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Experiential learning in agritourism about regenerative agriculture and the consumption of its food products in Guatemalan adults.

ABSTRACT

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In the context of global environmental and health challenges with the need for sustainable agricultural solutions, this study seeks to understand how experiential learning can promote greater awareness, knowledge and engagement in regenerative agriculture practices and food consumption in the Guatemalan context.

This work comes from the idea to make a business project of doing experiential learning workshops about regenerative agriculture in the author's family farm which has a variety of plantations and animals in the Guatemalan coast. The study gathers the viewpoint of farmers involved in regenerative agriculture practices and agritourism. It also has the perspective of some Guatemalan consumers in relation to experiential learning and sustainable food products.

By evaluating the impact of the initiative, this research contributes to the broader discourse on agritourism, regenerative agriculture and sustainable food systems.

The research material is a combination between a questionnaire to Guatemalan consumers, interviews to farmers familiar with the topic and a workshop with potential consumers from the city.

The gathered evidence supports many literature points. One of the main conclusions was that the project has potential bringing along more awareness and economic opportunities for the farm and local communities.

Keywords: Experiential learning, Agritourism, Regenerative agriculture, Sustainability, Consumer behavior

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1 INTRODUCTION

Agritourism combines agricultural practices with touristic activities; the trend has emerged as a powerful way to promote sustainability and local products by educating the public (Tugade , L.O., Vergara, L.R. and Thorsam, 2021). In Guatemala, where agriculture plays an important role in the economy and cultural heritage, agritourism offers a unique opportunity to advance regenerative agriculture. This is an approach that emphasizes soil health, biodiversity and ecological balance (Uldrich, J. 2022). This thesis explores the potential of experiential learning in agritourism to enhance understanding and adoption of regenerative agriculture among Guatemalan adults and examines the impact on their consumption of regenerative food products.

There has been an increasing demand for agricultural products that are produced ethically and sustainably (Petrescu, D.C., Vermeir, I. and Petrescu-Mag, R.M. 2019). This presents a potential opportunity for agritourism initiatives as an educational platform that bridge the gap between regenerative agricultural practices and consumer behavior.

Experiential learning, a hands-on approach that involves active participation and reflection (Acampado, A.G. 2019), is effective especially in an agritourism setting. Engaging directly with farming processes can make participants gain a deeper understanding of the principles and benefits of regenerative agriculture. This learning method goes beyond traditional one-way education. It also foments a personal connection to the land and its products, influencing dietary choices while promoting the consumption of locally sourced regenerative foods (Tugade , L.O., Vergara, L.R. and Thorsam, I. 2021).

The motivation of this thesis idea was to implement workshops involving experiential learning about regenerative agriculture and its products. The focus is on Guatemalan adults which is a demographic that plays an important role in shaping the country's agricultural landscape and consumer trends. The methodology consists of a combination of interviews with farmers, questionnaire and workshop to potential consumers. It aims to answer the following questions: *“To what extent will participants recognize and appreciate the environmental benefits of implementing regenerative agriculture practices and consuming sustainable-produced food?”*, *“How does participation in regenerative agriculture experience impact the participants' understanding of sustainable and community friendly*

farming practices?” and “What role does experiential learning play in promoting a sense of environmental responsibility and high-quality food consumption?”

The study aims to assess the effectiveness of experiential learning in agritourism on participant's knowledge, behaviors and attitudes related to regenerative agriculture and food consumption. After understanding these, the findings will contribute to the development of an effective educational program and strategies that support sustainable agriculture and food systems in Guatemala.

2 THEORETICAL BACKGROUND

Agritourism, an innovative and rapidly growing sector, has become an important topic in the context experiential learning, particularly of sustainable practices like regenerative agriculture. This thesis explores the intersection of agritourism, experiential learning, and the consumption of food products derived from regenerative agricultural methods among Guatemalan adults. The theoretical framework underpinning this research draws on concepts from educational theory, sustainable agriculture, and consumer behavior to elucidate the potential of agritourism as a transformative educational tool.

2.1 Experiential learning theory

2.1.1 Definition

Experience is defined by John Dewey (as cited in Acampado, 2019) the “interaction of organism and environment”, with dynamic, communicative, undefined and socially oriented characteristics. This would be the base for a new interactive perspective towards education challenging traditional methods. (Acampado, A.G. 2019) According to David A. Kolb, experiential learning is a teaching method where students become active participants of their learning process by experiencing real world activities. (Kolb, D. A. 1984)

In the classroom’s context, a large amount of evidence supports that the general student’s achievement is directly affected by their active participation and interest in the subject. Educators can’t measure their class motivation easily because it varies depending on different personal aspects; but engagement can be noticeable.(Kong, Y. 2021) Activities such as problem solving have proven to increase interest and participation, allowing an exchange between the students and the lecturer, who can have a better understanding of the efficacy of the activities. (Chiu, S.K. 2019) Another factor that improves student engagement is if learners see that the experience is meaningful, this would increase the likelihood of making connections between the real life experience and the new perspective or mindset about the subject. (Walker, J., Kumar, A. and Gilovich, T. 2016)

2.1.2 Principles and theories

According to D. Kolb the learning process starts with having an experience then a reflective observation followed by abstract conceptualization and ends with trying the new learnings with an active experimentation, this is presented in the image below. (Kolb, D. A. 1984)

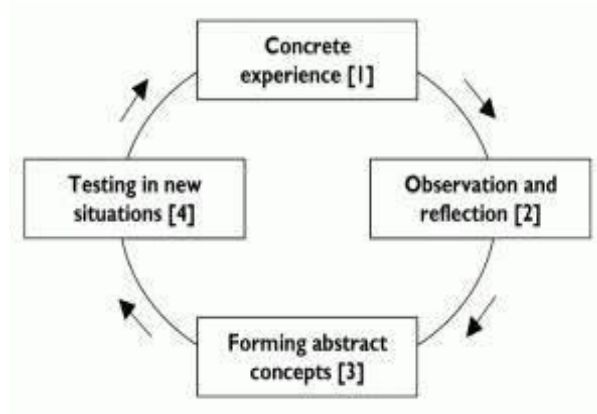


Figure 1: Learning process (Kolb, D. A. 1984)

An example would be medical students who examine a patient (concrete experience) then describe the case to prepare it for the seminar (reflective observation) where it is discussed and theory is presented by the teachers (abstract conceptualization), finally the students apply their knowledge with a practical exercise (active experimentation). (Wijnen-Meijer, M. *et al.* 2022)

According to John Dewey, new and diverse experiences have greater meaning and deeper reflections, especially when they are connected to nature. (Acampado, A.G. 2019) Long lasting memories are created after emotions and ideas are developed after a conflict or problem. Dewey's theory strongly states that these learnings occur in a social environment, as humans are naturally social beings that combine their experiences to form complex societies. (Acampado, A.G. 2019) In a classroom's environment everything starts with the student's previous knowledge that is contextualized by the educator, who organizes the information in logical content pieces that will lead to reflection, which is a key component of the process. The facilitator should take into consideration the readiness of the learners to coordinate the process of creating new knowledge. (Roberts, G. 2003) Students need to develop critical thinking skills to reflect the new content for further application

in real life; relevancy of the subject is an important characteristic to create deep and lasting connections. (Sisselman-Borgi, A. 2017) Dewey's reflective cycle is described in the image below.

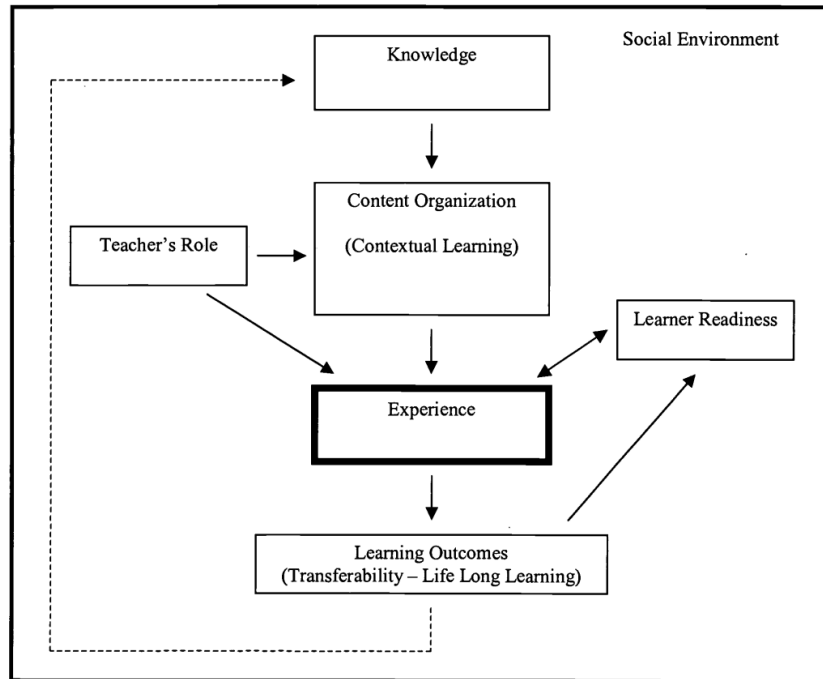


Figure 2: Reflective process. (Roberts, G. 2003)

Graham Gibbs also highlighted the importance of reflection in the learning process, he designed a six-stage cycle that includes event description, feelings, evaluation, analysis, conclusion and plan (as cited in Abbott, J. 2019). It is also important to take into consideration that the surrounding academic or working environment has preexisting factors that influence the person's behaviors such as culture, peer interactions, traditions, etc. Gibb's cycle is presented in the image below.

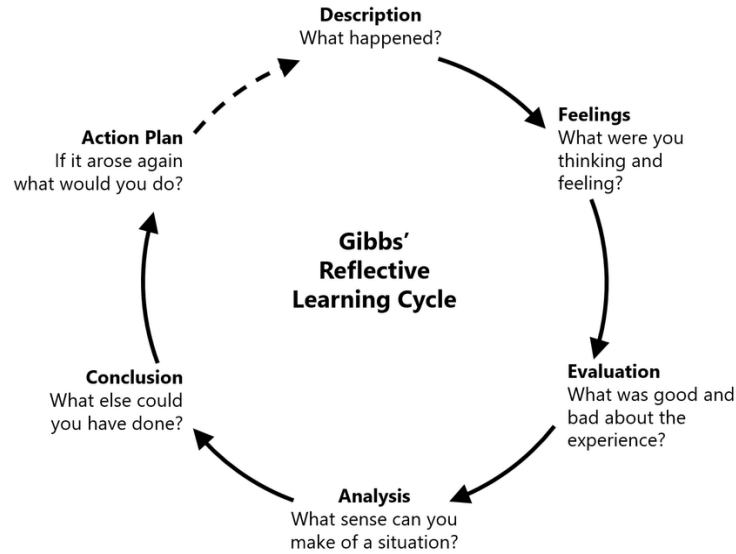


Figure 3: Gibb’s Reflective Learning Cycle. (Abbott, J. 2019)

Reflection is one of the key learning tools of an excellent teacher according to Stephen Brookfield, it does not require a formal curriculum to practice (as cited in Miller, B. 2010). He described four lenses or points of view to develop and improve their own teaching style that are mentioned in the following table.

Table 1. Four lenses to develop teaching style (modified from Miller 2010 and Abbott 2019).

Autobiographical	Based on self review; explores personal previous experiences as a teacher or learner that lead to certain reactions or responses. Some tools could be journals, student’s feedback or evaluations.
Subject view	Consider the experiments through the learner’s eyes and how their previous experiences affect their current actions and emotions.
Colleagues view	Peer discussions can explore how colleagues' previous learning leads to alternative responses.
Theoretical literature	Evidence-based practice, theory, literature can provide a better understanding of the topic.

According to Brookfield a good educator goes beyond the given feedback and constantly looks for improvement by changing teaching methods and goals. The openness for innovation leads to a student-centered approach where knowledge is exchanged in an effective way. (Miller, B. 2010)

2.1.3 Experiential learning and adult learning

Adults can have a rich knowledge about life which creates different motivations to learn such as professional incentives, personal improvement or just the pure joy of learning. Their previous experiences and current needs set higher expectations on their new educational goals; also their limited schedules makes them want to choose and invest in productive and meaningful decisions. (Sisselman-Borgi, A. 2017) Principles from Malcom Knowles's work in adult learning suggests that interactive, practical, applicable and contextual learning is more successful than traditional practice like conferences, lectures, seminars, etc (as cited in Tessema, H., Ó Ruairc, B. 2019). Ideally the different activities should be broken into 20 minute sets, because this is the average time frame of attention span of an adult. (Tessema, H., Ó Ruairc, B. 2019)

Experiential learning is often applied in higher education with internships, where students can apply their knowledge obtained in the classroom to a real-life setting (Sisselman-Borgi, A. 2017). A group of medical students in the Technical University of Munich reviewed their active learning practice experience as beneficial, highlighting the practice of decision making, problem solving and teamwork. (Wijnen-Meijer, M. *et al.* 2022) It also has been used in the veterinary science program in the Virginia Polytechnic Institute where students worked on applied learning projects and participated in practical activities based on the lecture. (Virginia polytechnic institute. 2015) This was made due to the difficulty to retain content during entire hours with a traditional approach that most of the classroom was experiencing. (Virginia polytechnic institute. 2015)

2.1.4 Implementing workshops for adult learning

"A workshop is a short term learning experience that encourages active, experiential learning and uses a variety of learning activities to meet the needs of diverse learners". (Brooks-Harris 1999: p. 6)
A workshop is a method that involves student engagement by interacting among their peers and the

teacher; the sessions often take place in small groups. Teamwork plays a crucial part in doing the assigned tasks followed by problem solving and discussions. (Tessema, H., Ó Ruairc, B. 2019)

A successful workshop requires a clear definition of the learning goals and the detailed planning of the activities that are going to be used to reach the objectives. (Tessema & Ruairc 2019). The stages of workshop process are depicted in Table 2 below.

Table 2. Stages of workshop (Tessema & Ruairc 2019)

<p>Stage 1- Pre planning</p>	<ul style="list-style-type: none"> - Definition of the learning outcomes to use as guidance to plan the activities. - Determine the skills to be involved. - It is recommended that the activity should last 1 hour or 2 depending on the complexity of the subject divided in 20 minute sets.
<p>Stage 2- Planning</p>	<ul style="list-style-type: none"> - Structure development, including an introduction that describes the main objective of the workshop and expected learning outcomes. - Kolb's four stages of experiential learning can be used as a base for planning the activities. - Description of the interactive activities and the closure.
<p>Stage 3- Delivery</p>	<ul style="list-style-type: none"> - Facilitators need to be prepared, they should make an enjoyable and interactive experience. Humor has proven to increase engagement. - The use of technology is recommended.
<p>Stage 4- Feedback</p>	<ul style="list-style-type: none"> - It is usually done informally by a verbal interaction of letting the participants express their perspective about the experience. - The use of questionnaires can gather and register important information for future planning.

A group of students participated in a workshop during the Annual Meeting of the Council on Medical Student Education in Pediatrics, the topic was document submissions in the MedEdPORTAL. The 2-hour activity involved hands-on work and instructional strategies to understand and review publishing

guidelines; a survey via email was delivered after the 4, 9 and 15 months post conference to evaluate the outcomes. (Vercio, C. *et al.* 2022) The small sample study suggested that the workshops may be efficient to complete educational products if the preparation is adequate and the learning outcomes are properly transmitted to students. (Vercio, C. *et al.* 2022)

2.2 Agritourism as an educational platform about regenerative agriculture

2.2.1 Definition of agritourism

Agritourism is described as the visit to an agricultural area with the purpose of leisure, work or education; it offers experiences related to daily farm activities such as harvesting and planting and other outdoor attractions. (Tugade , L, Vergara, L.R. and Thorsam, I. 2021) Another similar concept is ecological tourism that can be defined as a *“responsible trip to areas where the natural environment is conserved and also improves the wellbeing of local communities”*. (De Leon, K. 2012) The first country to recognize and define agritourism was Italy, which established laws in 1985 to support the restoration of farm buildings and diversify the incomes of farms in rural areas. (Lamie, D. *et al.*2021) The main characteristics must be the reduction of negative impacts towards the environment, create positive experiences and benefit the local communities by enhancing their participation and development. (De Leon, K. 2012)

The concept can be broad due to the variety of cultures and territories, which makes it difficult to study and generalize. New studies have been emerging to address the authenticity of agritourism and its market possibilities. (Lamie, D. *et al.*2021) Phillip, Hunter and Blackstock (2010) suggested a defining criteria described on the table below.

Table 3. A typology for defining agritourism. (Adapted from Karampela, S., Kizos T, Spilanis I, 2016).

Agrotourism type	Description
Non-working farm indirect interaction	<ul style="list-style-type: none"> - Not physically based on a working farm. - Connection to agriculture with imagery or location.
Non-working farm direct interaction	<ul style="list-style-type: none"> - Not based on a physical farm.

	<ul style="list-style-type: none"> - It has farming demonstrations, farm heritage attractions and agricultural sales or shows.
Working farm indirect interaction	<ul style="list-style-type: none"> - Farm-based accommodation. - Farm shops, outdoor activities and food processing attractions.
Working farm direct staged interaction	<ul style="list-style-type: none"> - Direct interaction with agriculture. - Open farm tours - Staged or organized processes.
Working farm direct authentic interaction	<ul style="list-style-type: none"> - Visitors have a real work involvement and participate on farm tasks, contributing to its economical growth.

A farm is considered “sustainable” if it operates while being responsible and respectful to the ecosystems, sociocultural norms and traditions. (De Leon, K. 2012) The planning of sustainable tourism should take place before its development in the area to maintain the natural resources. Details such as waste management, local guides, accommodations and local regulations should be previously discussed. (Case Studies on Sustainable Ecotourism, Agriculture, and FISHERIES IN BIMP–EAGA’ 2017)

2.2.2 Agritourism around the world

Global changes, such as food production, trends in society and government policies also affect the agricultural business. The farmers who are not willing to adapt can be affected compared to other colleagues who accept change. (Barbieri, C. and Streifeneder, T. 2019) Many have been diversifying to keep their businesses profitable and not be affected by price fluctuations, inflation and other external factors. (Barbieri, C. and Streifeneder, T. 2019) Agritourism has been seen as an additional activity that can benefit the farm's economy. (Barbieri, C. and Streifeneder, T. 2019)

It is estimated that the market of agritourism could reach \$62.7 billion globally with a growth rate of 13.4%, which countries like the United States, Italy and Japan have already explored. In 2018 Taiwan generated around 3.72\$ million during the year with national visitors that looked for leisure farm

activities. (Tugade , L, Vergara, L.R. and Thorsam, I. 2021) Research suggests that the local cooperation between farms, governments and other local businesses highly contributes to the success and popularity of the industry. (Karampela, S., Kizos, T. and Spilanis , I. 2016)

In Southeast Asia “community-based tourism” has been growing and focusses on the capacity of development of locals to manage their own industry, increasing employment and environmental awareness in the community and visitors. (Case Studies on Sustainable Ecotourism, Agriculture, and FISHERIES IN BIMP–EAGA’ 2017) There is a wide range of accommodation prices, from simple tents to well-equipped cabins made from recycled materials and hardwood. (Case Studies on Sustainable Ecotourism, Agriculture, and FISHERIES IN BIMP–EAGA’ 2017) Its growth has been a result of the planned cross-sectoral collaboration as an integrated ecosystem with local authorities and small businesses of the area to make an impact. (Case Studies on Sustainable Ecotourism, Agriculture, and FISHERIES IN BIMP–EAGA’ 2017)

In Iran, rural communities face many challenges such as poor harvests, economic recessions and migrations to have a stable economy. The idea of implementing agritourism has been considered as beneficial to provide additional income while promoting farming education; the country has the advantage of having different climates that allows them to cultivate a variety of crops. (Lak, A. and Khairabadi, O. 2022) A set of interviews were conducted with groups of tourists, experts, residents and local authorities of the Hamedan region to analyze the point of view about developing agritourism in the area. (Lak, A. and Khairabadi, O. 2022) It was concluded that the success of the project relies on the cooperation between different establishments of the community; also that the sustainability depends on the planning and regulations that reduce the negative impacts on the environment. (Lak, A. and Khairabadi, O. 2022)

Destinations such as Napa Valley, USA have worked to be recognized as a wine destination with a more sophisticated approach including comfortable accommodations that are themed according to the wine culture. (Barbieri, C. and Streifeneder, T. 2019) The wider the range of product choice, the higher the chances are to increase tourism. (Karampela, S., Kizos, T. and Spilanis , I. 2016)

Economic motives are the main priority for farmers when it comes to choosing agritourism, this is because of the rising production costs and the lack of policies that promote farming prices in the constantly changing and globalized world. (Lyon, S. 2013) Although income is important, there are

also other factors that many farmers are taking into consideration such as heritage appreciation, educating populations about food production and sustainability. (Lyon, S. 2013)

Agritourism has opened job possibilities, additional revenue for farms and local communities while increasing job opportunities and agricultural literacy. (Karampela, S., Kizos, T. and Spilanis , I. 2016)

2.2.3 Experiential learning in agritourism

In recent years there has been an increase in demand for farm experiences and recreational activities that are enjoyed with family. In Japan, working cattle farms have been offering dairy workshops which have been successful by including dairy processing activities such as cheese making and milking cows. (Tugade , L, Vergara, L.R. and Thorsam, I. 2021)

There has been research about the economic and sustainable benefits of agritourism towards local environment and communities, but little is known about the improving the agricultural literacy of participants and its influence their purchase of the local-organic food products. One of the difficulties of studying and analyzing agritourism is the diversity of context that involves each scenario. (Barbieri, C. and Streifeneder, T. 2019) The experience in *working farms* offers a more complete and complex set of learning activities related to agricultural activities compared to non-working farm agritourism. In the *direct and authentic interaction* category the visitor has an active role in the working place, which has been related to long lasting learning. (Karampela, S., Kizos, T. and Spilanis , I. 2016)

In the 1900's agricultural programs in America have been implementing an experiential learning approach for their students with the aim to achieve complex working knowledge, compared to the previous instructional and textual method. The practice is performed in staged or actual farms. (Baker, M.A. and Robinson, J.S. 2016) These active learning changes have been followed after an executive report by the President's Council of Advisors on Science stated that there is a higher need nowadays for a STEM (Science, Technology, Engineering, and Mathematics) workforce in the United States because students are graduating unprepared for college. Research has proven that students who had this approach had a higher performance in creativity and practical use of knowledge scores compared to their direct instruction counterparts. (Baker, M.A. and Robinson, J.S. 2016) The report concluded that it is recommended to have a blended approach using both direct instructions and practical approaches to have better results, teachers need to promote the development of

competences by following a scripted routine. This has been reviewed positively by its graduates. (Baker, M.A. and Robinson, J.S. 2016)

According to a study from Jesse Walker, spending money on experiences produces greater satisfaction rather than materialistic consumption, it also creates a sense of gratitude and increases the tendency to spend on others. (Walker, J., Kumar, A. and Gilovich, T. 2016)

Agritourism also strengthens social ties by sharing conversations about shared moments rather than purchasing objects. (Pappas, S. 2021) This makes agritourism not only about agricultural matters, but also about culture and societies as well. New emerging destinations have been popularized such as Maharashtra India and Peru where the indigenous communities offer to learn about their daily lifestyle while surrounded by their natural activities and attractions. (Barbieri, C. and Streifeneder, T. 2019) Some popular tours like La Ruta del Cafe in Chiapas, Mexico and Kentucky's Bourbon Trail have developed specialized networks and touristic routes for their visitors around the local identity. (Lyon, S. 2013) The learning about the grow and process of these food products is complemented with a cultural experience of the area. (Lyon, S. 2013) This widens the entertainment options instead of traveling long distances just for 2-hour events in isolated regions. (Lyon, S. 2013)

2.2.4 Agrotourism in Guatemala

Guatemala has constant warm weather around the year and a cultural richness with multiple native ethnicities living in the whole territory. (De Leon, K. 2012) Central America is home to 12% of the world's biodiversity which makes it a desirable destination for ecotourism. The new visitor's profile are young people between 18-35 years old who enjoy outdoor activities and look for more meaningful experiences in terms of culture, sustainability and solidarity. (Lemus, J. and Díaz, G. 2022) Developed countries have subsidies, infrastructure and policies that protect farmers, which is usually not the case in developing countries like Guatemala, where there aren't also many studies that evaluate the impact of agritourism. (Lak, A. and Khairabadi, O. 2022) Recent findings suggest that a coordination of different sectors like the population's hospitality education, local authorities and businesses determine the success of the project in an area. (Lak, A. and Khairabadi, O. 2022) Hosts need to learn practices that welcome new visitors in a sustainable way. (Lak, A. and Khairabadi, O. 2022)

After the COVID-19 pandemic, the national tourism increased significantly where the natural attractions and cultural destinations such as Tikal, (a major Mayan city) have increased their popularity. Protected areas with a rich local and ancestral knowledge have become an attraction to families. This immersion in the communities and outdoor activities such as volcano hiking are suitable for young and fit people who look for a wellness lifestyle and adventures. (Lemus, J. and Díaz, G. 2022)

The country is famous for its coffee so there are many farms that open their doors for tourists to observe the production process and the experience generally ends with tasting samples. These tours are standardized and try to focus on the story rather than the quality standards to increase the visitor's interest. (Lyon, S. 2013) The National Coffee Association (Anacafé) started to fund coffee projects in 2004 in Solola Atitlan, an Unesco world heritage that attracts many international tourists. This association worked with a local cooperative to promote tourism. (Lyon, S. 2013) It started with 20 participants who attended 2-3 training sessions every two months during a year. The workshops had demonstrations about the 1-hour tour development and also focused on developing interpersonal skills and confidence on the future guides to be able to lead groups of foreigners. (Lyon, S. 2013)

The tour starts with a cultural immersion at the beginning led by indigenous women who wear traditional dresses and introduce the visitors to the manual weaving experience, the fabrics that are produced include patterns and colors that are characteristic of the region. (Lyon, S. 2013) The coffee tour starts later, and shows a family participating in the manual harvest process. Machinery is limited and chemicals are avoided as non-renewable resources to respect the environment. (Lyon, S. 2013)

One of the main challenges of the project was to find guides who are willing to learn English, which is highly necessary. Another difficulty was to find economic and self sufficiency in management, such as lack of internet skills to manage the websites and advertisements. (Lyon, S. 2013) Another cultural challenge is the lack of knowledge of locals on how to start a business and the concern of foreigners disrupting the community rules by bringing and consuming drugs like in San Pedro Atitlan. (Lyon, S. 2013) Some suggestions were made such as offering internships to local high school students to learn about tourism and its benefits. (Lyon, S. 2013) Besides the challenges, one of the most important benefits recognized by the local community is the unity that the project brought along with its educational and economic opportunities that could benefit the whole area. (Lyon, S. 2013)

There are some natural reserves and farms that welcome visitors to learn and engage in different outdoor activities and also learn from sustainable practices. Some of them include accommodations such as “Reserva el Patrocinio” (Patrocinio, 2023) and “Tarrales reserve” (Tarrales, 2024); others like “La Granja de Lola” and “Caoba Farms” focus on regenerative agriculture and offer food services from its products. (Galvez, 2022) All of the examples mentioned before have sustainable practices and offer guided tours that show their operations and products; none of them offer workshops. The following table summarizes the previous information.

Table 4. Examples of Guatemalan farms that practice agritourism.

	Accommodations	Main activity	Field tours	Workshops
La Granja de Lola	No	Regenerative agriculture Restaurant and shop in Guatemala City	Yes	No
El Patrocinio	Yes	Lodge and field tours	Yes	No
Tarrales reserve	Yes	Birdwatching	Yes	No
Caoba Farms	No	Food and dining	Yes	No

2.3 Principles and practices of regenerative agriculture

Regenerative agriculture consists in sustainable farming practices that maintains soil productivity by enhancing biological processes. (Choudhary, A. *et al.* 2022) This trend has increased its popularity during the last years due to the concerns of traditional agricultural methods that involve the use of synthetic pesticides, fossil fuels and land exploitation that affects the wellbeing of natural ecosystems. (Giller, K.E. *et al.* 2021) Soil preservation requires “reduced till” methods which means that it is barely disturbed when it comes to planting seeds. (Choudhary, A. *et al.* 2022)

Biodiversity plays an important role in regenerative agriculture practices; this leads to choosing polyculture over monoculture which involves planting different types of crops in the same land space to avoid the depletion of soil nutrients. (Adamczewska-Sowińska, K. and Sowiński, J. 2019) The variety of plants increases the capture of carbon dioxide in the atmosphere which is fixed in the soil. (Adamczewska-Sowińska, K. and Sowiński, J. 2019) Another principle of regenerative agriculture is the implementation of animals such as cattle and poultry which are fed from the weeds or grasses that grow between the crops; this increases the soil microbial density because of the manure. (Daley, Dr.C. 2023) This is optimal when it's combined with crop rotation techniques that avoid the depletion of soil and over-compaction. (Daley, Dr.C. 2023) The manure is rich in nutrients due to the diversity of the animal's diet compared to the traditional corn and soy feeding. (Alothman, M. *et al.* 2019) Biocides and prophylactic antibiotics in livestock should be avoided. These interactions between plants and animals create nutrient-flow systems that integrate the soil flora and fauna that create better crop nutrition while being beneficial to the environment. (Choudhary, A. *et al.* 2022)

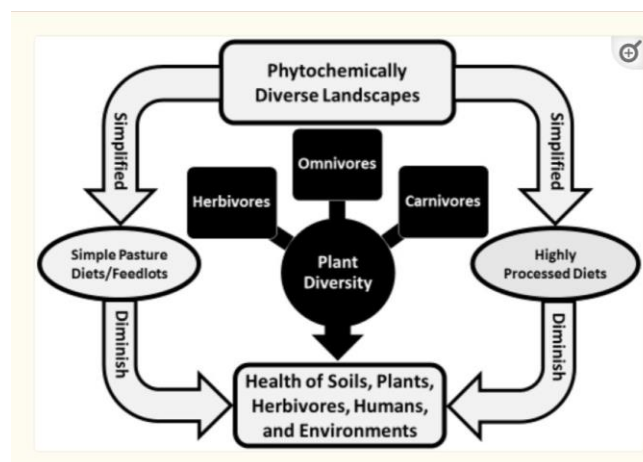


Figure 4: Nutrient flow systems. (Daley, Dr.C. 2023)

2.3.1 Regenerative agriculture around the globe

The term regenerative agriculture has been in use since the 1970's decade but it has increased in popularity and interest since 2015. (Giller, K.E. *et al.* 2021) In 2020 it was announced that it would be the highest food trend, and even though its focus was shadowed by the pandemic the business interest increased by 138% over the following year. (Uldrich, J. 2022) One of the main global

objectives of implementing this farming practice is carbon fixation, compared to conventional farming practices. (Austen, C. 2022)

These practices have been promoted by society and some NGOs (Friends of the Earth, World Wildlife Fund, etc), multinational companies (Kellogg's, Patagonia, the World Council for Sustainable Business Development, etc) and some charitable foundations. (Giller, K.E. *et al.* 2021)

Large businesses in the food industry like General Mills make their contribution by buying some of their corn, wheat, sugar and dairy from farmers who practice regenerative agriculture. (Uldrich, J. 2022) Others like Pepsico, Walmart, Danone and Unilever plan to adopt these practices on their large farm territories. (Uldrich, J. 2022)

Some countries have developed policies that support their farmers and lead the market to purchase organic products by creating a conscious society towards food quality and the environment. (Lak, A. and Khairabadi, O. 2022) It can be challenging to start implementing regenerative agriculture methods because it requires scientific knowledge that also considers the local ecosystems, additional resources and the involvement of local communities. (Alliance, R. 2023)

According to a study made in England, economic concerns are the greatest influence of farmers when it comes to considering transition to regenerative agriculture (more than sentimental and environmental concerns), but soil health is always seen as the principal factor that determines productivity and natural capital. (Beacham, J.D. *et al.* 2023) It is seen as possible to maximize yields and ensure profitability by reducing some inputs. English farmers recognize that the quality of regenerative agriculture products is a key element for marketing and also see the potential to seek more environmentally friendly markets. (Beacham, J.D. *et al.* 2023)

2.3.2 Benefits of regenerative agriculture food products

The global market has created highly demanding and knowledgeable consumers, the general interest in food quality, health and environmental health has increased considerably over the last years. (Petrescu, D.C., Vermeir, I. and Petrescu-Mag, R.M. 2019) Food quality is a central issue in the food industry, the consumer perceptions have been changing as their intentions shift to an environmentally friendly approach. (Petrescu, D.C., Vermeir, I. and Petrescu-Mag, R.M. 2019)

The market of organic products in the U.S relies on the “consumer-oriented products category” which had an increase of 16% in 2014 and keeps on the rise until present days. (USDA, 2024) The consumer profile is most likely to be a physically active and health conscious female with an educational and economical advantage compared to the average non-organic consumer. (Vigar *et al.* 2019)

There is a large number of observational research, systematic reviews and short-term clinical trials that link health benefits with organic products. Some of these findings include a reduction in pesticide excretion, non-Hodgkin lymphoma, infertility, birth defects, metabolic syndrome and high BMI; the long term effects have not been established yet. (Vigar *et al.* 2019) It is also important to consider that organic food intake is often linked to healthier dietary practices by people with healthy weight. (Vigar *et al.* 2019)

One of the characteristics of regenerative agriculture is that livestock graze freely between crops. Therefore, they have a diverse diet of plants and therefore phytochemicals which improves the quality of the composition of the meat and dairy by avoiding protein and lipid oxidation. (Provenza, F.D., Kronberg, S.L. and Gregorini, P. 2019) Research has shown that the cow’s diet significantly affects the nutritional composition of milk, pasture increases the amount of proteins. (Alothman, M. *et al.* 2019) This feeding also improves the lipid quality by increasing the amount of omega-3 polyunsaturated fatty acid while reducing the levels of omega-6, this ratio has anti inflammatory effects. (Alothman, M. *et al.* 2019)

Research also suggests that when the chicken’s diet is full of weeds, forages and insects also increases the levels of vitamins A and E. Caged eggs had 50% less of omega-3 and 38% less vitamin A compared to pasture raised. (Karsten, H.D. *et al.* 2010)

2.4 Experiential learning as an educational platform for agritourism related to regenerative agriculture

There is little information available about studies that explore the role of experiential learning in agritourism, which can be a broad subject that is presented in different concepts around the world. The educational impact on visitors has not been clearly measured yet.

The learning potential of agritourism is important considering the need to preserve food systems in a sustainable way. This also implies the agricultural literacy of citizens and policy makers, which englobes the understanding of the social, economic, environmental and historic significance of food production systems. This knowledge can influence the purchase decision of consumers, which in this case would be local and organic products. (Brune , S. 2018) In the United States, there is a large gap between producers and consumers for food products, and the agricultural literacy is low among the population. (Brune , S. 2018) The National Research Agenda of the American Association for Agricultural Education released some suggestions to address the previous challenges. The first is to increase the public understanding of agriculture and natural resources, the other is to create learning opportunities that engage in different environments. The third one is to establish efficient agricultural education programs.

There is prior research on the economic benefits of agritourism, but little is known about its pedagogical results and as a transformative process that creates reflection and critical consciousness. (Brune , S. 2018) Agricultural education has expanded by including social values. (Karampela, S., Kizos, T. and Spilanis , I. 2016) Farm visits may increase the consumer's agricultural literacy which may influence their purchase decision towards the local products. Some suggest that if the activities are directed to children it may raise future generations to consume sustainable products. (Brune , S. 2018) Educational dairy farms in Japan have been successful in attracting visitors that come for recreational purposes with their families, this has proven to bring closure between producers and consumers in local areas. (Karampela, S., Kizos, T. and Spilanis , I. 2016)

There is little information available about studies that explore the role of experiential learning in agritourism, which can be a broad subject that is presented in different concepts around the world. The educational impact on visitors related to their food purchase decision has not been measured yet.

2.4.1 Sustainable consumer behavior

Sustainable consumer behavior refers to behaviors and actions that decrease negative environmental impacts reducing the use of natural resources. The approach has become holistic and also includes local communities involving their culture and economic development. It involves approaches that have a positive long-term effect. (Pappas, S. 2021)

During the 1970's research on sustainable consumer behavior was focused on the potential individuals that are likely to choose more ecological choices in their purchase decision. (White, K., Habib, R. and Hardisty, D.J. 2019) Nowadays research addresses the main motivators or techniques that would bring more consumers to the sustainable market. White and colleagues organized the SHIFT (Social influence, habits, individual self, feelings and tangibility) that is summarized in the following table.

Table 4. Motivators of sustainable consumption. (White, K., Habib, R. and Hardisty, D.J. 2019)

	Findings	Examples
Social influence	<p>Social identity and group identification dictate the level of influence in sustainable practices.</p> <p>Social norms can state the “positive” or “negative” practices. Their perceptions can shape intentions that influence behavior.</p> <p>People do not want to be in “dissociative groups” which are seen negatively by other members of communities.</p>	<p>Influential community leaders set the example for sustainable behaviors</p> <p>Recycling is seen as an “educated” practice in many communities.</p> <p>Perceptions towards sustainable and eco-friendly practices are seen as “feminine” in certain communities.</p>
Habit formation	<p>A habit is formed after persisted behavior that turns into automatic actions over time.</p> <p>Incentives and positive feedback can encourage repetition.</p> <p>Discontinuation of habits can occur after a change of context.</p> <p>Economic incentives induce sustainable behaviors but they do not promote them on a deep level. Intention and actions create better incentives than punishments or fines.</p> <p>Comparing proper feedback past and present personal performance has proven to be effective.</p>	<p>Sustainable habits can be choosing healthy food products, choosing renewable energy sources at home and also separate the waste in different bins for further use.</p> <p>Having a baby changed the couple’s awareness on investigating the source and processes of the food products purchased in the household.</p> <p>Community positive- feedback on the reduction of plastic consumption of specific households.</p>
Individual self	<p>Self concept influences personal consumption decisions. People are motivated to seek information that reinforces pre-existing views.</p> <p>Self interest has better consumer effects if it is combined with global awareness.</p> <p>Another factor is the availability of the product which is effective generating positive effects.</p> <p>Personal standards influence in giving the “extra mile” when it comes to sustainable practices.</p>	<p>Consumers are more likely to purchase sustainable products if it promotes positive physical aesthetics and health.</p> <p>People who enjoy outdoor activities and are conscious about the environment are more likely to buy greener products.</p> <p>Women tend to be more agreeable and open to more experiences. Younger, liberal and highly educated people are more open towards green practices.</p>

Feelings and cognition	<p>Negative feelings such as guilt and a lack of exposure to information (or overload) and confusion decline sustainable behaviors.</p> <p>Involvement is more likely when there is pleasure.</p> <p>Affinity towards nature influences the sustainable approach.</p>	<p>Positive feelings such as joy and pride are linked to reduce plastic usage rather than punishments and fines.</p> <p>People who enjoy outdoor activities are more likely to practice sustainable habits.</p>
Tangibility	<p>It is less likely to engage in green behaviors if they are abstract.</p> <p>If the outcomes seem very distant, they become less desirable.</p>	<p>Communications can promote immediate legal changes that promote environmental conservation.</p> <p>Trends such as “voluntary simplicity” promote the reduction of tangible goods.</p>

Positive perceptions towards sustainable products won't necessarily mean that they would display favorable behaviors towards it, factors such as price and availability can have a bigger influence depending on each case. (White, K., Habib, R. and Hardisty, D.J. 2019) Incentives and displaying information are not effective as social influence when it comes to dictating consumer behaviors, personal and community care are more effective than guilt. (Pappas, S. 2021) It is also challenging to address environmental issues when they are not tangible. One study found that graphic “warning” signs on the negative health effects on highly sugary beverages were more effective in reducing their purchase on 3.2%; being more effective than highlighting the unhealthy ingredients or the high amount of calories. (Donnelly, G.E. *et al.* 2018) There is also a demographic challenge in promoting sustainable purchase, research has shown that younger generations such as millennials are reported to pay extra for sustainable products and are more open to learning about the subject. (White, K., Habib, R. and Hardisty, D.J. 2019)

Behavioral changes should be based on practice while developing critical thinking skills that would be implemented in real life scenarios. (Zhang, K. *et al.* 2021)

A study was made in Macedonia about cognitive learning and its relation on the decision to travel; the results were that personal interests and the suggestions of friends and family had a much greater impact than public advertisements. (Batkoska, L. and Koseska, E. 2012)

2.4.2 Sustainable consumer behavior in agritourism

People traveling for agritourism purposes tend to look for a greater satisfaction than just utilitarian purposes, their orientation is usually directed to fill social and psychological needs.

The presence of a community is important to both local food consumers and tourists, being one of its main attractions including their authentic local foods. (Lyon, S. 2013)

Experiences that generate satisfaction create a positive relationship with service providers which can influence future behaviors in choosing healthier practices. (Lyon, S. 2013)

The level of quality is usually measured according to appearance, taste and freshness of the product. (Petrescu, D.C., Vermeir, I. and Petrescu-Mag, R.M. 2019) There is a limited amount of evidence that establishes what “healthy products” means to consumers because it can vary according to their perceptions that are influenced by the socioeconomic situation and health. According to Dacinia et al the consumers perception is also related to the product’s ingredients, package materials, nutrition facts and environmental impact. (Petrescu, D.C., Vermeir, I. and Petrescu-Mag, R.M. 2019)

2.4.3 Regenerative agriculture products in the Guatemalan context

Guatemala’s warm and tropical weather allows it to grow a variety of food products such as dairy, poultry, fruits, vegetables and cereals all year long. The amount of local consumers looking for healthy and sustainable products has increased during the past years. In 2014 there were 94,000 hectares for organic agriculture, where 15% was organically cultivated. (USDA, 2024)

Most of the organic-certified crops are sold as exportations, being unknown to the local market. Specialized stores offer these products but since the market interest has been increasing over the last years large supermarkets such as “La Torre” or Wal-mart started marketing them in their stores. The small Guatemalan organic-consumer consists mostly of foreigners, locals who have lived abroad (were these products are recognized) or people who follow strict and “healthier” diets. The country is high price sensitive but for the small organic-consumer group this factor is not considered a big issue. (USDA, 2024)

3 METHODOLOGIES

This inductive qualitative research with phenomenographic nature determines some views of consumers and farmers who practice regenerative agriculture. This research methodology investigates different ways in which people experience something along with their point of view. (Farrow, 2020)

The objective of this study is to gather information about what people from different perspectives around the subject think about the potential business idea of creating regenerative agriculture workshops based on experiential learning principles for adult consumers. It also seeks to investigate whether these activities could influence the purchase decision towards sustainable products, especially related to regenerative agriculture.

A mixed method technique was used to gather data, including interviews, a workshop and a questionnaire which was qualitative in nature. A narrative analysis was used to interpret the gathered data. First, the narratives were collected and there was a special focus towards the feelings and opinions of the people being interviewed. (Team, Pestle, 2024)

The purpose to choose a qualitative approach was because it is the method that best describes feelings, attitudes and habits of Guatemalan consumers, which are hard to quantify. Qualitative studies also add important and additional context to support the study. (Ally, 2020)

The first stage of the data gathering process was the semi-structured interviews to have an insight of the current situation about regenerative agriculture and agritourism in the country from people who work with these subjects. The purpose of choosing this method was to create a dialogue between the participants, allowing them to comment about their feelings and beliefs about the subject. (Adams, 2015) Three interviews were done, the first person is the owner of Parraxe, the farm where the project is planned, he is a Guatemalan farmer who practices regenerative agriculture. The second person also practices regenerative agriculture and she is also involved in the agritourism business. The other person is also a farmer who is involved in Agritourism but it does not focus on regenerative agriculture or sustainability. The questions for both interviews were supported by the researched literature review and were formulated as open-ending to give a more profound insight about the topic. (For questions see Appendix 1)

The second stage of data gathering was doing a workshop. The purpose was to gather information about the different viewpoints towards the project of agritourism and evaluate if it had any influence on their awareness or purchase decision towards food products.

The third method was the questionnaire was sent to Guatemalan consumers from the capital city between 20-50 years old. The questions are found in Appendix 2. The questions were open ended instead of multiple choice to gather more content about feelings and opinions about the purchase decision of Guatemalan consumers towards food products and their awareness of sustainable farm practices including regenerative agriculture. The form was sent on social media groups and individual chats, fifteen people answered.

4 FINDINGS

4.1 First interview: Owner of Parraxe

The first interview was done in Finca Parraxe in Guatemala Suchitepequez, where regenerative agriculture is practiced. It has been a family owned farm since four generations ago and its main product is coffee. There is also cacao, rubber, poultry, macadamia and cattle; everything grown in a sustainable way. The objective of the interview was to know about his perspective on the benefits and challenges of practicing regenerative agriculture in the context of Guatemala. Another objective is to know his point of view based on his experience about the potential of the idea of creating workshops open for the public to educate people about the subject. The questions are on Appendix 1

The first questions were about an overview about the regenerative agriculture practices on the farm; including the differences about conventional farming, techniques to enhance soil health and diversification including livestock. It was also asked about the economic advantages and challenges about transitioning from conventional practices and the engagement with the local community to promote awareness.

After the interview, the environmental benefits mentioned were multiple, starting from improving the soil health. The benefits from the animal products were also explained, highlighting the improved nutritional quality of the milk and eggs because of the animal's diverse diet. According to the interviewee, regenerative agriculture improves costs because nowadays it is hard and more expensive to hire manual labor, so when the cows pasture between the crops they help to control the rapid-growing weeds and grasses that grow between the cultivates. The cattle rotates between different farm sectors every day and the chickens are released where the cows grazed 4 days before so they can eat beetle (phyllophaga) eggs which lay in the feces and affect the plant's roots after hatching. This interview relates the literature findings about the environmental benefits including the benefits to the soil due to the organic fertilizers that come from the pasture raised cattle.

In relation to agritourism, it has been done informally with personal visits. It is usual that a field tour is done with every personal visitor of the owner, who proudly shows where all the crops and animals are located and how they work together. His daughters have made chocolate tablets and fresh cheese from scratch with friends, after watching the processes of milking cows and harvesting cacao.

Their visitors have reported that these activities were very entertaining and educational, especially because these processes are not taught in schools or known to the general public.

In relation to the business opportunity, agritourism was seen as a profitable side business who has a lot of success with other farms around the area. There are accommodation spaces available but need to be remodeled, because there are no big cities around that offer those services. There is a community of people living inside that can also contribute with their work and culture. The idea has not been thought about deeply but it has a lot of potential according to the owner, he thinks that the tourists that go to the biggest themed park in the country (IRTRA, Retalhuleu) can be a good target because the farm is on the way (1 hour driving away).

4.2 Second interview

The second person is a female Guatemalan farmer who owns and operates her family farm with regenerative agriculture practices. She has a store with a restaurant that offers her products including eggs, milk, cheese, yogurt, chicken, beef and vegetables. They also sell organic products from other farms. The questions can be found in Appendix 1.

After asking her about the main activities of the farm, the conversation turned into relating regenerative agriculture and agritourism. She says that the producers are at the beginning of the economic chain in the country, meaning that ideally it needs the support of the local governments to grow its potential, which is not the case in Guatemala. This relates to the literature findings written in the theoretical background where farms from different locations such as Iran, Italy or Japan received local support for the agritourism business. If natural resources are taken care of properly, the economic benefits are long lasting compared to traditional methods that provide a short term good remuneration but the natural resources cannot be used again. One of the biggest benefits of this growing method according to her is the social benefits that take care of everyone's natural resources but also includes the participation of local communities that can have educational and economic opportunities.

She hired a group of female cheese masters from the Netherlands to train local women to make cheese and be able to teach other people how to make the product. One of her objectives is to connect the consumers from the capital to their producers to enhance the awareness of sustainable

agricultural practices. She has given courses to people interested on how to start a sustainable farm, they lack proper infrastructure but has received up to 60 students at a time. She is convinced that education is one of the most important pillars to promote regenerative agriculture, impulsing her to give conferences in different platforms and universities.

The courses and visits are done by demand and they are not always available, her main focus is selling her products. She wants to eventually develop proper infrastructure and have more resources such as training staff to receive visitors as a permanent project to promote the farm lifestyle.

4.3 Third interview

The third interview was done with another farmer who does not practice regenerative agriculture but started his agritourism project on his farm in Guatemala. The purpose of the meeting was to gather information about the market, operations, considerations and target audience in the country. His project started 2 years ago inside his coffee farm. The questions are gathered in Appendix 1.

His farm is located in the department of Jutiapa, located 124 km from the city and it is also an area where specialty coffee is produced. The questions started with an overview about the farm's operations, which has mainly coffee but it also has goats, chickens and a couple of cows. The farm does not profit significantly with the animals.

The questions turned about agritourism in Guatemala according to his perspective. He has seen an incredible potential in neighboring towns, where in recent years there has been an increase in their purchasing power due to the increment in the economy and the money received from relatives working in the United States.

He started with opening an Instagram account offering horse riding, an open space for hiking, coffee tour, goat cheese tour and pick up eggs. The account was opened 3 months before the project started and it included a number for reservations, which were fully booked by people from neighboring towns and from the capital city. The hiking track and the preparations for the project were done after the reservations were made. They trained 2 locals to guide the tours according to the demand. According to the owner, the highest profit margin was from the training track, where also people rode their bicycles. This was popular because it is difficult to walk or bike in Guatemalan towns because they do not have the proper infrastructure for them.

He states that agritourism is great for farms because it adds profit having relatively low costs, and it also educates people about the importance of nature and support for local products. He sees that people are satisfied to have a hands-on learning experience, which currently is difficult to find options in the country. At the beginning there are some costs related to the infrastructure so the visitors have a nice place to do the activities and also to train a good guide that can engage and run the place. This can take time but with the proper organization and stating clear goals it is achievable. He does not have accommodations because his target market is mainly people from neighboring towns that come during the day, specially on weekends but if there is the possibility to offer the service it can also attract tourists (foreigners or from the city) who can stay over during the week.

4.4 Workshop

The workshop was about the process of making chocolate in the context of regenerative agriculture. It was estimated to last 1 hour and 40 minutes with intervals of 20 minutes. A group of three adults from Guatemala city participated. The data was gathered through notes that were made based on observations and the participant's comments towards the activity. A narrative analysis was made to find recurring themes and topics after the feedback was given from the participants.

In the beginning, the visitors were asked about what they know about regenerative agriculture. Only one of them had a general idea about the concept but it was something new for the rest. They were also asked about how much they know about the process of making chocolate and cheese; all of them had already an idea and have seen how the final product is made but not from the beginning and in the context of regenerative agriculture.

They stayed at the farm's main house so they started the tour the following day after breakfast. The visitors were taken on a tour inside the farm to see the fields and how the animals and plants worked in the regenerative agriculture cycle. Its benefits to the ecosystem and to the health when its food products were consumed were also explained.

The next activity was to visit the cacao plants, with an explanation about the variety and the harvest season. After explaining how a ripe fruit looks and the proper way to cut it from the tree, the visitors looked for their own cacao. They tasted the fresh fruit, which is basically seeds covered with a sweet mucilage, they are taken out the mouth and taken in a bag for the rest of its process. The following

activity was to see the fermentation process, where seeds are left during 2-7 days. Afterwards the visitors are taken to see the roasting and grinding of the cocoa beans. With the result of the dough, hot chocolate bars are made and molded by hand, the locals living on the farm were in charge of explaining this process.

The dairy workshop was done the second day. One of the opening questions was if they knew the difference between “pasture raised” and “organic” food products, which they thought were synonyms. There was another field tour but only to see the cattle eating grass between the crops. The economic, sustainable and health benefits about pasture raised cattle products were pointed out. Following this activity the visitors tried to milk a cow, the technical and biological process was explained and the conservation of the product too. In the cold room they made their own fresh cheese following the instructions of the guide, the properties of pasture raised milk are highlighted. The product stays in the cold until the next day while they are invited to a snack tasting cheeses from previous days. If the visitors leave the following day they take their own cheese, if not, they are given a sample to take home.

All the workers who took part in the previous activities live on the farm, being natives to the area and who also wear traditional clothing.

The visitors were asked about their experience. Because they were staying at the farm, they also enjoyed walking, observing all the animals and the surroundings. They were asked what they understood about regenerative agriculture after the workshops and they had a much better understanding, all of the participants were able to explain and also give their opinion on their favorite subject. They all shared that it was a unique experience in Guatemala because there are many chocolate and cheese tours in the country but they focus only on the final product and not in a global perspective that includes local communities. With their experience they felt that they contributed to their society along with their mental and physical well-being.

Another question was if they understood the difference between “pasture raised” and “organic”, which was part of the initial explanation. All of them could identify the difference: pasture raised means that the animals spend most of their time outside eating a variety of plants and insects, meanwhile the term organic usually refers to hormone/antibiotic free and organic food.

Some of their suggestions were to have a physical or online store to continue delivering their products, especially to the city where there is a bigger market. They also said that the fact that there is accommodation could be helpful for families or adventurers who enjoy outdoor activities and also want to learn about regenerative agriculture. They were asked if they would be interested in future tours such as coffee and macadamia and their answer was positive, it could add to the wholesome experience of the diverse farm.

Another point was the way that the workshops were given. The comments on the active learning process were positive because it involved observing how the cycles of regenerative agriculture worked in the natural habitat and the highlight was the hands-on experience where they could make their own chocolate and cheese. Even though it was a lot of information, they said that it did not feel overwhelming because of the variety of activities and environments of the whole workshop. The friendly environment was another important factor that made a learning activity feel like leisure.

4.5 Questionnaire to consumers

The academic backgrounds were diverse, most of them were women between 30-50 years old.

Only two of them knew about regenerative agriculture before and all of them had an idea of what organic products are. Every person answered that they thought that the origin of the food products is important, six out of fifteen chose food quality as their main factor when it comes to their purchase decision. Four of them were oriented by price and the rest mainly by accessibility of the product. Eight of them answered that they relate food quality based primarily on its production process including if it has additives. The rest of them prioritize the amount and quality of the nutrients. None of them answered that they learn about food quality and sustainable food processes at school, but everyone has an insight of the topic by personal reading, documentaries, social media or conversations with other people about the subject. None of them has attended a workshop related to regenerative agriculture. Three of them have attended a chocolate workshop where they made their own chocolate bars and two have attended a cheese workshop; none of these included field tours or was related to regenerative agriculture.

The questions turned to the active learning subject, all of them had experienced active learning before, such as simulations, flipped classroom and interactive lectures. Half favored it in comparison

to the traditional method where much information can be overwhelming. The other half preferred a combination of traditional with active learning.

Some of the mentioned benefits were an improved retention of material, increased motivation, greater enjoyment of the learning process and development of critical thinking skills.

They were asked if they enjoy spending their leisure time in nature where almost all the answers were positive except for two who think that it depends on the type of activities. All of them included culture and food as interesting topics while traveling. Accommodations are necessary according to nine of them and the rest responded that it depends on their schedule and needs at the time.

5 CONCLUSIONS

According to the literature of John Dewey, new and diverse experiences have greater meaning and deeper reflections, especially when they are connected to nature. (Acampado, A.G. 2019) This could be seen in the positive feedback during the workshop, where the visitors felt a learning experience as leisure, and even though there was a lot of information it did not feel overwhelming because they were surrounded by nature and the activities were diverse.

The literature also recommended that the activities should last 1 hour or 2 depending on the complexity of the subject divided in 20 minute sets. (Tessema, H., Ó Ruairc, B. 2019) This was a challenge because sometimes the field tour can last longer depending on the questions or if there is something interesting on the way, in this case it took a brief time so everyone could spot a falcon sitting on a tree. Another observation is that the person guiding the tour does not need to stop for every question that is asked, otherwise the whole activity would take a lot of time and the other visitors can feel overwhelmed by listening to a lot of information standing in one place.

If “healthy” practices are related to positive experiences sustainable habits are easily formed. (Lyon, S. 2013) After the workshop, the participants mentioned their motivation to start choosing products that were grown with sustainable practices, especially regenerative agriculture but there is not enough evidence to state that they started a new habit. The fact that their comments and attitude about their learning experience was positive contributes to the fact that farm visits may increase the consumer’s agricultural literacy which can influence their purchase decision towards local products. (Brune , S. 2018) This supports the fact that experiential learning creates long lasting memories and positive attitude towards the content being imparted. According to the second interviewee who has experience on selling her regenerative agriculture products, it is highly important to relate consumers with their producers to create their purchase commitment.

Active learning involves problem solving, which has proven to increase interest and participation. (Chiu, S.K. 2019) Another factor that improves student engagement is if learners consider that the experience is meaningful. (Walker, JKumar, A. and Gilovich, T. 2016) The people attracted to the farm experience are usually people who enjoy outdoor activities and are interested in the subject, which includes learning that involves the environment, local communities and their health based on how important it is to choose high quality food products.

In the “working farm direct authentic interaction” and “working farm direct staged interaction” involve hands-on activities, this creates more engagement and long lasting memories, which enriches the experiential learning theory. It is difficult for the organizers to measure engagement accurately but during the workshop when the visitors harvested their own fruits, milk the cows by themselves and produced chocolate bars and cheese, the moments where they engaged more, asked more questions and seemed to be enjoying the experience. According to their feedback it was the highlight of the whole experience.

According to the gathered data, there is a lot of potential on a regenerative agriculture workshop, but there are also some implications. The second interview and the literature mentioned that these projects can be affected by local governments, unfortunately in Guatemala there aren't many regulations that protect farmers and also there is a lack of proper road infrastructure that can lead to big traffic and mobility problems. Parraxe is located a three hour drive from the capital city, where a lot of the target market lives; because of the traffic the trip can be longer than expected. This leads to a need to invest in the remodeling of the accommodations that can host visitors for a longer time. The learning experience can also depend on the person imparting the workshop, who needs to be properly trained and engage with visitors while creating a friendly environment.

There is more research about the economic benefits of agritourism, but there is a lack of its pedagogical results. (Brune , S. 2018) The three interviews agreed on its potential and its importance to promote consciousness about the environment and local products. Every form of agritourism involves learning, even the ones who just offer activities or conventional tours where one person speaks, because by its definition it involves experiences, and every experience is a building block for learning.

6 DISCUSSION

This project has the purpose of educating the population of Guatemala city adults who are interested in healthy eating and enjoy being outdoors outside the city routine. The concept of the thesis was broad and included perspectives from consumers with different ideas so it was challenging to gather information and form concrete conclusions.

Experiential learning in agritourism has proven to be an effective educational tool for promoting regenerative agriculture. The participants who engaged in hands-on activities such as cacao harvesting, milking cows and chocolate tablets reported a deeper understanding of the principles and benefits of regenerative practices; this compared to traditional lecture-based education.

The immersive nature of experiential learning fosters a personal connection to the land and its processes, making the learning concepts more tangible and memorable. Even though there is a need for more evidence and long lasting studies, this work supported that participants valued the direct interaction with locals, farmers and see regenerative practices operating in real life. These findings suggest that incorporating more experiential learning opportunities in agritourism can improve knowledge retention and engagement. The participants expressed their intentions to adopt regenerative practices in their own farming activities or to support regenerative agriculture through their purchasing decisions. This highlights the potential of experiential learning to not only educate but also to inspire action and promote sustainable agriculture.

Future initiatives should be built on these findings to create even more impactful programs that support the adoption of regenerative agriculture and the consumption of its food products. A widespread awareness can slowly change government initiatives to improve infrastructure that enables a growth in agritourism and legislations that supports local farmers and their products.

Appendix 1

1. **Can you please tell me about yourself and your farm?**
 - How long have you been farming?
 - What types of crops do you grow or animals do you raise?
 - How large is your farm?

Regenerative Agriculture

2. **What do you understand by regenerative agriculture?**
 - How did you first learn about regenerative agriculture?
3. **Are you currently practicing any regenerative agriculture techniques?**
 - If yes, which ones?
 - If no, are you interested in implementing any, and which ones?
4. **What motivated you to adopt regenerative agriculture practices?**
 - Economic reasons?
 - Environmental concerns?
 - Social/community factors?
5. **What benefits have you observed since you started using regenerative practices?**
 - Soil health
 - Crop yields
 - Biodiversity
 - Economic benefits
6. **What challenges have you faced in implementing regenerative agriculture?**
 - Technical challenges?
 - Financial barriers?
 - Social or cultural resistance?
7. **How do you see the future of regenerative agriculture in your community?**
 - What support or resources would be helpful?

Agritourism

8. **What do you understand by agritourism?**
 - How did you first learn about agritourism?
9. **Are you currently involved in any agritourism activities?**
 - If yes, what kind of activities do you offer?
 - If no, are you interested in starting agritourism activities?
10. **What motivated you to get involved in agritourism?**
 - Economic reasons?
 - Educational purposes?
 - Cultural exchange?
11. **What benefits have you observed since you started agritourism activities?**
 - Economic benefits
 - Community engagement

- Environmental awareness
- 12. **What challenges have you faced in developing agritourism?**
 - Infrastructure issues?
 - Marketing difficulties?
 - Community acceptance?
- 13. **How do you see the future of agritourism in your community?**
 - What support or resources would be helpful?

Integration of Regenerative Agriculture and Agritourism

- 14. **Do you see any connections between regenerative agriculture and agritourism?**
 - How do these two areas complement each other?
- 15. **Have you experienced any benefits from combining regenerative agriculture and agritourism?**
 - Increased awareness among tourists about sustainable practices?
 - Economic synergies?
- 16. **What challenges do you face in integrating regenerative agriculture with agritourism?**
 - Balancing farming activities with tourist activities?
 - Educating visitors?

Appendix 2

1. Age: _____
2. Do you know what is regenerative agriculture? If so, explain the concept with your own words:
3. In your opinion, what is the most important factor for "food quality"?
4. What do you know about sustainable food products?
5. What is your source of information to learn about sustainable food products?
6. Have you experienced active learning before? If so, how would you compare your experience against a traditional learning method?
7. Have you attended a workshop about food preparations? If so, mention some examples.

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