to enhance collaborative learning while avoiding such risks.

Keywords: foreign-local knowledge exchange, social learning systems, agriculture, community, Guatemala

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1 INTRODUCTION

In 2009 two Americans came to the village of Tzununa on the northern shore of Lago de Atitlán in rural Guatemala to seek out a new life for themselves. They were among the first foreigners in the village. They bought some land from a local farmer and began to build their own farm with the aid of some of the local people. It was named Atitlán Organics and the idea was to use theoretical permaculture principles along with the locals’ knowledge of the land to create a sophisticated farm system to live off and to sell organic food. More foreigners arrived over the years and today Atitlán Organics has developed into a community with a profitable farm business that also offers courses on sustainable living. Local Guatemalans, foreign settlers and international volunteers work side by side in this community to support the environmental and economic development of once poverty-ridden Tzununa.

Multicultural cooperatives like this are becoming increasingly common. The geographical distances that once separated diverse groups of people are closed by increasing human mobility in the face of globalization. The social dynamics are being reshaped as people are exposed to more extensive social interactions across boundaries of culture, nationality or socioeconomic status. Shared norms or competencies might not be so obvious in such joint enterprises, but the ability to cooperate and acknowledge ‘other’ knowledge is yet a topic of growing importance (Rutten & Boekema 2012). The human capital of skills, knowledge and cooperative ability is emphasized as the foundation of modern economic development in the globalized knowledge economy of today (Brown & Lauder 2012).

Knowledge exchange and the ability to learn from each other becomes central in diverse social contexts and an increasingly important topic of study (Sillitoe 2007a; Williams 2006). Knowledge and education are today emphasized as keys for success and a foundation for social justice and cohesion (Brown & Lauder 2012). This gains a deeper relevance in socio-economically developing regions as the era of globalization is characterized by growing socioeconomic gaps (Dicken 2011), leading to a need for support in these areas. In this regard, contemporary global practices have the potential to enrich understanding of local issues and provide tools for solving them in the benefit of everyone involved (Sillitoe 2007b). At the same time, intervention by ‘outside’ and ‘superior’ knowledge is recognized to be a major cause of the erosion of indigenous knowledge systems which are being wiped out at a frightening rate (Davis 2009). Cases like loss of Mayan practices in Guatemala by western influences suggest such a reality (Hegarty 2015). Foreign intervention through development projects also involves the risk of exploitative neo-colonial tendencies (Nkrumah 1965). The meeting of global and local knowledge is thus a complex and delicate subject.

In this thesis, I investigate the complex nature of how knowledge is exchanged through learning as a social process in a context of diverse cultures and competencies. I have done this through a qualitative study while participating as a volunteer in the Atitlán Organics community in Tzununa, Guatemala. The study is centred around farming and agricultural knowledge, but general knowledge (such as worldviews and social skills) is also regarded to be important as it is difficult to view any knowledge in isolation in socio-culturally diverse groups (Arce & Fisher 2007). The community is central in this thesis as I see it as the glue that can hold such diversity together, and because communion is crucial for a social learning process, especially in
multicultural contexts (Rutten & Boekema 2012). I believe that a sense of community and openness to learn from diverse competencies can be highly beneficial aspects in small-scale local development outside the reach of contemporary societal structures, following reasoning by Mündel & Schugurensky (2013) among others. That is the motivation of this thesis and it contributes to the understanding of how such initiatives can act to be successful.

1.1 Research Aim

This research studies knowledge exchange in a community-based organization of individuals of diverse social, economic and cultural backgrounds with varying connection to the community. More specifically these identities can be grouped between local indigenous inhabitants in a socioeconomic underdeveloped region and foreign individuals from more privileged socioeconomic backgrounds, either as permanent settlers or as temporary volunteers. This provides a context for discussing knowledge exchange through a social learning process, highlighting barriers and opportunities to get an understanding of who gains what in this process. The following questions have been formulated for this purpose:

- How does the organizational structure, the shared social capital of norms, trust and values, and the intentions of the overall community affect the learning process?
- How do the socio-cultural background, intentions and competency of the diverse community members affect the learning process?
- What learning opportunities and obstacles present themselves in these differences between community members?
- What can the community members learn from each other in terms of agricultural knowledge or other beneficial knowledge?

1.2 Research Context & Limitations

This research is limited to studying one community, its individuals and their relationships. It is a qualitative study and cross-sectional, limited to the research period of four consecutive weeks in February and March of 2019. The researched community was chosen based on four key factors that enables the study of the research aim.

1. The community accepts temporary volunteers for farm work and encourages education and learning.
2. The community utilizes knowledge-intensive agricultural techniques that provide a subject to discuss learning around.
3. The community operates in a developing region of low socioeconomic status with outspoken intentions of connecting with the local people and contributing to the region’s development.
4. The researcher’s temporary proximity to the location at the time of research.
2 BACKGROUND

Guatemala has during recent years become one of the strongest economic performers in Latin America, but with one of the highest poverty rates that reached 60% in 2014 with 52% of these being indigenous people. Achieving developmental goals in the country remains a difficulty, with the government lacking sufficient resources and collecting the lowest share of public revenue in the world related to the size of its economy. Growth is argued to depend largely on private investment to support the development of infrastructure and human capital throughout the country (World Bank 2018).

This reality is evident in rural areas. Lago de Atitlán is a region in western Guatemala (Figure 1) where a blooming tourism industry is developing which has led to a lot of private investments. It is here that the research takes place, in the village of Tzununa of roughly 2000 inhabitants (Figure 2). Most native Guatemalans living here are indigenous and while Spanish is spoken by most, it is still a second language after the Mayan language of Kaqchikel. Tzununa is currently growing rapidly as a wide stream of international tourists and land-buying settlers have made their presence known in the area. This has led to substantial socio-economic development which is mostly welcomed by the local Guatemalans of Tzununa since the village suffered from severe poverty during past decades, with issues such as food deserts due to the cash-crop cultivation of coffee. Things are currently improving and investment by private, foreign actors are one of the reasons for this.

Figure 1. Lago de Atitlán in Guatemala, 1:1110000. Google Maps, 2019.
Tourism and foreign investment have a substantial impact on local development in Tzununa. The direction of that development depends on the type of investors that establish themselves in the area. The implications can be severe as foreign investments into developing local economies presents risks of neo-colonial pitfalls where foreign capital is used for exploitation rather than development (Nkrumah 1965). Tendencies of such development can be found in the nearby village San Marcos where long-term tourism exposure has led to issues of foreign ownership of land (for yoga studios, ashrams or cafés) with Guatemalans as labourers who live in a separate local economy. The reality is that foreigners will continue to come to the area, for good or for worse, and the village of Tzununa currently lies with its future open as to how its development will play out. The empowerment of local people in these situations depends on self-reliant, knowledgeable local people that are proactive in the development process as the strengthening of human capital is necessary for long-term sustainable development (IBRD 2007).

2.1 Atitlán Organics

The Atitlán Organics community today consists of two farms; the original Atitlán Organics farm, founded by Shad Qudsi and his wife, and the new farm Granja Tz’ikin, founded by Neal Hegarty and some other foreigners. These two farms are run as separate businesses but work in a close relationship and distribute their organic food products under the same brand. Both farms are designed after permaculture principles and operate with a mix of foreign settlers and native Guatemalans, with Granja Tz’ikin additionally taking on volunteers (Qudsi 2019-03-15).
discuss the two farms as part of one community since they operate in close proximity and are engaged in other shared activities, illustrated in figure 3.

In their own words, the community strives to integrate with and strengthen the Guatemalan people in the area. They do this through preferencing local business relations and by working together with locals in the community through employment and internships, providing educational opportunities and a pay check. They also organize service projects in the area, such as reforestation initiatives, by utilizing permaculture-inspired techniques that also aims to help build cultural bridges between Mayan farmers and the international community. (Hegarty 2019-03-14; Atitlán Organics 2019). The founders all have a strong educational and experiential background in permaculture and offer courses on subjects within that field. These courses are tailored towards both foreign travellers and local Guatemalans, with Guatemalans generally receiving substantial discounts (Qudsi 2019-03-14).

Permaculture is a philosophy and design principles of agriculture, ecological engineering and environmental design but also has applications in organizational design. It is often practiced through techniques such as organic farming, natural building, integrated farming and animal keeping. The theory adopts whole-system thinking and takes inspiration from indigenous farming techniques (Holmgren 2002; Mollison 1988). Neal Hegarty of the community recently wrote a thesis in which he explores how permaculture can be utilized to benefit Guatemalan farmers in the area. He discusses that many traditional Mayan farming techniques have been lost due to historical influences of western agricultural modernization, but that permaculture utilises some of these old Mayan practices (Hegarty 2015). This aspect of the knowledge exchange at Atitlán Organics is central to this thesis.
3 KNOWLEDGE EXCHANGE THROUGH SOCIAL LEARNING

In his thesis, Hegarty (2015) discusses literature on the relevance of drawing on local knowledge in development projects, especially in indigenous contexts (Haverkort et al. 2003) and the importance of community (Shiva 2008). Along similar lines, I turn to theory on how locally situated knowledge interacts with global, conventional science from an anthropological perspective in an agricultural context (Sillitoe 2007a). Next, I discuss organizational literature on social learning systems by Wenger (2000) to understand the learning process in this interaction. The theoretical framework of this thesis consists of these two theoretical fields. Volunteer workers are a dynamic element in this context that can be a source of world knowledge and contribute to a more conscious learning process in communities (Duguid, Mündel & Schugurensky 2013). In contrast, volunteer workers can also be a burden due to their temporariness and potentially damaging to communities. The benefit that they can provide largely depends on the organization that employs them (Wearing, Young & Everingham 2017).

3.1 Foreign-Local Knowledge Hybridization

Locally situated knowledge is often the key to driving successful initiatives in local agricultural development and for empowering local people. Global scientific theories are often a beneficial complement in these initiatives. The interaction can go two ways where scientifically informed global theories are adopted by local communities, and the knowledge in these communities inform and contribute to these global theories. This can lead to more nuanced knowledge and eases collaboration between local and ‘outside’ practitioners that embody different competencies, potentially resulting in enhanced social development (Sillitoe 2007b). Aligned intentions are a key factor in such collaborations for successful sustainable development (Sillitoe 2000). In their analysis of various communities of indigenous farmers, Cleveland & Soleri (2007) argues that any ‘outsider’ development initiative should consider local perspectives to gain local acceptance and facilitate local autonomy to not be initiatives of hegemonic “progress”. A modern example is foreign initiatives that primarily emphasizes environmental sustainability, not considering the common perspective of locals in socio-economic poor regions that economic growth is imperative, thus creating fragmented intentions (Cleveland & Soleri 2007). When they are successful, however, joint enterprises of local and outside actors can lead to hybridization of knowledge which Sable et al. (2007) argue for in their research on joint environmental projects between scientists and Innu aboriginals in Canada. Dove et al. (2007) support this by generally considering such hybridization to have positive potential if it is a conscious process that involves all parties and is not a choiceless pitfall of western mental colonization.

Knowledge hybridization occurs in social transactions between people of different social contexts which Sable et al. (2007) argue to be a form of knowledge translation, where knowledge is understood differently depending on factors such as individuals’ socio-cultural backgrounds. Williams (2006) elaborates on this concept and regards knowledge translation as the social exchange of knowledge between people that come to understand that knowledge differently because of the social nature of the exchange. People of diverse socio-cultural
background therefore make up dynamic social contexts for knowledge translation. This process is argued to create new knowledge inherent in the people involved in these social transactions (Williams 2006). People in these situations affect and are affected by the social context that they act within, such as surrounding communities. This is what creates shared social capital such as values and norms which functions as enablers for cooperative efficiency and learning (Rutten & Boekema 2012). Foreign-local knowledge relationships are a potentially beneficial element in learning communities and social structures are imperative to study in this regard (Williams 2006) and a way to understand how hybrid knowledge is created (Arce & Fisher 2007).

3.2 Social Learning Systems

Learning in cooperative work can occur through activities of socialization, cooperation, guidance or observations. This can be classified as informal learning which is often tacit by nature and not always a conscious or intentional process but can be a significant source of learning in communities (Duguid, Mundel & Schugurensky 2013). I adopt a social perspective on learning by using organizational theory of social learning systems by Wenger (2000) to discuss this. He conceptualizes learning as a social process into a conceptual framework with three key components. Individuals of different social identities are engaged in social learning activities within communities of practice and at the boundaries between such communities. I have adapted these concepts to this research but maintained Wenger’s reasoning about them.

3.2.1 Communities of Practice

The basic building blocks of social learning systems are its communities where people in joint enterprise work toward some common goal, directed by shared intentions and mutual understanding of what the community is about. In this process, the community’s members deepen their competencies by learning together. Wenger (2000) discusses how communities can embed properties to support this:

- The learning enterprise describes how a community consciously takes initiative to facilitate learning and in addressing knowledge gaps among its members. Outspoken learning goals, a good learning atmosphere or learning projects are examples of this (Wenger 2000).
- Mutuality, the depth of social capital, is another key factor. Shared norms, values, and trust are a foundation of community membership and efficient cooperation, something which Rutten & Boekema (2012) also highlight as an enabler for knowledge exchange. Rich connectivity between members is also important to allow for space and possibilities for people to interact (Wenger 2000).
- The shared repertoire describes community resources of core competencies, tools, and designs but also shared ways of communication, routines or roles. Effective leadership is important both for maintaining functioning coordination of work and for educational leadership (Wenger 2000).
3.2.2 Social Identities

At its core communities consist of people, who are the actual agents of learning. Wenger (2000) defines these individuals through social identities that combine competence and experience into knowledge. This knowing is influenced by identity characteristics since it determines what individuals consider to be important and whom they chose to interact with. I discuss identity characteristics by Wenger’s concepts, restructured in three core themes fit for this research:

- Knowledge profiles describe the competency of the individual and essentially outlines who is good at what, which is socially constructed and context-dependent (Rutten & Boekema 2012). To have social effectiveness, to be able to communicate and cooperate effectively is essential to in social learning situations (Wenger 2000).
- Intention with membership in the community affect connectedness, commitment and how meaningful their relationships become. Intentions also relate to expansiveness, to be open to new perspectives, to cross boundaries that enhance divergent learning opportunities. In a broader sense, intentions are part of the individual’s trajectory which extends identity through time when people move through different communities and build on their competency. Having a home base to ground competency in is important in this regard (Wenger 2000).
- Individuals’ sense of belonging and social status in the community determines how they interact and with whom. A sense of membership creates an awareness of identity that is essential for learning and putting knowledge into context. This leads to the concept of identity fractals, as individuals define themselves on local and global levels (Wenger 2000).

3.2.3 Boundaries

Boundaries describe differences between competencies. Competencies diverge at boundaries as opposed to converging within communities. They can be a source of learning where foreign competencies meet in cooperation that traverses this boundary. This cooperation brings the potential to learn from peoples’ differences and to broaden perspectives but can also create misunderstandings, fragmentation and a lack of efficiency. Communities run the risk of becoming narrow-minded if not exposing themselves to boundaries and such interactions should therefore be balanced. Wenger (2000) primarily discusses the boundaries that exist between communities. I take a different approach here and reason that boundaries also exist within a community as they describe differences, such as differences between different social groups. I apply boundaries differently than Wenger but use similar reasoning to identify key factors to understand how boundary learning can be meaningful and which actions that can be taken to strengthen boundary interaction.

- The ability to coordinate action is crucial for boundary cooperation to function. Differences can present cooperative obstacles as interaction works more easily in shared
social and cultural contexts (Roberts 2000). The effectiveness of coordinated action depends on the individuals’ ability to engage or suspend identity to understand ‘otherness’ (Wenger 2000).

- **Tension** between different competencies engaged in cooperation at boundaries gives opportunities for learning. A balance between common ground and real differences is required along with an ability to suspend judgement to see and acknowledge ‘other’ competencies. Something to interact about is needed and ways to translate between different repertoires. It is important that these practices are transparent so that both sides can find meaning in them, since people can perceive practices differently (Wenger 2000).

- Initiatives that span boundaries enable boundary interaction. Shared practices of a common language or explicit boundary-spanning routines allow people to coordinate activities together. Boundary processes should have negotiability to them, ensuring that all involved actors benefit from this process. Brokers are people who span boundaries by either creating lasting connections or by moving from place to place as roamers of short-lived connections that move knowledge (Wenger 2000).

3.3 **Constructing an Analytical Framework**

I here outline a framework of analysis to discuss the research questions in relation to the empirical data. It is built on trends found in the data and on the previously outlined theory where social learning systems by Wenger (2000) has been especially influential. I take a wide approach to knowledge in the community and consider non-farming related knowledge as important. Skills, worldviews and shared practices are important to view combined when studying knowledge in diverse cultural contexts (Arce & Fisher 2007), especially so in indigenous settings to create an awareness of cultural hegemony (Chomsky 2010).

I outline five key themes to explain and analyse learning as a social process on a community level.

- **The community** as a context for learning with enabling or disabling properties.
- Individuals of social identities as agents of learning with their background determining what knowledge exchange that occurs.
- **Boundaries** as places of cooperative obstacles and knowledge exchange between different identities within the community.

These three themes form the structure of the analysis. The following two themes are discussed throughout the entire analysis.

- Learning through informal learning activities of doing, socialization, guidance, and observation.
- Learning outcomes as hybridization of knowledge which affect individuals.
4 METHOD

Learning and knowledge exchange are subtle processes and studying them presents some difficulty as they are highly situated in the mind, both consciously and unconsciously (Duguid, Karsten & Schugurensky 2013). Ethnographic methods can play a useful role in this regard to develop conceptual approaches to understand the boundaries of knowledge and critically reflect on them (Arce & Fisher 2007). Participant observation was therefore chosen as a primary research method. Interviews were used to support the observations and played an equally significant role. In general, data from observations concerned learning processes, norms and behaviours whereas interview data leaned more towards descriptions of identities, intentions and learning outcomes.

The use of diverse methods is known as triangulation and arguably leads to more effective research as it strengthens the validity of the study (DeWalt & DeWalt 2011) and increases the researcher’s knowledge of the research setting (Patton 1999). This is especially the case for participant observation as it inherently aids the process of building rapport between researcher and researched, thus strengthening other methods that depend on strong rapport (DeWalt & DeWalt 2011). The conclusions drawn from the observations played a significant role in the design of the interview questions and guided their topics. The interviews in turn helped to clarify and confirm conclusions and provided data from the informants’ perspectives. The subsequent data analysis was done through coding, following four stages of interpretation, code creation, code application and restructuring the data, as outlined by Bryman (2008).

4.1 Participant observation

Participant observation aims to understand people from an internal perspective by immersion into the research context, to observe the informants while participating in activities with them. This enables one to somewhat think and feel like the researched (DeWalt & DeWalt 2011). I engaged in participation through my volunteer role on the Granja Tz’ikin farm in the community. This allowed me to identify myself with other volunteers but also gave insight into the lives of the other permanent foreign or Guatemalan community members. I worked with them daily which led to a deeper understanding of them and the community over time. I participated in standard volunteer tasks and in learning about permaculture alongside other volunteers. Practical differences between me and other volunteers were minor, apart from my research role. I adopted an overt role as a participant which means that the researched knew that they were being observed. I openly took notes during work and conducted informal, unstructured interviews sporadically. The methodology that I used for participant observation was guided by literature by DeWalt & DeWalt (2011).

I prepared a systemic framework of how to do the observations prior to the fieldwork. It contained specific things to observe, times and places of interest and person-moment specific questions to ask. This was subject to change as it is encouraged to continually reassess research questions, theory, and methodological practices. New insights gained during fieldwork should constantly be evaluated to provide guidance on what concepts to explore and how to shape the research questions (DeWalt & DeWalt 2011). During the fieldwork, I created day plans each
day with specific objectives for that day, including both actions to do and things to understand better. The outcome of these objectives was then evaluated and documented at the end of each day. The documentation was re-read and analysed daily to discern patterns, understand concepts and to decide what to focus the observations on. This especially impacted the framework for observations as I adapted it to the research setting and to reformulations of the research questions.

The observations were primarily done during the workday at Granja Tz’ikin, between 8.00 and 13.00, five days a week. Some observations were recorded during off-hours, from conversations or from spending leisure time on the farm. I used a pocket-size notebook for taking small, summarized jot notes to remember interesting observations and quotes (DeWalt & DeWalt 2011). These were later reviewed when writing the more extensive field notes and proved to be valuable in that process. The more of them I took, the richer the field notes became as it was easier to remember subtle observations such as facial expressions. The field notes are the actual long-term documentation of the observations. Two hours on average was dedicated each day to record the day’s observations. This was usually done directly after the workday so that I remembered as much as possible (DeWalt & DeWalt 2011). The field notes consisted of a chronological day log including events, quotes, conversations, body language, and researcher thoughts. Remarks and reflections on topics of interest were added during and after transcribing the day log. These reflective notes were kept separated from the day log. The field notes were written and organized using note-specific software (Microsoft OneNote). I also used some advised auxiliary documentation techniques (DeWalt & DeWalt 2011). I kept a personal journal to note concerns, general mood and how I perceived the development of my role in the community. I also took photographs of the property and sketched maps of the physical and social layout of the community for memory and to use as tools for analysis of behaviours.

4.2 Interviews

The observations focused on the process of learning while the interviews focused on the outcomes of that process from the informants’ own perspective since interviews help to reveal how people view themselves (Silverman 1993). The interviews were designed to be semi-structured. This allowed for flexibility as I was able to expand upon certain topics that became more pronounced (Dilley 2000). Some questions were more important to certain people and I actively chose which questions to ask different people which lead to interviews with varying structure and varying time length. I conducted 18 interviews in total with both foreigners and Guatemalan community members (see Appendix I).

The interviews were one-on-one except for one group interview with three of the Guatemalan workers, as they preferred that interview structure. The interviews with permanent community members were recorded and transcribed, with their consent. I took real-time notes in the volunteer interviews because I had a lot of data from them through informal interviews. The interviews with foreigners were conducted in English and the interviews with Guatemalans were conducted in Spanish. The recordings of the Spanish interviews were thoroughly analysed to get the full extent of the answers. The group interview was done with the aid of another community member, a native Spanish speaker, to act as interpreter and facilitator. This person
was a long-term volunteer without connection to the formal employment of the locals, but with a good relationship with them. I assumed him to be suitable for the role, considering guidelines for using an interpreter (Pareek & Rao 1980).

### 4.3 Method Discussion & Limitations

The following discussion attempts to clarify the research limitations to provide a critical perspective and aid the subsequent analysis of the gathered data. The most prominent limitation were language barriers. Native Guatemalans of Tzununa speak Kaqchikel with Spanish as their second language. I had no knowledge of Kaqchikel and my Spanish proficiency is intermediate. This functioned for basic interviews but presented some issues in understanding complex conversation topics, rapid and sluggish speech. Moreover, local Guatemalan would always speak Kaqchikel to each other when not interacting with a foreigner, which limited the verbal observations. Related to this is the fact that the work was generally divided between volunteers and Guatemalans which resulted in less interaction between these groups. I could not observe or participate with the Guatemalans as much as with others. This is the main reason I focused on interviews as the primary method of gathering data from the Guatemalans perspectives.

In general, there is an imbalance to the gender distribution in the sample, with more male informants than female (see Appendix I). This became difficult to address as there was more male people working in the community, especially Guatemalans working with farming. Among the foreigners, the males had the official position of land owners in the community and were more immersed in the farm operations which led me to focus more on them. This research is therefore imbalanced from a gender perspective which is a significant limitation.

Participant observation is a biased method with a biased researcher who constantly is interacting with the environment, affecting it and being affected by it in some degree. It is important to reflexively evaluate how this bias affects the research (DeWalt & DeWalt 2011). I think that this bias primarily lies in that the community and its people are presented through my interpretation of them. I have understood them from my perspective, generalized and attempted to describe the community and the people in text which inevitably will involve major simplifications. I have attempted to present the data from the perspective of myself as a community member and it is important to keep this biased interpretation in mind throughout this thesis. 

The overt role that was adopted during participant observation presents some considerations. Many informants gained a substantial interest in the research and would often ask question about it that led to conversations. These conversations had an imbalance to them since I as the researcher always had the research questions in mind which influenced the conversation either consciously or unconsciously. This is not an inherently negative trait and it is up to the researcher to use this as an advantage (DeWalt & DeWalt 2011). I found that the informants often provided valuable input on the research by expressing their opinions of certain related topics, which gave me ideas and observations of their opinions. However, there is a risk that the informants were more inclined to reflect on topics relevant to the study and express their opinions more frequently. I refrained from mentioning any theoretical terms or tools from the analytical framework or any hypotheses or conclusions in these conversations to mitigate
my effect as researcher. Another aspect of the overt role is that the informants were aware of being observed, which some of them noted during research. It is unclear how this awareness of being observed affected their behaviour, but DeWalt & DeWalt (2011) notes that in general, informants will not recall that they are being observed most of the time. I believe this to be the case for the informants of my research as well.

4.4 Ethical considerations

Ethical consideration for participant observation is especially important due to the intrusive and subtle nature of the method. I chose to adopt an overt research role because covert participant observation is not considered to be an ethical research method by many (DeWalt & DeWalt, 2011). All researched informants were asked for consent of being observed prior to any observations being recorded. I explained what consequences that can come from being observed and what my observational interests were. I also asked the community leaders for consent to study the community and why I did it. Despite the overt role however, informants usually do not register that they are observed most of the time. This puts increased responsibility on the researcher and reminders of the observations are encouraged (DeWalt & DeWalt, 2011). I did this by openly taking notes for example, if it was appropriate to the situation.

The informants’ identities have been protected in the published materials, with no mentioning of the real names of the participants. The exception to this is the founders of the farms in the Atitlán Organics community as they act as representatives of the communities and have given their consent of having their real identities exposed in the published report. The informants were also be informed of where and how the material is published (DeWalt & DeWalt 2011).
5 FINDINGS & ANALYSIS

It is tempting to try and give a holistic picture of all learning processes, their outcomes and implications in detail but that proved to be a task outside the scope of this thesis. I instead turn to relevant trends in the data that relate to the research questions in the structure of the analytical framework. I do this by first describing the community structure, values and norms to outline the learning context. The community members social identities are then considered as it is within people and their relationships that the learning happens. The concept of boundaries is last used to explore how and what people learn from each other’s differences.

Three clarifications need to be made first. The data was gathered through the informants’ actions and words, so the experiences and statements need to be understood as coming from their perspectives through my interpretation. Secondly, the data is mainly gathered from the farm Granja Tz’ikin, especially the observations, with some supplemental interviews done at the original Atitlán Organics farm. Thirdly, the people are discussed in the categories of Guatemalan community members, foreign community members and volunteers for simplicity. This is a generalization. A more detailed outline of how the individuals differed can be found in the presentation of the sample in Appendix I.

5.1 Community

The main activities of the community can be split up between farm operations, regional service projects and education. Although the bulk of the research studies learning by doing during day-to-day farm operations, it is important to note the educational aspect. It is run as a separate business, but it still influences the community at large. The community members either facilitate or have taken the courses and volunteers often take them during their stay. The community is a place of learning about permaculture and sustainable agriculture in general, stated by key (foreign) figures in the community. They have considerable knowledge and a pedagogic background which is a substantial part of the community repertoire (Wenger 2000). This is applied in the courses and similar activities as learning projects and influences the general learning atmosphere of the community. There is a conscious learning enterprise to expand on this knowledge repertoire and an outspoken emphasis to learn from each other. Jeremy, one of the owners of Granja Tz’ikin gives his thoughts on this:

…we like to create a multinational community. It’s nice for our [local Guatemalan] workers to meet international people. We want to involve people from other parts of the world with different skills that we can use. (…) We also want to turn this place into a hub for people to come and stay and learn. They get to know how things work on this farm and why and leave with valuable life skills.

I experienced this to be the case through my observations. The overarching connectivity and openness in the community were demonstrated by frequent sharing of ideas (Wenger 2000), and outspoken values of appreciating each other’s differences (Cleveland & Soleri 2007). I found that learning was one of the main reasons for membership in the community, regardless of the individual being foreign, Guatemalan or volunteer.
5.1.1 Community Management

The management structure on Granja Tz’ikin inherently forms the social dynamics of the farm work. Maintenance tasks such as animal keeping, harvesting vegetables and running the garden café keep the business running and are the backbone of work activity. Projects to develop the farm are done besides this to construct new buildings, extend the farm area or set up instalments such as solar panels. Neal and Jeremy, two central foreign community figures, appeared to have the deciding vote in farm decisions, probably because of their ownership of the land and their extensive permaculture knowledge, but both mentioned that they aimed to take decisions on a community level. The Guatemalans were primarily engaged in farm maintenance tasks and some major farm development projects, usually working autonomously in their own group. Foreign community members did similar tasks but to a lesser extent since they also dealt with administration work or engaging with the volunteers. The volunteers were formally managed by a volunteer coordinator, a role filled by a long-term volunteer. They often worked in their own group on smaller projects, sometimes in interaction with the foreign community members but rarely with the Guatemalans. The key thing I observed here is that the Guatemalans usually worked separately. I questioned Neal about this, who manages a lot of the farm work:

That’s a good question. That kind of just happened over the last while. Sometimes there are tasks which just needs to be done. I think the [local] guys like interacting with the volunteers, but they are not particular comfortable in telling people what to do, and usually the work they do is reasonably skilled work.

The divide seems to have happened naturally because the Guatemalans work so efficient among themselves and boundaries of language, culture, skill, can hinder that efficiency. The Guatemalans work as a community of practice among themselves with shared core competencies but at the expense of less connectivity with other community members, especially volunteers. This is a trade-off, as acknowledged by Neal.

Another management-related point of interest is that proper coordination of volunteers was crucial. The coordinator would sometimes be absent since he had other responsibilities to attend to which led to disorganization among the volunteers. They would often be doing nothing, learning nothing or taking up time of other community members in these situations. Many volunteers mentioned that they experienced themselves as a burden during these times. Coordination appears to be crucial here, something which Neal also acknowledged: There are sometimes problems with too many [volunteers], (...) if it’s not well managed, it’s a waste of time. This concurs with reasoning by Wearing, Young & Everingham (2017).

5.1.2 Membership, Norms & Values

I especially focused on observing norms, values and trust within the community as these are enablers for learning (Wenger 2000). A norm that stood out was the ubiquitous explanations of why tasks were carried out and how they related to the larger farm system. Knowledgeable community members often explained mundane practices in relation to a systemic or theoretical context, especially to volunteers. People knew why it was good to get air into the compost on a microbial level when turning it, or how a building was going to be designed when digging out
the foundation. Appreciation for this norm became evident in the interviews as many informants named this to be one of the most significant ways in which they came to understand permaculture practices. Many volunteers also mentioned that it strengthened their *commitment* to the community.

The people of the community expressed a valuable sense of *membership*. The foreign community members have the community as their home and are also its founders. They are the core of the community with a deep commitment. The Guatemalans had financially better work opportunities in other places but said that they wanted to be and work at the Atitlán Organics community for other reasons such as a good atmosphere, meaningful relationships and learning opportunities. This sense of membership extended to the volunteers and many of them experienced the community as part of their identities during their stay. A reason for this is the good attitude towards volunteers, illustrated here by one of the permanent members: *This is a place to learn and [the volunteers] are here to learn. Even if they screw up, don’t get upset towards them. They are important.*

The temporariness of volunteers came to light in occasional apprehensiveness in their relationships. Trust developed with time as volunteers became more familiar with the community. These were the only relationships where I observed some lack of trust, especially as Guatemalans and volunteers rarely worked together. The Guatemalans and permanent foreign community members appear to have a good level of trust between one another, and even though they work separately at times they still interact often and work with shared intentions. These conclusions are supported by the interview data.

### 5.2 Social identities

Here I attempt to give a generalized picture of the people of the community and how their backgrounds affect the learning process. This is my understanding of them from interpreting the data from observations and interviews.

#### 5.2.1 Intentions & Trajectories

*Aligned intentions* are key for cooperation (and learning) in communities (Sillitoe 2000). The Guatemalans formally have jobs at the community farms with a salary. In the interviews, they mentioned that economic stability is a primary intention for them, which I understood to be paramount for the Guatemalans of Tzununa in general. This concurs with reasoning by Cleveland & Soleri (2007). The Guatemalan members of Atitlán Organics mentioned other intentions for working in the community such as learning opportunities and a good working environment, but it is important to consider that their membership is a job to support their families. Along the lines of Wenger’s *trajectories*, all Guatemalan informants either currently have or want to have their own farm. The younger Guatemalans in the community also expressed a will to travel internationally or work as farming consultants in other parts of Guatemala. One of the foreign community leaders said that he wanted to give these younger Guatemalan possibilities to learn and become strong figures in the village to help, empower and inspire other Guatemalans to do the same. This contrasts against observations that I made of
trajectories of other young Guatemalan men in the area who work for foreigners to earn enough money to be able to emigrate illegally to the US.

The Guatemalan members of the community said that they see positively on the development of Atitlán Organics and similar places like it. What the term “development” means was however difficult to discern from the different perspectives. The foreign community members share the intention of creating a stable place where they can live long term, which I understood to be their primary goal. They are without a fixed salary and rely on the success of their businesses, but their intention is to develop the farm into an efficient system so that they can live in a cooperative without great financial dependencies. More specifically they want to develop the community and its peripheries into a permaculture network of highly effective organic farms. They have grand ideas and are the primary drivers of how the community and its peripheries (reforestation projects etc.) develops. I understood their developmental intentions to be more extensive than the Guatemalans. It is important to note this difference, even though I did not notice any clear conflict between their intentions. They communicated about these matters which, along the lines of Cleveland & Soleri (2007), it is paramount for foreigners to understand the local perspective, especially on local economic growth. The negotiability (Wenger 2000) between the community members and their differing intentions, shows partly in how the community strives to be a profitable business that prefers Guatemalan business partners where all collaborations strive to be economically sustainable. Neal gave his perspective on what he thinks that the Guatemalans in the area want: *I think it’s pretty clear (...) People want economic opportunity, regular dignified employment and good food.*

The foreigners also have intentions to continue the education business. Tourism and education should not be a financial dependency in their view, but they do want to the community to be a centre for learning about sustainable agriculture. The vision is to keep attracting both Guatemalans and foreigners in this endeavour.

Volunteers are a key aspect of this. They are multi-national and culturally heterogeneous with a temporary membership, but their intentions proved to be quite similar despite their differences. All informants showed substantial interest both in sustainable farming and in communities and learning about these things was their primary intention. These learning intentions were met by the community’s emphasis on learning in general. Many volunteers had long-term plans to either live in their own community or establish their own farm in the future, or just viewing the learning as a step along their life trajectory. However, their lack of having a home base due to their temporariness is impacting this learning (Wenger 2000). Many volunteers viewed their learning as positive but somewhat fragmented. One volunteer mentioned that she did not think that she could learn something specific due to her short volunteer time and viewed her learning as more inspirational.

5.2.2 Social Interaction Patterns & Sense of Belonging

I observed differing patterns of interaction and work-activities at Granja Tz’íkin by the different social groups. This is part of what Rutten & Boekema (2012) discuss as the social context of learning and relates to the concept of connectivity (Wenger 2000). The Guatemalan men worked and interacted more among themselves in general while communicating in Kaqchikel. The one Guatemalan woman at the farm worked in the kitchen alongside foreign Spanish-speakers,
sometimes assisted by volunteers. The foreign and Guatemalan community members interacted with each other frequently during the day, but volunteers and Guatemalans less so. I generally perceived Guatemalans to take up less space than foreign community members, talking less and moving around less. When other foreigners came to visit the farm, either in business or leisure, the foreign community member would engage these visitors in natural socialization, often in Spanish, while the Guatemalans usually kept their distance, continuing their work. This difference in behaviour is generalized in that the Guatemalans had lesser social effectiveness and less connectivity for spontaneous learning to occur outside their social group. In the rare occurrence of when I worked with them, they would be in charge and direct the work.

The volunteers worked in various places on the farm, not very autonomous and often directed. Because of their brief time span and learning intentions, they would not only be performing the tasks but also trying to learn as much as possible from them. I observed that this sometimes resulted in volunteers taking up a lot of time for community members, especially when the volunteers were not effectively managed.

The people of the community differed in their connection to Tzununa, relating to the concept of identity fractals (Wenger 2000). Guatemalans see Tzununa as their native home and have no other place to return to. They have a deeper, more dependent relation to the region than foreigners, who have livelihood possibilities outside of Tzununa. I found that the foreign community members often reflected on these topics and how their presence affected Tzununa. Many of the acknowledged that tourism is the cause of substantial changes in the area, since foreigners bring other cultures and significant economic opportunities. They realized that this has brought both positive and negative changes for the Guatemalans of Tzununa. The founder of Atitlán Organics gave his perspective on his influence in the village:

Me and my wife were the first foreigners that had an idea to bring more people here. Before we started building there was no other foreign establishments. Someone else would have done it if I hadn’t. I do believe that I have been instrumental to push this idea that Tzununa is known for sustainable living, permaculture, organic farming and natural building. (...) now Neal and Jeremy are here, and more people are coming for these purposes.

The volunteers reflected much on this change as well. They often discussed the effects on tourism in the area to share perspectives of potential colonialism, tourism dependency and socioeconomic differences. Many volunteers were prone to talk about these topics in the interviews. From the Guatemalan perspective, I found that foreigners are generally a welcomed aspect in Tzununa, but it is important to keep in mind that I as a foreigner asked these questions. Foreigners were perceived to bring change and economic opportunity but also potential issues with land prices rising. The Guatemalans expressed an interest in interacting with foreigners and especially the importance of working together in the village, illustrated here by a Guatemalan worker on the Atitlán Organics farm:

For me, the truth is that it is good. It is very important to the town also. What I see is that it helps many people here that need it, and it creates good opportunities and good ideas for the future. Ideas that we don’t have in Guatemala and in Tzununa.
5.2.3 Knowledge Profiles & Community Contribution

In this section I try to give a generalized outline of how the skills and competencies differed among the community members. The Guatemalan community members generally excelled in practical-oriented work with a mindset that is familiar with the local land and its resources. They were creative and resource-efficient when solving problems. I primarily explored this in the interviews, here in the words of one of the Guatemalans who self-asses his knowledge:

> How to plant beans with the MILPA-system, how to search for firewood in a good way in the mountains and bring it down. Also, about [local fruits], where they grow best. (...) [Constructing] the stone walls, how to build them and which rocks are good for what.

I understood their knowledge as being tacit, difficult to put into words but clear to see when watching them work. One foreign community member with construction-proficiencies put it this way:

> They are really good builders, they are really hard workers… I mean the biggest thing is cultural, they are much more willing to work a lot harder than we are. (...) They just know how to deal with rebar, stones and concrete. I am looking over their shoulders, [learning from them].

One of the foreign community leaders phrased it similarly in another interview:

> In a practical sense they are already ninjas in planting trees, building rock walls, building things and doing things. (...) Everyone knows how to do these things here. They have life skills developed at the age of 16.

The foreign community members are from a different socioeconomic and cultural background, with university degrees and work experience from there. They had the ideas of how to design sophisticated permaculture systems after theoretical and scientific concepts. I understood their knowledge to be broader with a contemporary global perspective. They self-asses their knowledge along these lines, illustrated here by Jeremy:

> …my college experience, to understand the chemistry of soil, what constitutes good and healthy natural soil, why it is important to plants, the design methodology and such. Theoretical things in general, simple science that helps explain things.

In another interview, Neal reflects on differences between his knowledge and the Guatemalans’ in general:

> It’s crazy the cultural differences when you think about it. (...) I mean some of the global issues that have shaped my thinking they have no idea about. Like if you ask them what climate change means, [or] what carbon sequestration is, they would have no idea. But on the other hand, they get it in a sense. I have told them that it is my dream to make this valley greener with more trees planted, and Carlos will say like “Yes! We need more firewood!”, so it’s like he gets it but from a different perspective. You have to respect that and in a sense there is no point in banging on
and lecturing him that “its more than just the firewood, it’s the Amazon rainforest and CO2”, and he is like “What are you talking about”.

Another key aspect of their competency is designing the farm into a permaculture system and turn this into a business. In the words of Shad, the founder of Atitlán Organics:

From my permaculture knowledge, (...) that is internationally available but not available locally say, it is the last 20% that makes everything possible (...) things like automated waterworks, or fermented chicken feed, or washing the salads. They have grown salads here for generations and knows how to do it better than you and me, but they do not know to wash it properly with certain type of water, put them in airtight zip lock bags, put some edible flowers inside of there (...) Also, logistical things like, who to sell it to, how to market it, what price to sell it for.

From the opposite perspective, the Guatemalan farm manager of Atitlán Organics shares his view on foreigners’ competency:

The people from other countries that come here have many ideas and a lot of experience. People from other places can know things about certain plants that we don’t (...) We can trade ideas here. Foreigners see what has been done here, what works, and what doesn’t work, and they bring new ideas which we can use.

The volunteers mainly had minor farming skills. They contributed with occasional carpentry or gardening skills which helped but rarely affected the farm operations significantly. Their contribution instead came through knowledge about the world, about their own culture, foreign ideas and frames of reference. The Guatemalans expressed that they found this interesting about the volunteers and viewed them as a positive aspect to the farm. As one of the younger ones expressed:

[The volunteers] help us in our work and they teach us a little bit of English. They come from different places which is interesting. (...) I want to learn more about the volunteers and from the volunteers. It is an energy to work with them. I am happy to speak with them, about their travels.

He mentions an energy to work with. Having volunteers around generally seemed to have a positive effect on the community for sustaining a good motivational energy and a willingness to innovate, a fact that the volunteers themselves appeared mostly oblivious about. Neal acknowledges this aspect of volunteers:

I think [volunteers] add a lot to the energy of the place. (...) I personally find that it motivates me to work. I have been working with farms for years, and now that I have my own place, it’s hard to motivate myself (...) [The local Guatemalans] seem to enjoy the interaction with cool people from around the world who come to volunteer.

5.3 Boundaries

With an understanding of the community and its people I use the concept of boundaries (Wenger 2000) as a central tool to analyse the learning processes between individuals of
different competencies as they can present both obstacles and opportunities for learning. I identified five major boundaries, categorized as varying competency, language, socio-cultural differences and community connection. I discuss these sequentially, but it is important to note that they are theoretical abstractions. They relate to each other and the different sides of the boundaries are not black and white. I do not mention the management structure (separation of work between groups) as a boundary as it has been discussed already, and because I argue that it is a result of other boundaries.

5.3.1 Competency

The volunteers’ knowledge of the farm operations was not as substantial as the permanent members. Their engagement in tasks at the farm involved some tension due to these differences (Wenger 2000). The volunteers’ limitations in work effectiveness showed when they did not know a certain technique or was not familiar with routines on the farm (also related to their temporary stay). I observed that this led to a lot of trial-and-error work which is a form of learning by doing, but also to volunteer confusion and passiveness. Volunteer coordination spanned this boundary by giving them suitable tasks and guidance when needed. The other side of this boundary tension is that most activities that the volunteers engaged in were learning experiences for them, supported by that they also had the clearest intentions for learning. I frequently observed community members explaining how practical tasks related to the overarching farm system or theoretical permaculture concepts to volunteers when working together. Guidance, observation and especially socialization were the main activities of learning in these cases. Many volunteers reported that spending time around knowledgeable people and socializing with them was the most significant aspect of their learning, concurring with the concept of informal learning (Duguid, Karsten & Schugurensky 2013). This relates to community norms that emphasize learning in general and volunteers often engaged in teaching each other new things.

Another common theme that I observed was when volunteers asked questions on how techniques and concepts on the farm could be applied in their home country. The knowledgeable community member and the volunteers then discussed this to try and relate specific local knowledge to other contexts which I interpret as a form of knowledge translation. The volunteers’ attitudes towards this became apparent in the interview as some thought that many techniques that they had learned could be useful in their home, while some thought the opposite.

The foreigners originally started practicing formal permaculture techniques in Tzununa. The Guatemalans in the community have by now developed a deep knowledge of its theoretical side but they already had great proficiency in the practical side of such work before they came to know permaculture. The interviews with the foreign community members revealed that they thought that they learned a lot of practical methods from the Guatemalans, such as working with rebar or constructing rock walls. As one of them put it:

I have learnt to work with cheap local materials (...) [and] a lot of masonry from them, to work with rocks, and being more creative and having more creative solutions, cheap solutions, to problems.
This also included knowledge of the local land and water flows which is crucial to understand in permaculture (Holmgren 2002). I also explored the knowledge transfer of foreigners to Guatemalans during these interviews. The Guatemalans emphasized the value of utilizing organic farming and natural fertilizer instead of chemicals that many other Guatemalan farmers in the area are using. One of the younger Guatemalans expressed to have gained a more scientific understanding of permaculture concepts on the farm. This included the compost and designing it into a system, water systems and general management of a permaculture-designed farm, something which all Guatemalans agreed on to understand better now. They all agreed that they had learned a lot from the courses they had taken and from the daily farm work. As one of the younger Guatemalans said:

I have learned [from foreigners] about the microorganisms, how the compost works with the hens, how to make [the compost] and how to use it, what it is made of, and I learn more and more, little by little.

Another key aspect is foreigners’ access to advanced technologies and modern business ideas. One foreign community member mentioned that he wanted to involve the younger locals in his more advanced design work for construction where he used computer programs. The Guatemalans have limited access to modern technologies, but younger locals showed interest to learn more about these things. They were also interested in doing garden consulting in the future, inspired and taught by foreign community members:

I would like to go to San Pedro or other places in the future, like Neal has done, and help people with their gardens. I did not like these things before, I didn’t know anything about that, how to manage a garden.

Along the lines of Sillitoe (2007) and others, a combination of foreign and Guatemalans competency in cooperation can lead to mutual benefits. Shad Qudsi at Atitlán Organics reasoned that the Guatemalans are far superior in practical tasks with location-specific knowledge, but he and other foreigners know theories that slightly enhance these farming practices and that provide a systemic perspective to systemize farm operations. Another foreign community member of Granja Tz’ikin described a common process of how farm projects go from concept to implementation. Many of the ideas appear to come from foreigners, inspired by permaculture theory. The Guatemalans have good, practical ways to realize these ideas. He and other permaculture-knowledgeable foreigners sometimes reflect on local methods and incorporate these in theory to be able to do other useful things. The local techniques are put into a theoretical context while at the same time influencing that theory (Sillitoe 2007b).

As argued by Dove et al. (2007), it is important that this is a conscious process that acknowledges all individuals for mutual benefits. I observed tendencies of this in discussions between Guatemalans and foreigners in how to solve problems. To learn from each other and respecting different knowledge is part of the community’s goals and I understood this to generally be the case. I did note respect among the Guatemalans for the foreigners’ permaculture knowledge, with tendencies of conceived western superiority which Hegarty

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1 The use of chemical fertilizers stem from modernist agricultural methods that originated in western cultures in the 1950s. Its application in Guatemala is largely due to cash crop cultivation, such as coffee, with customers in the west. This is one reason for the loss of many original Mayan farming techniques (Hegarty 2015).
(2015) encounters and discusses in his research, but foreigners also showed substantial respect for the local knowledge of the Guatemalans. The community strives to share ideas and find solutions together and not declaring one perspective superior to the other. One of the Guatemalans explicitly stated that if he thought of a better way of doing a task, different from a method suggested by a foreigner, then he would do it. This could lead to minor conflicts such as the locals wanting to use rebar and concrete in many implementations instead of permaculture techniques. It is noteworthy that the foreigners bring this permaculture knowledge to the community, which takes inspiration from Mayan methods. This contrasts to current local Guatemalan techniques such as rebar, cement or chemical fertilizers, which was introduced (or imposed) historically by western influences of modernistic agriculture, leading to erosion of many Mayan techniques (Hegarty 2015). To some degree, this puts the foreigners of Atitlán Organics in a position of repeated knowledge hegemony, albeit in a completely different situation. I think that this is crucial to be aware of this in the community, and Hegarty (2015) does discuss these topics in his previous research.

Hegemonic perspectives aside, many of the foreigners said that they are learning the practical way to think like the locals to some degree. At the same time, Guatemalans are increasingly realizing why they are doing certain permaculture things and understanding its systemic perspective more clearly. This is what I understood to be the main knowledge hybridization of farming skills between foreign and Guatemalan community members.

5.3.2 Language

The local Guatemalans spoke Kaqchikel natively, Spanish well and no English. They spoke Kaqchikel between each other and Spanish with everybody else. The permanent foreigners all spoke Spanish well and most of them spoke English decently. They spoke either Spanish or English depending on the individuals engaged in conversation. The volunteers generally spoke English well and Spanish with low proficiency. They spoke English to most people or attempted Spanish with non-English speaking individuals. All three languages were commonly used in everyday work in the community. This boundary primarily took shape as a barrier as it severely limited communication and coordinated action (Wenger 2000) between some individuals. Basic tasks could be coordinated decently using translation, a few words here and there and creative body language to somewhat span the boundary, but more complex concepts were not possible to coordinate together. I noted that it disabled many learning opportunities of overhearing conversations of interesting content. When working together or just within hearing distance, the Guatemalan Kaqchikel discussions on how to solve a task were lost to the foreigners, just as conversations in English about other countries or past travel experiences was lost to the Guatemalans. This applied to non-Spanish speakers as well. A lot of general knowledge of the farm or world knowledge was not absorbed because of this.

The most evident learning outcome across this boundary was volunteers learning Spanish or Guatemalans learning English. Volunteers and Guatemalans alike stated that it provided opportunities to practice speaking the language but that they usually just learned a few words here and there without sustained teaching. The community offered both English classes free for the Guatemalans and Spanish classes at a cost for the volunteers as learning projects in a
conscious attempt to span that boundary (Wenger 2000). These were somewhat utilized and were reported to have positive effects.

Another subtler learning outcome was reported by some informants who said to have become better communicators by being forced into more creative ways of communication. I often observed people using hand signs, broken language and sometimes use of pictures or videos on a smartphone to convey a message. The social skill learning outcomes was hinted at by the Guatemalans but more pronounced by the volunteers, here in an interview with an American volunteer:

I need to get more comfortable with making a fool of myself. (…) exposing yourself to these sorts of conversations can help you to learn how to communicate better in general. There is usually some kind of resistance or distance between people, (…) [and] interacting with different cultures is a great way to train yourself in how to bridge those distances.

In this quote, he recognizes boundary tension and that working in this tension presents some challenges of cooperation but also an opportunity for learning to enhance his own social skills. He does mention cultural differences as a part of this which is another significant boundary.

5.3.3 Socio-cultural background

The multiculturalism of the community is a complex boundary since it presents obstacles and learning opportunities that stem from the members’ background of cultural heritage, socioeconomic status and education. Discussing foreign, Guatemalan and volunteer community members as groups is a vast generalization of a more complex picture, but it does serve to clarify the boundary. The foreign-Guatemalan tension is what I found to be most interesting, with the term foreigners here also including volunteers, as this tension highlights the localness of the Guatemalans with the global foreigners. The obstacles in this tension is limitations in understanding each other’s cultures, and possibly less trust because of this. This might lead to dysfunctional cooperation and hinder learning (Rutten & Boekema 2012). Among themselves the Guatemalans worked rapidly and efficiently as their cultural similarities and competency converged (Wenger 2000) which is the main reason that they worked on their own. I did not observe any major cooperative issues, but I did note a cultural distance as a foreigner to the Guatemalans which other foreigners noted as well. I explored this in the interviews and understood it as differences in cognition and worldviews. When asked about differences between foreign and local, both sides expressed cultural differences as major. The Guatemalans mentioned this difference as interesting because it exposes them to a different mindset than their own:

…people think differently in other parts of the world. They have a different mindset. It is interesting to meet these people and understand this other mindset. I can listen to other people from around the world and understand ‘this is how other people think’.
This line of thinking was also present in the interviews with the foreign community members. They too appreciated this otherness and differing mindset. Neal and Jeremy gave their views on how they adapted to this:

I feel that I have learned, by being in Tzununa, there is a way of putting things that is different. It’s like less wordy. People here have a different type of wisdom. [They] sort of express it more of a look than saying anything. (…) the way of seeing the world and interacting with it is fundamentally different, there is no question. I more and more come to value that. I don’t know if I see it so much as a barrier.

The work ethic is different here. I come from a culture where we throw things away. I learned that from being here, that you can reuse and repair things a lot more than we do in the west. Now when I go back to the US to visit my mom, I am always repairing things and fixing things which usually people throw away [there].

Rutten & Boekema (2012) argues that learning through doing can be more functional with shared cultural norms and values but I interpret this as only one side of learning, where competency converge in learning. The reasoning of foreign and Guatemalan community members above instead highlights learning that diverges at boundaries (Wenger 2000), where knowledge is translated in mutual experience (Williams 2006). There is an understanding of differences in cultures and an awareness that cooperating across this boundary is affecting them to some degree. Judging by this awareness, this is a conscious process that can lead to beneficial hybridization of knowledge (Dove et al. 2007) that, along with mutual respect, has the potential to enhance how foreigners and Guatemalans work together and understand each other. I consider this expansiveness (Wenger 2000) in the community to be a key component in its success.

A more direct divergent learning opportunity at this boundary is the automatic exposure to factual knowledge about other cultures, places and the world, especially because of the flow of international volunteers that spread knowledge as roamers (Wenger 2000). I daily observed people in the community who exchanged information and stories while socializing. This affected all community members but was especially appreciated by the Guatemalans as it was a way for them to interact with the world outside of the region. The contradiction here is that the Guatemalans had less connectivity (Wenger 2000) in the community for this exchange to occur. The distance between volunteers and Guatemalans, created by working structure and boundaries of competency, language and culture, hinders this type of learning. One of the community leaders mentioned in an interview that he thought of having the work more integrated, but he still noted inefficiency and coordination issues with it. Nevertheless, this is a learning opportunity that is not utilized fully, as it means a trade-off with other benefits. The risk of imposing dominant western views on indigenous people is an aspect to keep in mind here as well, which was noted by some foreigners in the community.

5.3.4 Community Connection

This internationalism in the community inherently presents a boundary in that members have a varying connection to the community and to Tzununa. The volunteers’ affect the social context in the community and the learning process since their temporariness can limit deep
relationships, trust and shared social context (Williams 2006). I noted an internal cooperative structure among volunteers, with dynamic power relationships since new people quickly got familiar with the farm and the people, while others left. This led to conscious, and sometimes inefficient, cooperation of learning how to work together. I experienced that I became more inclined to express my opinions and communicate clearly as I worked with other volunteers, learning how to cooperate and being affected by their behaviour as well. I learned how to cooperate with other’s in the social context and I also learned from them. I found similar reasoning in interviews with other volunteers. Many of them thought that cooperation with other volunteers was interesting, valuable and learning experience in cooperative ability. In contrast, they saw the time limitation as a drawback since it was difficult really get to know people but also expressed wonder of how similar people from various parts of the world can be, and how relatively well cooperation works in these situations.

The volunteer aspect of the community generally led to constant processes of getting to know new people, volunteer to volunteer and volunteer to permanent community member. I noted some lack of trust and kinship involving volunteers however. One Guatemalan community member mentioned in an interview that she wanted to interact with the volunteers more because she did not like the fact that there were people in the community that she did not have contact with. She experienced this lack of connectivity as harmful to the community atmosphere sometimes. This is problematic as some volunteers did not take the step to connect with the Guatemalans at all even though they mentioned an interest to do so. The reasons for their passiveness can be related to their limited time, the community work structure, language and culture boundaries. Activities outside community work did help in this regard, as some volunteers went on hikes with the younger Guatemalans in the mountains, or some stayed with one of their families as accommodation for a fee. This reportedly strengthened relationships and spanned this temporary boundary, but they did occur outside of the community work. Time itself was however the greatest aspect of spanning this boundary, which I think makes the volunteer dynamics an interesting aspect of the community, as volunteers that stay longer such as the one long-term volunteer, in a sense eventually become part of the permanent foreign community members. The permanent foreigners clearly have more meaningful relationships with the Guatemalans in the community. Such relationships are built over time through mutual boundary-spanning activities which I see as crucial for a good community atmosphere. The more volunteers and Guatemalans can engage in this the better for the overarching community. The development of strong relationships between Guatemalan and foreigners is paramount to the community, the Guatemalan people and to the process of learning from each other.
6 CONCLUSION

In this thesis I have analysed knowledge exchange through a social learning process in the Atitlán Organics community in the village of Tzununa in Guatemala through a qualitative study. The aim has been to explore how the community’s diverse individuals cooperate and learn from each other, ultimately benefitting the community and its people. The contribution that I make in this regard is an understanding of the multifaceted set of factors that influence the learning process on an individual and community level and how they relate to each other. These factors are summarized in the following answers to the research questions.

The organizational structure is divided into similar social groups of people (Guatemalans, volunteers etc.) for work to be efficient, but this is a trade-off with connectivity for learning between people of diverse backgrounds and competencies. The quality of cooperation and learning in the Atitlán Organics community comes through emphasis on social capital of communion, learning and valuing diversity. I conclude that this is one of their key strengths and it illustrates how important shared values and commitment to them are in communities.

The meaning of membership and intentions within the community can differ, but acknowledging, respecting and incorporating these differences into a shared purpose can let diverse people work together and find meaning within the community. In turn, the socio-cultural diversity leads to diverse knowledge and social interaction patterns which determines who contributes with what and who learns what to whom in the community. I conclude that awareness of each other’s differences, strengths, and sense of belonging in the community is a cornerstone for working with such diversity.

Some boundaries in the community are traversed and some are not, constituting a trade-off between cooperative efficiency and opportunity to learn from each other’s diversity. The primary cooperative obstacle in the community is the language boundary. The diverse farming-related knowledge between Guatemalans and foreigners present some tension but great learning opportunities between the two. The socio-cultural differences enable people to understand the work, the community and the world differently, while inherently presenting potential issues of trust and mutual understanding. The temporariness of some people in the community can also create a lack of trust. Active spanning of these boundaries evidently eases cooperation and gives potential to learn from each other, so I conclude that the community’s emphasis of learning from each other is a key factor that is important to sustain.

With time, foreigners’ and Guatemalans’ diverse knowledge of agriculture and worldviews hybridize. My conclusion is that this can lead to mutually beneficial outcomes when competencies combine, where the Guatemalans know the land and have the skills, and foreigners know the designs and how to enhance these skills. There are substantial risks of cultural and knowledge hegemony in these situations, as pointed out by literature and exemplified in other villages in the research region, which is important to keep in mind. I consider the Atitlán Organics community to deal with these risks by having learned to work together and consciously reflecting on their cooperation. I think that a key strength is that they are not designed as a “development project to help people”, but as an economically and environmentally sustainable business cooperative that emphasizes working together and learning from each other. Temporary volunteers can add to the expansiveness of the community and tap into this knowledge to see ways of how to use it in their own contexts.
The findings in this thesis contribute to the understanding of what can be done in similar dynamic, international communities to facilitate learning and make them more beneficial for all involved. My hope is that this can guide practitioners in community-based organizations for community development as I believe that communities of all sorts are healthy contexts for people to cooperate within. In the face of globalization, multicultural social constellations and a ubiquitous emphasis on knowledge, I believe that understanding these concepts is vital to create and sustain healthy communities.
REFERENCES


Roberts, J (2000) From know-how to show-how? Questioning the role of information and communication technologies in knowledge transfer *Technology Analysis & Strategic Management* 12 (4) pp 429-443.


Internet sources


https://www.google.se/maps/@15.0080799,-90.0849671,9z [Retrieved 2019-04-21].


Interviews

The interviews are ordered by date. The informants have been assigned pseudonyms to ensure that their identity is protected. This does not include the central leading figures in the community as they are viewed as responsible for the studied organization. Details on informants are found in Appendix I.

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Informant</th>
<th>Interview Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview 1</td>
<td>2019-02-22</td>
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<td>Volunteer P</td>
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<td>Interview 3</td>
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<td>Interview 4</td>
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<td>Name/Role</td>
<td>Duration</td>
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<tr>
<td>Interview 6</td>
<td>2019-03-06</td>
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<td>~45 minutes</td>
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<tr>
<td>Interview 7</td>
<td>2019-03-07</td>
<td>Volunteer R</td>
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<td>Interview 8</td>
<td>2019-03-07</td>
<td>Volunteer X</td>
<td>~15 minutes</td>
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<tr>
<td>Interview 9</td>
<td>2019-03-11</td>
<td>Foreigner D</td>
<td>~45 minutes</td>
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<tr>
<td>Interview 10</td>
<td>2019-03-13</td>
<td>Jeremy Fellows (owner of Granja Tz’ikin farm)</td>
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<td>Interview 11</td>
<td>2019-03-14</td>
<td>Guatemalan I</td>
<td>~30 minutes</td>
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<tr>
<td>Interview 12</td>
<td>2019-03-14</td>
<td>Neal Hegarty (owner of Granja Tz’ikin farm)</td>
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<tr>
<td>Interview 13</td>
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<td>2019-03-15</td>
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<td>~15 minutes</td>
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<tr>
<td>Interview 15</td>
<td>2019-03-15</td>
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<td>2019-03-16</td>
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<td>Interview 17</td>
<td>2019-03-16</td>
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<tr>
<td></td>
<td></td>
<td>(The village of Tzununa is part of this municipality)</td>
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<tr>
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<td>Secretary of ‘Municipalidad de San Marcos La Laguna’&lt;sup&gt;2&lt;/sup&gt;</td>
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<sup>2</sup> The information gathered from this interview concerned background information of Tzununa and has been backed up with the general opinions by accepted public opinions in the area. These interviews have not contributed to the findings in this thesis, but has only served to provide background information of the region.
APPENDIX I: SAMPLE PRESENTATION

These two tables list the observed informants at the farms Granja Tz’ikin and Atitlán Organics, respectively. A dashed line in a cell means that information is missing. They are the main people that spend time and affect the community. There were some other individuals that were encountered during the research, but they have not been included as they had a minor impact of the scope of the research.

Granja Tz’ikin Farm

<table>
<thead>
<tr>
<th>Informant</th>
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<th>Nationality</th>
<th>Age</th>
<th>Gender</th>
<th>Interview #</th>
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## Atillán Organics Farm

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