Universität für Bodenkultur Wien
Department für Nachhaltige
Agrarsysteme

The Food-Scapes of a Selected Group of Students Participating in the Course "Slow, Fair, Local – Innovations in Organic Farming"

Development, Application and Discussion of a Strategy for the Analysis of "Food-Scapes"

Master Thesis

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Declaration

I declare that this master thesis is a presentation of my own research work and was created independently. Contributions of other colleagues are indicated clearly. This master thesis has not been previously submitted for assessment at this or any other university.

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List of Abbreviations

BOKU: University of Natural Resources and Life Sciences Vienna

FIBL: Forschungsinstitut für biologischen Landbau (Research Institute of Organic Agriculture)

ID: Identification number of the Food-Scape

IFOAM: International Federation of Organic Agriculture Movements

SWOT: Strength, Weakness, Opportunity and Threat

TPB: Theory of planed behavior

TRA: Theory of reasoned action

Abstract

122 food-scapes and explaining texts have been collected as examination performance in context of the lecture “Slow, Fair, Local – Innovations in Organic Farming” between October and November 2013. The lecture took place at the University of Natural Resources and Life Science in Vienna The aim of this thesis is: to combine available methods to analyze the purchasing and consumer behavior of the students; identify the most important reasons that influence the decision for one or the other food source; and describe how the students present their own behavior. The software Atals.ti 7 has been used as a tool to structure and analyze the food-scapes and explain texts according to the strategy previously developed.

Key findings are that the students have a positive attitude towards food from alternative sources. Nevertheless, it has been observed that the students’ decision for one or the other food-providers strongly depends on the price and the availability of the different food-sources and not mainly on their conviction as hypothesized. This result mostly corresponds with the outcome of previous studies that investigated in factors that influence the decision-making process for one or the other food source.

The present data set and the applied methodology seem to be a promising tool for analyzing the complex structure of consumer and purchasing behavior. However, a SWOT analysis shows that there is a high potential to gain more precise results by improving the instruction for the food-scapes and explaining texts.

Keywords: food-scape, purchasing and consumer behavior, alternative food sources, student

Kurzzusammenfassung

Im Rahmen der Lehrveranstaltung „Slow, Fair, Lokal – Innovationen in der ökologischen Landwirtschaft“ an der Universität für Bodenkultur Wien wurden zwischen Oktober und November 2013 122 Lebensmittellandschaften und Erläuterungen als Prüfungsleistung erstellt. Das Ziel dieser Masterarbeit ist es, vorhandene Methoden zu kombinieren und anzuwenden, um das Konsum- und Kaufverhalten der Studenten anhand der Lebensmittellandschaften zu erforschen. Außerdem werden die wichtigsten Kriterien für die Kaufentscheidung der Studenten identifiziert und analysiert. Des Weiteren wird dargestellt, wie die Studenten ihr eigenes Verhalten beschreiben.

Die Lebensmittellandschaften und Erläuterungen wurden nach einer zuvor entwickelten Strategie mit Hilfe des Computerprogramms Atlas.ti 7 kodiert und anschließend ausgewertet. Das Ergebnis zeigt, dass die Studenten eine positive Einstellung gegenüber Lebensmitteln von alternativen Quellen haben. Allerdings wurde auch herausgefunden, dass die Entscheidung für die eine oder andere Lebensmittelquelle stark von dem jeweiligen Preis und der Verfügbarkeit abhängig ist und nicht so sehr von der Überzeugung der Studenten. Ein Großteil der Ergebnisse, die das Kaufverhalten beeinflussen, stimmt mit den Ergebnissen früherer Studien überein.

Die angewandte Methode scheint das Potential zu haben, die vielen Fassetten der komplexen Struktur des Kauf- und Konsumverhaltens zu erfassen. Allerdings zeigt die SWOT-Analyse, dass durch eine Verbesserung der Methode, insbesondere die Anleitung für die Lebensmittellandschaft und Erläuterung, präzisere Daten erhoben werden können.

Schlüsselwörter: Lebensmittellandschaft, Konsum und Kaufverhalten, alternative Lebensmittelquellen, Studenten

1. Introduction

The purchase and consumption of food is a topic that can be relevant for everyone. “Rules for food with pleasure and a good conscience” is the featured article of the magazine “Zeit Wissen” by Rauner (2014) for August and September 2014 which talks about the difficulties making wise choices given all the options of products available nowadays. Food should be healthy, environmentally friendly, animal welfare has to considered, and the conditions for the workers must be fair while the price remains low. Several labels indicate which of these traits are fulfilled by a product. However the consumer has to make a decision and one sometimes wonders if there is anything that can be consumed without a side effect. The recommendation in the magazine is that people must set their own priorities and live with their choices knowing that there might be a more perfect way (Rauner, 2014:23,33).

There are several studies that carry out research concerning the reasons for the choice of different food sources. Most of them examine a mixed sample population that is representative for our society rather than focusing on a specific group (Hughner et al., 2007:97-100). There have been only a few studies concerning the purchasing and consumer behavior of young people even though they are the consumers of the future (Vermeir and Verbeke, 2006:188, Vogel et al., 2010:38). There is a lack of knowledge in students in generally and especially for those who study in the area of agricultural and nutritional science. This in spite of the fact that they have the potential to become a role models in our society due to their knowledge and future job position. Therefore, the present study aims to find out where these young people purchase and consume their food and what reasoning informs their choices.

Moreover most studies in the area of purchasing and consumer behavior are done with traditional survey methods such as questionnaires, personal interviews and focus group discussions (Hughner et al., 2007:97-100,105). Hughner et al. (2007:105) state that new methods are needed to get a deeper understanding of the complex structure of consumption and beliefs about food. As a consequence the food-scapes and the explaining texts will be analyzed with a newly developed strategy, which will be discussed for its strengths and weaknesses in this thesis.

The following study will analyze and describe how students from the University of Natural Resources and Life Sciences in Vienna (abbr. BOKU) that participated the course “933008 Slow, Fair, Local – Innovations in Organic Farming” deal with the choices between different food sources and how they regard the reasons for their choices.

2. State of Research

2.1. History and Definition of Three Alternative Food Sources

Alternative food sources refer in this thesis to organic and local foods, as well as to Slow-Food.

2.1.1. Organic Food

The organic movement arouse out of the concept of biodynamic farming. The biodynamic farming approach goes back to one of Rudolf Steiner's humanistic lectures on the development of agriculture, in German called "Geisteswissenschaftliche Grundlagen zum Gedeihen der Landwirtschaft" in the year 1924. Anthroposophy, the underlying philosophy in Steiner's work is the base for biodynamic farming. Biodynamic farming is characterized by biodynamic preparations and ruminants as an obligatory presence on the farm. Additionally cosmic rhythms must be considered and the whole farm is seen as a living organism (Vogt, 2001:49).

The interest in an alternative to the conventional agriculture arouse due to environmental problems caused through agriculture in the 20th century. The three scientists Hans Müller (1891-1988) and his wife Maria Müller (1894-1969) as well as Hans-Peter Rusch (1906-1977) laid the foundation for the organic agriculture due to their investigations in soil fertility and the cycle of living substances (microorganism) in the whole food chain (soil, plant, animal, human). The organic agriculture was a good alternative for the biodynamic farming practice for all those farmers who hesitated to convert due to the ideology behind the biodynamic farming (BÖLW, 2012:6-7).

The first organic association, "Bioland-Verband" was founded in South-West-Germany in the year 1971 (BÖLW, 2012:7).

The organic sector has grown steadily. The "International Federation of Organic Agriculture Movements" (IFOAM) is the international umbrella organization of the organic sector. They define organic as "… a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic Agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved." (IFOAM, s. a.).

In the early years organic farming was strongly connected to values like locality and community farming but due to the fast growth it has become more and more commercialized and the original values seem to be weakening (Adams and Salois, 2010:333). In 1991 the first regulations for organic agriculture practice was issued on an EU-level (Lampkin et al., 2001:391). Nowadays organic production is regulated in the EU by the Council Regulation (EC) No 834/2007 published by the European Union and the implanting rules (EC) 889/2008. In addition the farmers can join a private association (e.g. BIO AUSTRIA) and follow its standards, which are stricter than the standards at the EU level (BIO-AUSTRIA, 2006).

2.1.2. Local Food

The history of local food is simple; it is basically what was done before globalization began.

There is no clear definition for local food in scientific literature according to Kaliwoda (2007:26) who reviewed literature on that topic in her thesis. She determined that local products are products with a geographic identity that is communicated to the consumer. A study of Dorandt (2005:104) conducted in Germany also shows that the majority of the sampled population defines local products by geographic area though the specifics vary in size from the direct surroundings up to, and including all of Germany.

Wilkins et al. (2000:266) asked students in a written questionnaire to define the expression local food. The result is quite general: they used terms like “food grown or produced in a certain radius”; food that is grown “close to your home”; food grown in the student’s “region state or local community”; furthermore they defined it through its “uniqueness” and “specialty” for the region where it is available (Wilkins et al., 2000:266).

Austrian people classify local products most commonly as products that have been produced within Austria (Warschun et al., 2013:3). Since it is not known which definition the students had in mind when describing their food sources, the term local food will be considered as products produced in Austria for the purpose of this thesis.

2.1.3. Slow-Food

The non-profit organization Slow-Food was founded 1989 in Italy. Up until now more than 100,000 members represent over 150 countries. The Slow Food approach contains three main principles, namely “Good, Clean and Fair”. “Good” stands for a flavorful and fresh food that has been produced in the region. “Clean” implies that the food has been produced, processed and distributed in harmony with the surrounding ecosystem. Besides that biodiversity, animal welfare and the human health have also been taken into account. “Fair” indicates fair conditions and salaries for the producers as well as fair prices for the consumers. Furthermore it stands for a respectful handling with regards to the environment, other people in other parts of the world and also with consideration of future generations (Slow-Food, 2014c).

2.2. Market Share and Purchasing Patterns of Different Food Sources in Austria

2.2.1. Organic Food

Austria is one of leading countries in the organic sector. According to the statistics of FIBL and IFOAM (2013:45) 19.7 percent of the country's agricultural land is cultivated according the principles of organic farming. Austria also appears among the top ten countries worldwide when looking at the those with the biggest market and the consumption per capita of organic food in 2011 (FIBL and IFOAM, 2013:70). The market share of organically produced fresh products in Austria is about 7 percent (BMLFUW, 2013:60).

In Austria 75 percent of organic products are sold via food retailers (Reuter, 2002:9). The main food retailers in Austria have their own organic brand. The most dominant and best known brands are "ja!Natürlich" from BIlla/Merkur and "Natur+pur" from Spar. Only about 10 percent of organic products are sold via local specialized trade and 15 percent via direct marketing. In addition 20 percent of organic products are provided for export mainly to Germany, England and Italy (Reuter, 2002:9-13).

2.2.2. Local Food

Warschun et al. (2013:2) did at the behest of A.T. Kearney a study concerning the development of local food in the three German speaking countries: Austria, Germany and Switzerland. The study shows that more than 70 percent of the respondents buy local food several times a month. Furthermore, 50 percent stated that local food is a regular component in their weekly shopping basket. Austrians play a leading role in the local food industry, since 60 percent of them profess to buy local products on a weekly basis. Furthermore, the study found that the top five products from the region are eggs, vegetables, fruit, meat and dairy products. According to the survey, respondents value the origin of these products higher than the organic way of production.
About one half of the respondents in the three German speaking countries stated that they buy 21 percent local food per purchase whereas only 11 percent is indicated for organic products (Warschun et al., 2013:5).

2.2.3. Slow-Food

Austria has 15 local Slow-Food groups, called convivias, and additionally two Slow-Food youth groups. Each convivia has a volunteer leader who is in touch with the other local convivia groups and with the larger Slow-Food International. The convivias organize and oversee that principles of the Slow-Food movement are acted out and experienced. Food tastings, school gardens, farmers markets and many other events are arranged by the local Slow-Food groups (Slow-Food, 2014b).

There are two farmers' markets where Slow-Food can be purchased in Vienna, the Karmelitermarkt in the second district and the Kutschkermarkt in the eighteenth district (Slow-Food, 2014a). There is a lack of published literature for places where Slow-Food can be purchased in Austria. However, own experience show that Slow-Food products are sold mainly on farmers' markets and from time to time in food shops.

2.2.4. Organic vs. Local – a Shift in Preference?

The organic sector has grown continuously in past decades. Organic food is now available in supermarkets and discounters at affordable prices. This development has led to a lack of trust towards organic products and a shift towards local products.

One reason is that consumers think that the original values of organic farming - namely small-scale farms where personal contact with the farmer is possible - have been lost through the globalization of the organic sector. The described values are now associated with the purchase of local products (Zepeda and Deal, 2009:702, Adams and Salois, 2010:333).

Stimulated by this lack of trust in organic products, a new product category emerged, namely organic products that are labeled with an additional ethical value. Ethical values include: animal welfare; local production; maintenance of biodiversity; and fair prices and conditions for the producer/farmer etc.. The highest priority is given to local production and animal welfare according to a survey done in Austria, Germany, Great Britain, Italy and Switzerland (Zander and Hamm, 2010:500-502).

However, products from conventional production can also claim those characteristics. Stolz et al. (2011:778) suggests that conventionally produced and ethical products are mainly purchased by customers who normally buy conventional food. People who occasionally buy organic products rarely chose the conventional products with the additional value instead of organic food.

Austrian people were asked to give their prediction for the different food categories for the future. According to the respondents local products are expected to be prioritized over organic products in the coming years (AMA, 2010:7).

2.3. Reasons for the Decision for One or the Other Food Source

This chapter gives an overview of factors that have an influence on the purchase decision process for different food sources, in general, and in particular for Austria. Additionally wherever available the influencing factors with regards to young people will be described separately.

Generally it might be stated that personal experiences are mainly involved in the decision-making process when purchasing food (Hughner et al., 2007:95).

2.3.1. Reasons Concerning the Purchase of Organic Food

There are several studies of the factors that influence purchasing decisions for or against organic products. The main reasons for organic products are health concerns; worries about the abundance of chemical fertilizer and other chemical components; as well as better taste; and better control. Furthermore, concerns for the environment and animal welfare play a minor role in the decision making process (BMLFUW, 2013:60)

Hughner et al. (2007) give a good overview about scientific literature from 1985-2005 concerning the arguments influencing the choice to purchase organic products. The results of this study, as well as from an Austrian study, are summarized in table 1. The main influencing factors that promote the sale of organic products are health, taste and environmental concerns whereas price is the most common obstacle for the purchase of

organic products. A further hinderance for the purchase of organic products is the availability (table 1).

Table 1: Summary of the main motives for buying (+) or rejecting (-) organic food as stated in literature.

IMPACT	REASON	COUNTRY &SAMPLE	REFERENCE AND METHOD
+	- personal health* - environmental concerns* - better taste* - animal welfare - personal contact with the producer (direct marketing) - convenience (supermarket)	AUSTRIA, 103 customers equally distributed among supermarket, organic shop and direct marketing locations	Thelen and Botschen (2005:53) Laddering interview
-	- high prices* - lack of availability* - lack of interest* - lack of trust - lack of taste - image that quality of local products is equal to organic products		
+	- personal health concerns* - superior taste* - environmental concerns* - food safety - animal welfare	INTERNATIONAL Focus on empirical research papers	Hughner et al. (2007:101) Review paper looking at literature from 1985–2005
-	- high prices* - lack of availability* - lack of trust in certification		

**identified as most important*

The extent to which organic products are purchased is also influenced by income and education. The higher the income the more organic products are purchased. Income and education are often positively correlated so that people with a higher education generally earn more money (Dimitri and Dettmann, 2012:1173), (Paul and Rana, 2012:415).

Young Consumers

Robinson-O'Brien et al. (2009:14) found in Minnesota (USA) that for about 20 percent of the adolescents (15-23 years) organic is somewhat to very important. For about 23 percent of them local food seems to be “somewhat-or-very-important” (Robinson-O'Brien et al., 2009:14). They also concluded that vegetarians among them are more positive towards food from alternative production compared to the meat eaters (Robinson-O'Brien et al., 2009:16).

In the Czech Republic quality (95.8%), price (89.1%), appearance (79%) and availability (67.5%) are stated as important influencing factors among students when buying food. Place

of origin, as well as brands, play a minor role in their decision process (Zámková and Prokop, 2013:1195).

High school students in Vienna were interviewed in 2005 in order to better understand their attitudes towards organic food. Here the biggest influencing factors are family, friends and lifestyle. High school students with health and nature-oriented lifestyles often have a stronger inclination to purchase organic food than do students with other lifestyles (Vogel et al., 2010:45).

It might be important to consider that high school students are normally not yet in charge of the shopping since it is likely that they still live at their parents' home (Vogel et al., 2010:38) whereas college and university students often live for the first time outside of parental care.

2.3.2. Reasons Concerning the Purchase of Local Food

In general short traveling distances (environmental concerns), quality (freshness and taste) and support of the local economy are the most common arguments for the purchase of local food given by the consumers (Roininen et al., 2006:26, Dorandt, 2005:104, Warschun et al., 2013:5). Similar arguments are found by Von Alvensleben (1999:8) in Germany (table 2). Other reasons provided are healthier products and greater confidence in local products as a result of believing that people know where the food comes from (Von Alvensleben, 1999:8).

Table 2: Reasons for the choice of local products (illustration inspired by Kaliwoda (2007:28), content Von Alvensleben (1999:8))

PRODUCT RELATED REASONS	ENVIRONMENTAL REASONS	ECONOMIC AND PERSONAL REASONS
- fresher - better quality - better in taste - healthier	- shorter traveling distances - natural Production - without genetic engineering	- support of the local economy - identification with the region - more confidence

Despite the variety of positive traits seen in local products, the actual purchasing decisions often depend on taste and quality of the food (Warschun et al., 2013:4).

2.3.3. Reasons for Locally Grown Organic Food in Austria

Thelen and Botschen (2005) indicate that the Austrian population purchases locally grown organic products for several reasons. They aim to support the local economy and at the same time strengthen the small-scale farmer system in their own country to counteract the food giants. Other desires include the wish to reduce traveling distances in order to lessen negative environmental consequences. Furthermore local organic products are conceived as products with an original and pure flavor. Dairy products, fruits, vegetables and meat are the product categories for which Austrians care the most about the origin. Fruit and vegetables from the region are seen to be fresher and therefore contribute more to personal health status. Reasons for purchasing local organic meat are related to health but also to concerns for animal welfare (Thelen and Botschen, 2005:54-59). Social interaction is also associated with shopping for local organic food. People who buy organic and local products, in particular look for personal contact with farmers and others with a similar mindset on farmers' markets, pick-up stations for CSA-boxes, and other local events etc. (Zepeda and Deal, 2009:702).

2.3.4. Reasons Concerning the Purchase of Slow-Food

Up to now there have been no studies analyzing the influencing factors focusing on Slow-Food.

2.4. Attitude - Intention - Behavior

This chapter gives an overview on the relation between attitude, intention and behavior in order to better understand the process that happens when people decide to use the one or the other food source.

The interest in the connection between attitude and behavior is fairly old. Wicker (1969) concluded that "it is considerably more likely that attitudes will be unrelated or only slightly related to overt behaviors than that attitudes will be closely related to actions" (Wicker, 1969:65). Despite this result the investigations were carried on. New models have been developed with the assumption that attitude alone as a predictor for behavior is too simple.

Fischbein and Ajzen developed two well-known theories: The "theory of reasoned action" (TRA) and later, the "theory of planned behavior" (TPB) which strengthen the validity of their first theory by adding the factor "perceived behavioral control" (Ajzen 1991:181,183) (figure 1). "As in the original theory of reasoned action, a central factor in the theory of planned behavior is the individual's intention to perform a given behavior." (Ajzen 1991:181). The intention is seen as the factor that initiates motivation which influences the willingness to behave in a certain way. The intention of a person is determined by three factors (figure 1). The first factor is the attitude towards a certain way of behavior meaning the degree to which a person agrees with a certain behavior. The second factor is the subjective norm, the pressure that is conceived due to the social environment that may lead the completion or rejection of an intended behavior. The third factor, the only component in which the TPB differs from the TRA, is the perceived behavioral control. This factor includes external factors that have an influence on the intention and also directly on the behavior. The perceived behavioral control describes how a person senses the level of difficulty to perform a behavior under the given conditions and experiences that have been made in the past (Ajzen 1991:181-183,188).

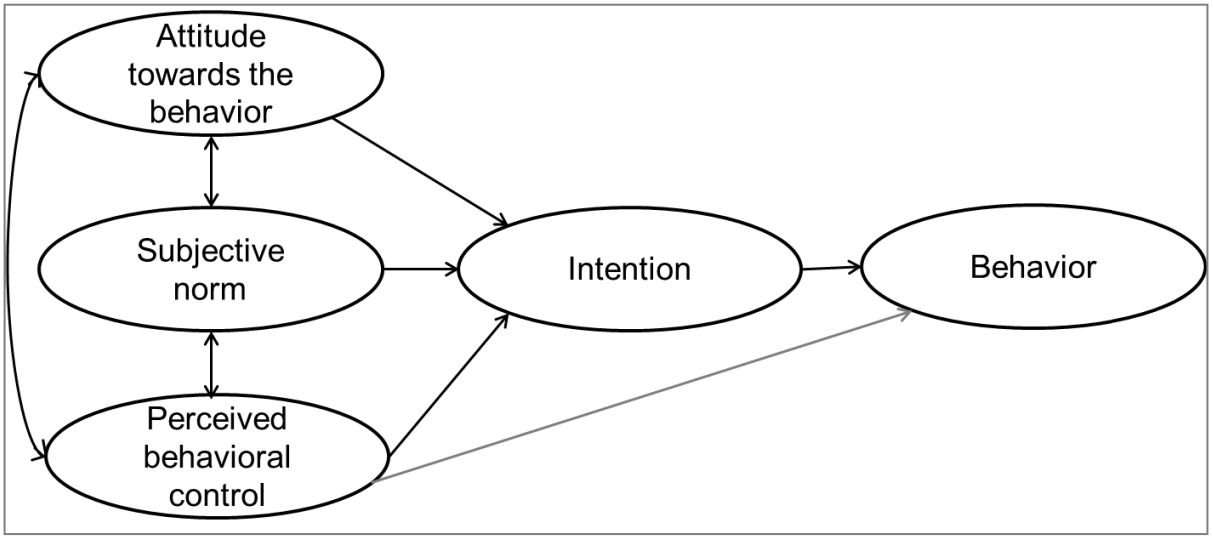

Figure 1: Illustration of the theory of planned behavior (TPB) by Fischbein and Ajzen (Ajzen 1991:182) that explains which parameters influence the humans' behavior.

In general it can be said that "the more favorable the attitude and subjective norm with respect to a behavior, and the greater the perceived behavioral control, the stronger should be an individual's intention to perform the behavior under consideration." (Ajzen 1991:188) as well as "the stronger the intention to engage in a behavior, the more likely should be its performance" (Ajzen 1991:181). It has to be considered depending on the examined situation and behavior the three factors (attitude, subjective norm and perceived behavioral control) might be weighted differently (Ajzen 1991:188-189).

It is generally possible to add further factors to the TPB that are important for the prediction of behavior since the TPB also arose through the addition of another components to the TRA (Ajzen 1991:199). Conner and Armitage (1998:1452) conclude that the following six parameters are also meaningful variables for the predictions of behavior. These parameters are: important beliefs; moral norms; behavior in the past; and habits. Self-identity and affect of a person as well as the structure of the perceived personal control could be extended by including self-efficacy. Furthermore they conclude that that it is unlikely that it makes sense to include all of these parameters in one study but it is suggestive to include those parameters that are meaningful in the context of the investigation.

Arvola et al. (2008) extended the TPB by the elements moral norm and affective attitude to see how these parameters influence the prediction of the purchase intention for organic food. The study concludes that it is valuable to include these two elements since purchasing organic food is somehow connected to emotions. This gets clearer when looking at the following quotation: "…..many consumers experience organic food choice as a morally right thing to do, which provides an internal reward, and this moral feeling further relates to intentions to purchase organic food." (Arvola et al., 2008:452).

The TPB was also modified by Vermeir and Verbeke (2008) in order to study the consumption of sustainable food among young people in Belgium. Four parameters that have an influence on the intention of the consumers were included. The subjective norm, in

other words, the influence of others and the attitude in this case towards the investment in sustainable food, stays the same as in the original TPB. The perceived behavioral control is adjusted in this study to “perceived availability”. Furthermore, “perceived consumer effectiveness” refers to the consumer’s estimation of how much impact is caused by his or her behavior related to a specific issue (Vermeir and Verbeke, 2008:544). The aggregation of the four parameters described above explains about 50 percent of the deviation between the actual purchase of sustainable products and the intention to do so. Consumers who believe that their behavior will be effective are more likely to behave according to their intention compared to people who have a weaker belief in the effectiveness (Vermeir and Verbeke, 2008:548).

2.5. Methods Used for the Analysis of Purchase and Consume Behavior

Most of the studies that analyze the purchasing and consumer behavior are done with classical methods such as questionnaires, personal interviews and focus group discussions (Hughner et al., 2007:97-100,105). The same is observed in more recent publications (Paul and Rana, 2012, Robinson-O'Brien et al., 2009, Zámková and Prokop, 2013, Warschun et al., 2013, Zepeda and Deal, 2009). However according to Hughner et al. (2007:105) it seems to be difficult to fully capture the complex systems with those methods alone. Therefore it is prudent to find methods that are better for identifying the complex interaction between the factors that influence the decision-making process of the consumers.

3. Research Questions, Hypotheses and Objectives

3.1. Research Objectives

The objectives of this research are to describe the purchasing and consumer behavior of the BOKU students who participated in the course "Slow, Fair, Local – Innovations in Organic Farming". The identification of factors and reasons that influence the purchasing and consumer behavior and the decision-making process of the students will be presented. The thesis also reveals how the students present and reflect on their own behavior in their examination performance for a lecture in which the focus was clearly set on alternative food-provider and systems.

A further objective is to apply and combine available methods to analyze the present data set, as well as to reflect the borders of the applied methodology.

3.2. Research Questions

The data set will be analyzed on the basis of four main research questions. The first research question is **"R_1: What kind of sources for food are used by students according to the food-scapes*?"** with the following four sub-questions**:**

R $_{1.1}$: What is the students' understanding of local and Slow-Food according to the explaining text**?

R $_{1.2}$: How many different food-providers are used by the student according to the food-scapes?

R $_{1.3}$: What is the proportion of conventional and alternative food sources (organic, slow and local food) in total purchased by the individual students according to the food-scape?

R $_{1.4}$: What is the common attitude of the students towards food and purchasing behavior according to the explaining text?

"R_2: How is the purchasing and consumer behavior of the students influenced by the parameters distance and preference according to the food-scapes?" The three sub-questions are:

R $_{2.1}$: To what extent does the preference for a certain food-source influence the importance of a certain food-provider according to the food-scape measured by the number of visits?

R $_{2.2}$: What is the relationship between the preference for, and the distance that has to be overcome to get to, a certain food-provider?

R $_{2.3}$: What influence does the distance between a food source and the place of living have on the importance of certain food-providers according to the food-scape?

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* Illustration of the students food-providers including the characteristics importance, preference, distance from home and the way of production (conventional, organic, local and Slow-Food)

** Explains important aspects of the students' food-scape

The third research questions is "**R_3: What are the arguments used by the students for using one or the other food-providers according to the explaining text?"** with the following two sub-questions:

$R_{3.1}$: What are the most common arguments used by students for purchasing decisions related to different food-providers according to the explaining texts?

$R_{3.2}$: Do the students plan to change anything in their food-scape according to the explaining texts?

Due to the fact that the data has been collected as examination performance the fourth research question **"R_4: How do the students describe their own behavior**?" is raised.

3.3. Working Hypothesis

Because the data was collected as part of a lecture as examination performance it can be assumed that the students were aiming for good grades. This would suggest that the information collected has some connection with the content of the lecture which focused on alternative food sources and the issues of the present food production systems. This background may have lead to a bias in the students towards a stronger focus on alternative food sources in food-scape which might not have otherwise been the case.

The following two hypotheses related to research question one (R_1) emerged:

H_{1a}: The students purchase and consume only food from alternative food sources (organic, local, slow food) according to the food-scapes.

H_{1b}: The students have a positive attitude towards alternative food sources according to the explaining texts and the preference in the food-scapes.

Furthermore it is assumed that the students who participated in the lecture were interested in and aware of alternative food providers and may have been willing to overcome obstacles like further traveling distances to get allow for purchase of alternative foods. In this context the following hypothesis has been raised:

H_{2a}: The preference for a food-provider is the determining factor for amount of food that is purchased in the one or the other location according to the food-scapes.

Further hypotheses are related to research question three (R_3) and examine factors that influence purchasing decisions. Furthermore it looks at statements why the students may not decide in the way they would like to do according to their conviction.

H_{3a}: The food choice of the students is mainly driven by their beliefs about a certain food category or food-provider.

H_{3b}: External factors, especially money, are mentioned as the reason why student's actual behavior differs from their intentions according to the explaining texts.

The following hypotheses places a strong focus on the conditions under which the data has been collected and focuses on the way the students present their own purchasing behavior:

H_{4a}: If the students purchase their food mainly from conventional sources they appear to be apologetic and offer justifications in the explaining texts.

H_{4b}: The main focus of the food-scapes and explaining text is on alternative food sources.

4. Methodology

4.1. Research Area and Characteristic of the Respondents

The data was collected from 122 students at the University Natural Resources and Life Science in Vienna (Austria) in the context the lecture “933008 Slow, Fair, Local – Innovation in Organic Farming”. The sample population is neither representative of Austria nor of Vienna or the university; it is simply a group of students who are interested in a topic correlated with food and who therefore chose to participate in the lecture. 76 students who created the food-scapes and explaining texts are female and 46 are male.

4.2. Data Collection

4.2.1. Knowledge that the Students Gained through the Lecture

The lecture “933008 Slow, Fair, Local – Innovation in Organic Farming” took place on the 22nd and 23rd of October 2013. The students heard presentations from eight guest-speakers on the following topics.

- Michal Andert was talking about Slow-Food in the state of Burgenland (Austria) and his impressions about the organization. He also described common traits of Slow-Food and organic products.
- Monika Liehl presented the philosophy, the events and her personal impression of the Earth market starting at the foundation of the first Earth market in Austria, which is called “Markt der Erde Parndorf”.
- Alois Huber from the Spar Warenhandels AG talked about the sustainability of the supermarket chain and methods to reduce the waste of food.
- Joseph Habich was presenting the brewery Wimitzbräu while talking generally about the connection of locality and organic agriculture.
- Heidemarie Porstner from Global 2000 was speaking about the new seed regulation and the biodiversity in the Austrian agriculture.
- Hardwig Kirmer from Fairtrade Austria was giving an overview about the history of Fairtrade, their successes and their goals for the future.
- Felicitas Schneider a professor at the BOKU was explaining the problem of food waste and some possibilities to reduce it along the whole food chain.
- Andreas Karl Barth from Bio-Austria was talking about possibilities and places for local marketing in Austria.

(BOKU, 2004-2014)

After the lectures students were asked to reflect on their own food network by creating a food-scape and an explaining text (description chapter 4.2.2). This assignment is the examination performance of the students and the information basis for this master thesis. It can be assumed that the influencing factors of education and/or lack of knowledge - which is mentioned in the study of Vermeir and Verbeke (2006:175) as well as by Hughner et al. (2007:104) - is eliminated in this information basis. That is due to the fact that a general interest in this topic is assumed as the students decided to participate in this course out of interest.

4.2.2. Instruction for Creation of the Food-Scape and the Explaining Text

The lecture was held in German. The instructions given to the students are translated into English below and the original text can be found in appendix 1.

- Take a white A3 sheet.
- Put your first and last name as well as your matriculation on the sheet
- Put your name in the center of the paper surrounded by a circle.
- Add with pencil your food-providers (markets, supermarkets, parents, internet, restaurants, cafes, CSA, Coop, etc.) each in circles and place them next to your name. Mention as many as possible but not so many to create unclarity and illegibility.
- The size of the circle reflects the importance of the each food-provider. The bigger the circle, the more often you go there for shopping/eating/drinking.
- The distance between the circle in the center and the circle demonstrating the food-provider shows the distance or accessibility of the food-provider.
- Color the circles with the following colors to show their way of production:
    - Conventional food: blue
    - Organic food: green
    - Local food: brown
    - Slow-Food: red
- The thickness of the lines shows which food-provider you like the best to go shopping/eating (this can be independent form the distance or importance). A very thick line means that you like it there very much whereas a very thin line means you like it the least.
- Comment on important aspects professional competent on the back of the paper (show connection to food-scape) if reasonable you can also use graphs.

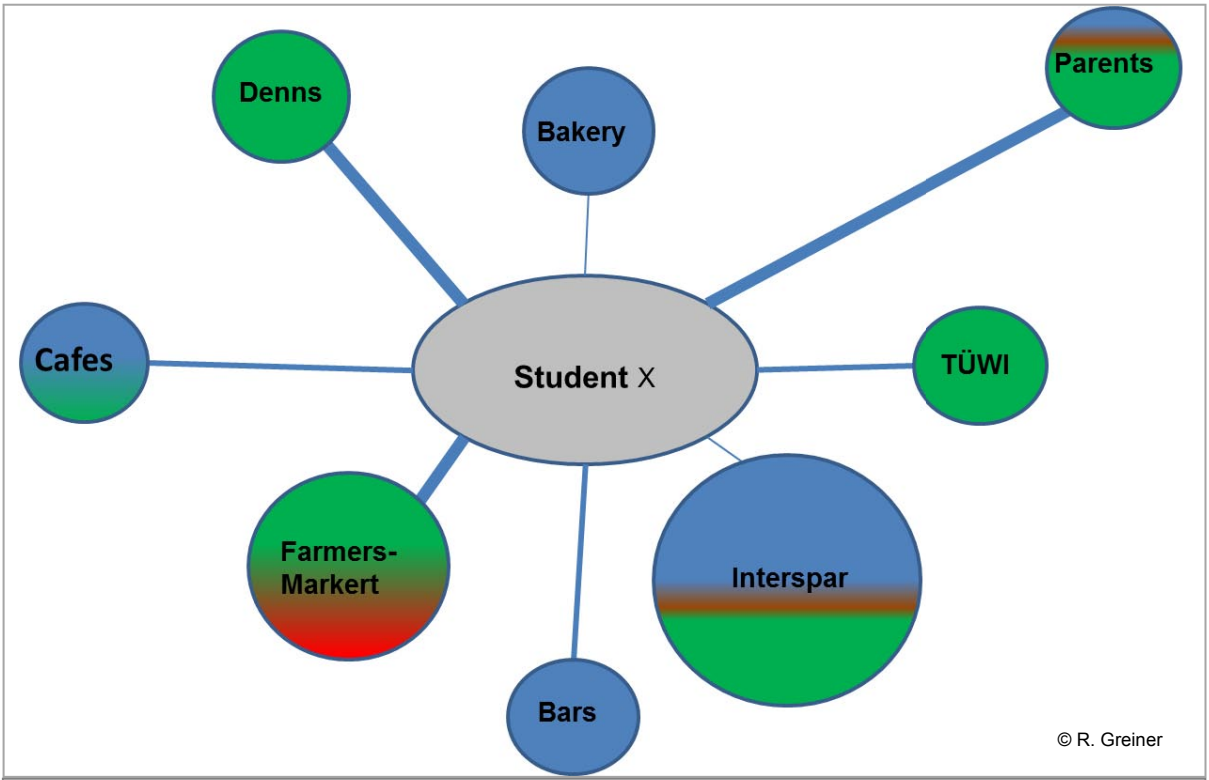
Criteria for evaluation: readability, traceability, comprehensibility and simulation of reality of the food-scape on the front as well as quality of the comments and individual additions.

The food-scape has to be submitted at the latest on the 20.11.2013.

4.2.3. Example Outcome of a Food-Scape and the Methodology Behind

Figure 2 shows how a food-scape created according to the instruction (chapter 4.2.2) might look. Due to different interpretations of the instructions there is some variability among the food-scapes but the important elements are mostly recognizable. If this is not the case the corresponding food-scape was excluded from the analysis. In the present data set 22 food-scapes have been excluded mainly due to bad readability. This leaves 100 food-scapes-available for the analysis.

The methodology behind the food-scape is basically a Chapati or also called Venn diagram, visual graphic used to show relationships between different components (Widler, s. a.). In this thesis, the relationships between the students and their food-providers are illustrated.



Legend:

Blue = source of conventional food	**Circle size** = importance
Green = source of organic food	**Thickness of line** = preference
Brown = source of local food	**Distance between student and food-provider**
Red = source of Slow-Food	= how far away from home

Figure 2: Example illustration of a food-scape. The circle size represents the importance (frequency of visits), the preference for a food-provider rises with the thickness of the line that connects the student and the food-provider. The distance between the student and the food-provider indicates the distance that has to be traveled from home to reach the location. The colors indicate the way of production (blue=conventional, green=organic, brown=local, and red =Slow-Food).

4.3. Data Storage and Consideration of Ethical Issues

The original food-scapes and the explaining texts are drawn on A3 sized paper and stored at the BOKU in the Division of Organic Farming by Professor C. R. Vogl. For this thesis the food-scapes and explaining text have been scanned by a third person and saved as pdf files. This process had to be done by a third person due ethical concerns that have been raised.

As already mentioned the food-scapes and the explaining texts are the examination performances of the lecture “Slow Fair Local – Innovation in Organic Farming” and the students assumed that only Professor C. R. Vogl receives them for the purpose of evaluation and grading. They do not know that these documents will be analyzed and used for a master thesis. This means that they did not agree to have their data used in an investigation. In order to address this concern the data has been anonymized. The names and matriculation numbers have been covered during the scanning process. Each food-scape was given an identification number (ID) so that only Professor C. R. Vogl would be able to identify them should doing so become necessary.

4.4. Data Analyses

The food-scapes and the explaining texts were analyzed in a qualitative way with help of the computer program Atlas.ti 7. Deductive and inductive categories were formed for the analyzing process. Inductive categories arise out of the present materials and were not based on a theoretical background and they were not formulated before starting the analysis. Deductive categories were developed before the actual appraisal begins (Mayring, 2012:29). This chapter will give a complete overview of the used method and the supporting equipment used.

4.4.1. Used Software

The computer program “Atlas.ti belongs to the genre of CAQDAS programs. CAQDAS stands for computer-aided qualitative data analysis software. Atlas.ti – like any other CAQDAS program – does not actually analyze the data; it is simply a tool for supporting the process of qualitative data analysis.” (Friese, 2012:1). In this master thesis Atlas.ti 7 was used for coding and structuring the dataset in a way that it is possible to answer the research questions afterwards. Detailed information on use of the program will be provided below.

4.4.2. Coding Structure of the Food-Scapes

This sub-chapter shows how the five parameters that are visualized in the food-scapes are analyzed. All the categories used for coding, with one exception, were defined before the coding process started by looking at some of the food-scapes. The exceptions are the different food-providers. Only the umbrella categories where collected before the coding process started, the detailed coding structure and forming of the categories arouse during the coding procedure. Therefore this work contains inductive and deductive categories. Further it has to be kept in mind is that the classification of the food-scapes and the explaining texts are subjective since there are no exact scales in the instruction given to the students.

Food-Providers

All the food-providers, which are mentioned on a food-scapes by the students, were coded in Atlas.ti and sorted by categories with help of defined prefixes. The umbrella prefixes are defined by different kind of food sources such as “stores” (S), “farmers market” (M), “gastronomy” (G) and so on. Since the umbrella categories are fairly big, a second prefix is introduced, e.g. “organic supermarket” (os), “discounter” (dis), “bakery” (bak) etc.. The umbrella category “gastronomy” was divided in “cafes” (c), “restaurant” (r), “bars” (b) and so forth. To get a better picture of the coding system at this point three example codes for figure 2 will be given below and information about all codes that have been used in this work are available in (appendix 2).

1. **S_bs_Denns** (store_organic supermarket_Denns)
2. **G_r_TÜWI** (gastronomy_restaurant_TÜWI)
3. **G_c_X** (gastronomy_café_exact place not defined)

G_c_X shows the first challenge that the exact place is not always given on the food-scapes in which case an X is used.

To reduce the number of codes and to make the code list more clearly all locations that appear only once are collected in a corresponding category. For example if there are three bakery stores mentioned only once they will be collected under the code “S_bak_Sonstige” whereas “sonstige” translates to “others”. The only category in which this rule is not applied is the gastronomy.

Importance

As described in chapter 4.2.2 the importance of each food-provider is given by the circle size. There was no exact scale given to the students in the instruction telling them which circle size reflects which degree of importance. Therefore each food-scape is considered individually and the degree of importance (circle sizes) is classified in relation to the whole picture in three steps. The categories are coded as “*imp_1” which means the most important food source, “*imp_3” the least important source for food and “*imp_2” means the importance lies somewhere in-between the two categories mentioned before. If the importance is unclear the code “*imp_?” is applied.

When applying this coding method as an example on figure 2 Interspar would represent “*imp_3”, the farmers market and parents as a food source would be coded with “*imp_2” and the rest would belong to “*imp_1”.

Additionally the food-providers with the highest importance and the biggest circle have been coded with H_plus name of the food-provider. The H_plus name of the food-provider can be applied up to two food-providers per food-scape. If food-scape has more than two food-providers falling into a particular category the code H_X for is applied.

Distance

The distance between the student’s home and the food-provider is illustrated by the distance between the circle in the middle and the circle of each food-provider (chapter 4.2.2). Again, there was no clearly defined instruction telling the students to use lines with a certain length for defined distances. Therefore the same strategy as above is applied but four categories are defined instead of three. The four categories coded are close (*dist_1), medium far (*dist_2), far (*dist_3) and very far (*dist_4) distance from home. Very far is used for places

that are outside the area that can be reached in the structure of the student's daily life. In case of an unclear distance in the food-scape the code "*dist_?" is used.

Interspar would be coded with "*dist_1" because it is very close to student X, the farmers' market and the TÜWI are examples for "*dist_2" (medium far) whereas the cafes and bars that are even further away and therefore get the code "*dist_3". The parents are further away than every other food source and therefore they get the code "*dist_4" (figure 2).

Preference

Preference, which refers to how much the student likes to go to a food-provider, is marked in the food-scape through the thickness of the line that connects the circle in the center with the circle of the food-provider (chapter 4.2.2). The preference is also coded in three categories in the content of the whole picture. The three categories are "first choice" (*pref_1)," last choice" (*pref_3) and somewhere in-between the two previous categories is (*pref_2). When the preferences are not clearly indicated in the food-scape the code "*pref_?" is used.
When applying these code categories to figure 2 Interspar would be coded with "*pref_3", the TÜWI would be an example for "*pref_2" and the parents and the farmers' markets are places which would be coded with "*pref_1" because they are marked with the thickest line in the example food-scape.

Proportion of Conventional vs. Alternative Food

The places where conventional food is purchased are marked with blue and the alternative food categories namely organic, local and Slow-Food are represented in green, brown and red (chapter 4.2.2). Due to the fact that not even two thirds of the students gave the proportion for each food-provider, the proportion between conventional and alternative food sources will only be given for the whole food-scape and not for every single food-provider. The proportion is coded in three steps:

- Conventional is dominant (+prop_1)
- Approximately equal proportion conventional and alternative food (+prop_2)
- Alternative food is dominant (+prop_3)

According to this system figure 2 would be evaluated with "+prop_2" because neither the conventional nor the alternative food is obviously dominant in the example food-scape.

4.4.3. Coding Structure of the Explaining Texts

The coding structure for the explaining texts aims to extract statements with which the students justify their food choice and to evaluate how the students describe their own behavior. Furthermore some general attitudes towards food and some ideas of a potential purchase behavior in future are coded. Sub-categories for these four main focuses are created during the coding process. Since the explaining texts are written in German, the codes for this part are also in German.

General Attitude
All statements about the general attitude towards food from different food-providers are coded and selected under an umbrella term called “attitude” and split into different sub-categories during the coding process depending on the content. The applied code is X_ followed by the corresponding attitude (appendix 6).

Plan for the Future
The code Y_ followed by the future plan is applied for all those statements that indicate that the student wants to change something in his or her purchasing and consumer behavior in future (appendix 7).

Reasons for Choice of a Certain Food-Provider/Category
To identify the reasons behind the student’s buying decisions related to certain food-providers and/or product categories, the statements concerning this content are coded according to the following structure: The first letter of the code “G” always indicates that this code is a reason for the buying decision. The second letter will give information about which provider category is talked for example “M” for farmers’ market and then finally the reason will be added, for example “freshness”. Last but not least a plus (+) or minus (-) is added as an indicator whether this reason has a promoting (+) or inhibiting (-) influence on the buying decision. Accordingly, an example code would be: “GM_Kontakt und Gespräch+” whereas GM indicates for reason (G) for farmers’ market (M) and “Kontakt and Gespräch” stands for “contact and conversation” which is a reason that is an promoting (+) argument for buying products at the farmers’ market. During the coding process it turned out that it makes sense to apply three general categories of reasons. First the general reasons which are independent from the food-provider, second the reasons that concern a certain food-provider group such as supermarket, farmers market etc. and last the category that represents reasons for a specific place for example Bill or Hofer (appendix 5).

The Way How Students Present their Own Behavior
Due to circumstances around the data collection it is also interesting to look at the way students describe their own behavior in their food-scapes. All indicators concerning that topic are coded under the umbrella term “how” indicated with a “W”. This structure leads for example to the codes with the following elements: W_ plus adjectives, which describe how the students describe their own behavior. The adjectives are developed during the coding process (appendix 8).

Additional Miscellaneous
Unexpected statements given by the students that seem to be interesting for answering the research questions and hypothesis will be collected in this category and coded with “Z”. There might arise some new aspects that have not been considered prior the coding process.

4.4.4. Tools to Answer the Research Questions and the Hypothesis

This chapter will give an overview on the methods used to filter the information needed to answer the research questions and prove the hypothesis presented in chapter 3.2 and 3.3.

For a better general comprehension of the students understanding of local and Slow-Food, the definition for local and Slow-Food, which is coded under miscellaneous, is extracted from the data set with help of the output function in the code manager in Atlas.ti and described in the results section.

Tools to Answer Research Question One (R_1) and Hypothesis One (H_1)

A primary document table is created in Atlas.ti which shows the number of represented food-providers for every single food-scape. This table is the base for creating a boxplot graph with help of the statistic program R. The box in the boxplot represents the area in which 50 percent of the data is detected. The line in the box shows the median. The two lines on top and on bottom of the box represent the values that are higher and lower than the values that lie within the 50 percent box. The dots show extreme values so called outliers.

To provide an overview of food-providers visited by the students, the food-providers are summarized under defined food-provider groups, for example “gastronomy”. This is done by forming so called “code family” in Atlas.ti. These “code families”, are presented in a table that contains the number of different codes that are in this group and the frequency of application. Furthermore it contains the importance that belongs to the food-provider group which has been extracted with help of the “co-occurrence table” function in Atlas.ti. These values have been transformed into a percentage for each food-provider group.

The most important food-providers are also filtered with the “primary document” function in Atlas.ti. This data is collected in a table and afterwards transformed into a bar diagram. Another table is created within Atlas.ti to summarize the proportion of the food that comes from conventional and alternative sources according to the food-scapes. These values are transformed into a percentage and presented in a circle diagram.

All statements concerning the attitude towards different food-providers/categories are filtered and qualitatively described in the results section with help of the “primary document” function in Atlas.ti.

Tools to Answer Research Question Two (R_2) and Hypothesis Two (H_2)

To answer the research question concerning the parameters that influence the purchasing behavior (R_2) by reference of the food-scape, “co-occurrence tables” are created in Atlas.ti. These tables enable filtering of food-scapes in which two selected codes appear at the same time. For example, when looking at the correlation between a “high” preference and importance, a co-occurrence is created by selecting the corresponding codes. This table gives a simple overview that only contains numbers for the correlation of the chosen codes representing importance, distance and preference. All the numbers are transferred into a percentage for better comparability. The table is an indicator for correlations that could be interesting for further analysis due to the numbers.

Tools to Answer Research Question Three (R_3) and Hypothesis Three (H_3)
A “primary document table” is created in Atlas.ti to list the promoting and inhibiting reasons for the decision for different food-provider/categories mentioned by the students. The reasons are assigned to a certain umbrella term in excel manually. The data is on the one hand sorted by umbrella reasons and on the other hand by their frequency of appearance. Furthermore the reasons are sorted according to the food-provider groups to describe the most common arguments in each category.

Tools to Answer Research Question Four (R_4) and Hypothesis Four (H_4)
A “primary document table” is created in Atlas.ti to filter all the statements that are coded as description concerning the way how the students describe their behavior. Furthermore some co-occurrence tables are created to detect if there is a pattern behind the connection between the describing adjectives and the different food source categories.

Chapter five presents the results of the 100 food-scapes and the explaining texts that have been analyzed. It has to be kept in mind that the students had exact instruction for the food-scape elements whereas it was their own decision what to write in the explaining text. That means that there is homogenous data available in the food-scapes and very different and individual information in the explaining text.

5. Results

5.1. Food-Providers Given by the Students in the Food-Scapes

5.1.1. Frequency of Food-Provider per Food-Scape

The students included between 3 and 20 different food-providers in their food-scapes with the exception of three students who included more locations. However 50 percent of the food-scapes contain between 8 and 13 different food-providers (figure 3).

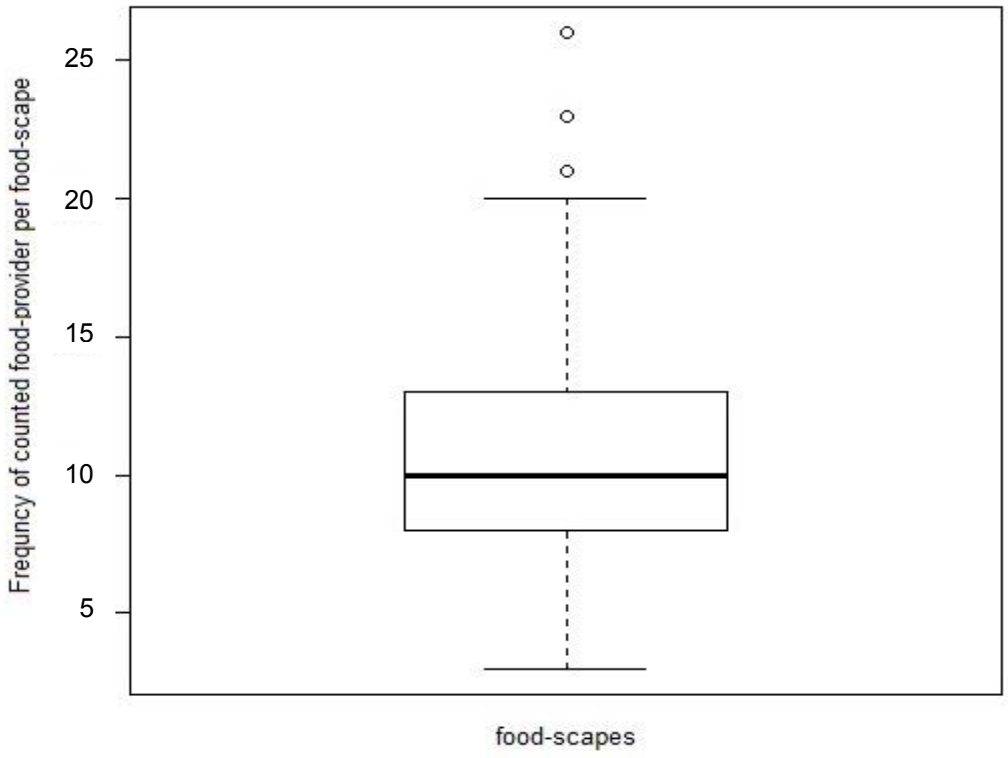


Figure 3: The frequency of counted food-providers per food-scape (n=100) presented as boxplot.

5.1.2. Food Sources Used by the Students and their Importance

The food-provider group that is identified the most often (389 times) is the “supermarket, discounter and retail” (table 3). It contains 25 different codes examples are Billa, Spar, Hofer, bakeries, butcher, etc. (detailed information appendix 2A).

“Gastronomy” is the food-provider group that is mentioned 349 times and it contains 106 different codes (table 3). This group is composed out of restaurants, cafes, take away food etc. every location where food is consumed outside of the home, is included (details appendix 2B),

The four different codes of the group “private source” are the students’ personal production, personal production of relatives, food that has been purchased by family members and friends. This category is counted 160 times in the present data set (table 3, appendix 2C).

“Direct marketing” is mentioned 122 times and this group contains 19 different codes (table 3) which includes among others farmers’ markets and farm shops (details appendix 2D).

The group of “organic supermarkets and whole food shops” comprises 8 different codes which also include the DM/Alnatura store (appendix 2E). This group is represented 65 times in the data set (table 3).

Food-providers that did not fit in one of the groups described above are collected in the group “other food-providers”. Examples are dumpster diving, food-coops and online orderings (appendix 2F). The food-providers in this group are mentioned 35 times by the students in the food-scapes (table 3).

In total 168 different codes have been applied and 1120 food-providers are used by the 100 students altogether (table 3).

Table 3: Food-provider groups, frequency (how often the codes from this group are identified within all food-scapes (n=100)) and the different levels of importance in the sense of how often the corresponding places are visited for each food provider group in percent.

FOOD-PROVIDER GROUP	**FREQUENCY**	**IMPORTANCE** (% per group)			
[nr. of different codes]		**high**	**medium**	**least**	**unclear**
Supermarket, discounter and retail *[25]*	**389**	**26%**	34%	40%	0%
Gastronomy *[106]*	**349**	**5%**	33%	**62%**	0%
Private sources *[4]*	**160**	**28%**	**46%**	**26%**	0%
Direct marketing *[19]*	**122**	14%	**38%**	48%	0%
Organic supermarkets & whole food stores *[8]*	**65**	11%	32%	**57%**	0%
Other food-providers *[6]*	**35**	23%	37%	40%	0%
Sum of all food-providers	**1120**	**17%**	**36%**	**47%**	**0%**

The importance was assignable for all food-providers in all food scapes. 17 percent of the 1120 food-providers that are mentioned on the food-scapes have a high importance that means they are visited most often. The leading food-provider groups are “private sources” with 28 percent followed by the “supermarkets, discounter and retailer” with 26 percent. The “gastronomy” comes” with 5 percent last in the category of food-provider groups with a high importance for the students (table 3).

A medium importance has been indicated in 36 percent of the stated food-providers when looking at all the food-provider groups together. The medium importance seems to be most common among “private sources” (46 percent) chased by “direct marketing” (38 percent). The rest of the food-provider groups show a medium importance of 32 to 37 percent. This indicates that the medium importance is proportional similar among all food-provider groups (table 3).

47 percent of the entire food-providers that are given by the students are in the category of low importance. The group “gastronomy” leads this category since 62 percent of the given food-providers in this category are classified as least important. The category “organic supermarkets and whole food stores” is, with 57 percent, in second place. Only 26 percent of the “private sources” are noted as least important (table 3).

The sum of the different levels of importance of the food-providers shows that the percentage share rises from the sources classified as important to the food-provider with the lowest importance. The same pattern is recognizable for all food-provider groups with two exceptions. The exceptions are the groups “private sources” and “supermarket, discounter and retail”; in these cases the medium importance includes most of the food-providers (table 3). However, in general it can be said that the students included fewer food-providers which they visit often and more locations that they use sometimes.

5.1.3. Food-Providers with the Highest Importance

20 students indicate that their parents are the most important food source. Hofer is on the second place with 17 students that indicated it as most important food-provider. The main food source was not identifiable on 17 food-scapes since the students marked more than two food-providers as very important. The central part of the graph is represented by the supermarkets. First the group supermarket X (14 times) is given including all supermarkets which were not precisely defined followed by Billa (13 times), Spar/Interspar (10 times) and finally Merkur (8 times). The farmers’ market, food-coop as well as personal production, friends and the TÜWI/Hofladen on campus complete the list of the 12 most important suppliers with 5 or less calls (figure 4).

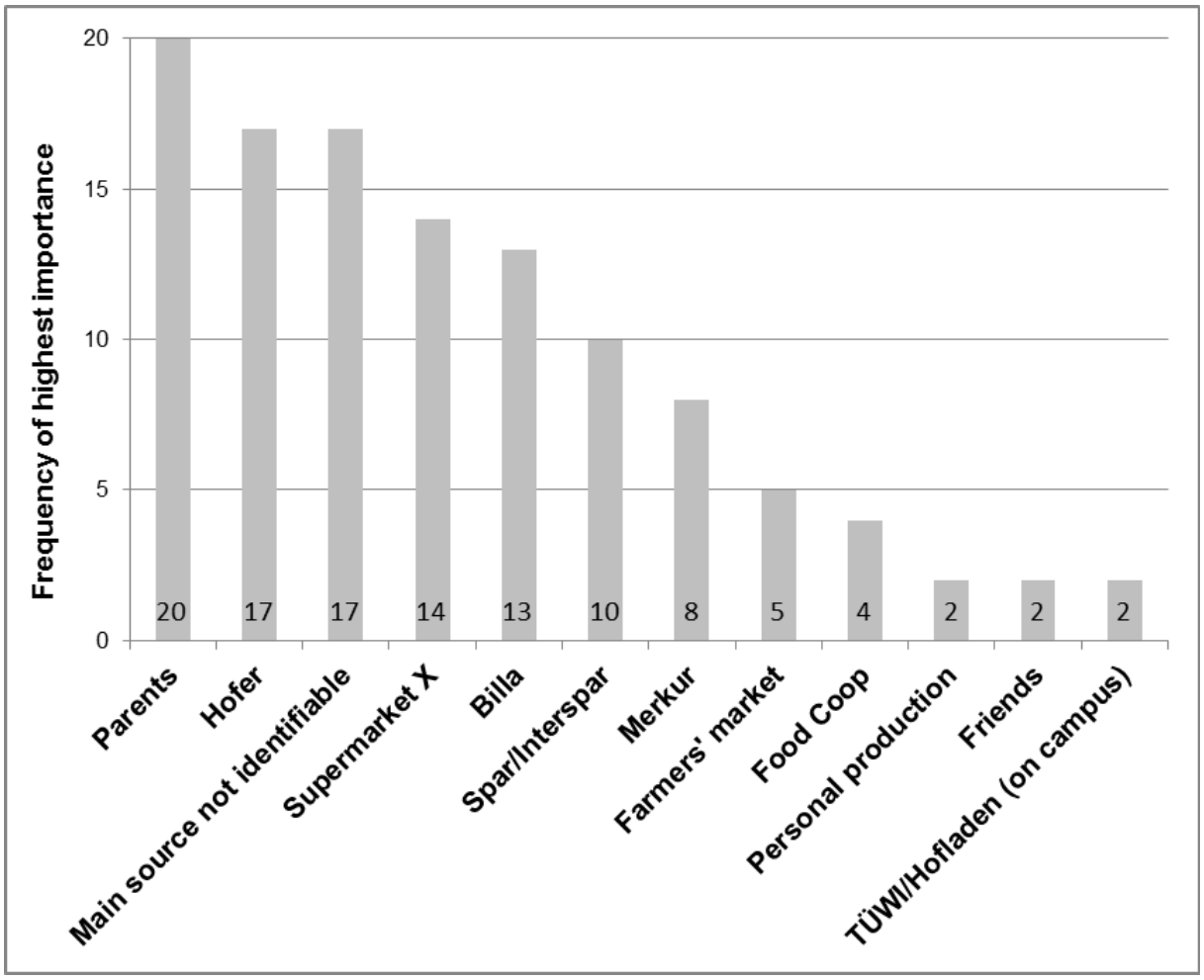


Figure 4: The food-providers which have been identified as the most important food sources of the students according to the circle size in the food-scapes. Main source is not identifiable means that more than two food-provider are marked as very important.
** only 12 most important food-providers are presented, a full list with all 21 food-providers that have been identified can be found in the appendix 3.*

5.1.4. Proportion of Conventional vs. Food from Alternative Food-Providers

Food from conventional food-providers is in 22 percent of the food-scapes higher than food from alternative food sources. 34 percent of the food-scapes belong to the second category which represents all of those where the proportion of conventional food equals the proportion of food from alternative sources. The third category contains all the food-scapes (44 percent) in which the proportion of food from alternative food-providers is higher than from conventional food sources (figure 5).

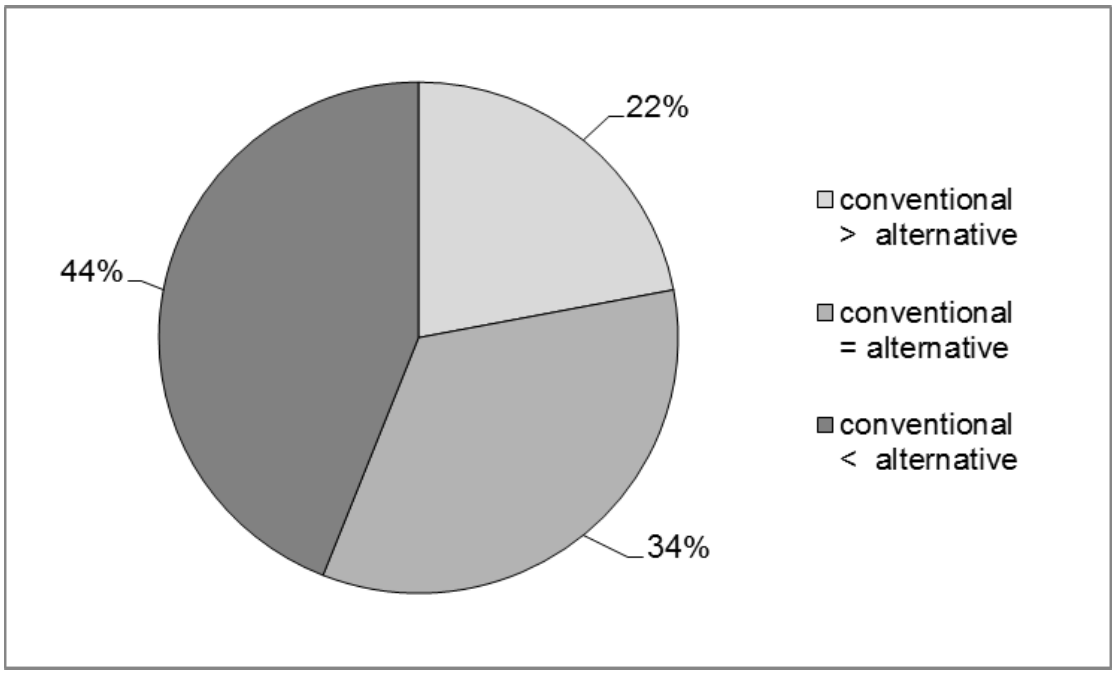


Figure 5: Outline of the proportion (%) of conventional vs. food from alternative sources (organic, local and Slow-Food) given on the food-scapes (n=100).

At this point it is important to present the following observation. The proportions in the first category (conventional > alternative) and the third category (conventional < alternative) are mostly closer to a balanced proportion (conventional = alternative) than to only conventional or only organic food sources. There are some exceptions in which only conventional or alternative food sources are illustrated in the food-scape.

5.1.5. Common Attitudes of the Students towards Different Food Sources

The students were not explicitly asked for their attitude towards different food sources in the instruction and therefore not even half of them included their attitude in the explaining text. However, 113 statement regarding attitudes were identified; the majority is concerned with the way and region of production as well as with the seasonality. When looking on the five most important attitudes arising out of the explaining text, the following hierarchical order appears:

- A positive attitude towards organic products has been mentioned 34 times.
- A positive attitude towards local products has been coded 32 times.
- A positive attitude towards alternative sources in general was identified 11 times.
- A positive attitude towards seasonal products has been recognized 9 times.
- The attitude that the way of production and origin loses importance when eating in a restaurant has been mentioned 8 times.

All the remaining attitudes are mentioned three times or less. Among them is the willingness to pay a higher price for a higher quality; the atmosphere in the place where food is purchased is more important than the price as is a critical attitude towards organic products (appendix 6).

It is noticeable that most of the attitudes mentioned support the alternative food sources. The only exception is that several students think that the origin and the way of production does not matter as much in restaurants. Only one student has the opinion that not everything has to be organic. In general it has to be said that the students for whom a positive attitude towards local products is coded are not necessarily the same as the one who stated the positive attitude towards organic products.

5.2. The Influence of Distance and Preference

This sub-chapter will first give an outline of the food-provider groups and the corresponding distance as well as the associated preference. Afterwards the relation between the three influencing factors; importance, distance and preference, is examined more closely.

5.2.1. Food-Provider Groups and the Corresponding Distance from Home

Clearly, the proportion of food-providers that are visited with a stated distance of “close”, “medium” and “far” is fairly equal distributed among the 1120 food-providers with each about 30 percent. The category “very far” is noted by 10 percent. It was not possible to identify the distance for one percent of the food-scapes. However, when looking at the distribution of the different food-provider groups, a different picture appears (table 4).

The majority (78 percent) of the food-provider group “supermarkets, discounter and retail” used by the students are in the category “close” (42 percent) or “medium” far away (36 percent) from home. The contribution of the “gastronomy” is more towards “medium” (35 percent) and “far” (43 percent) distances in this case 78 percent of the visited places are within those two categories. The group “private sources” is the only group where 50 percent of the food-providers are “very far” away from the students’ home. It also seems that the students are willing to travel further to get food sources from the food-provider group “direct marketing”. 39 percent of the food sources are located far away and 11 percent even very far from home. For the food-provider group “organic supermarkets and whole food stores” the three distances “far”, “medium” and “close” are similar represented. However, most of the sources in this category are within a “medium” distance from home (41 percent). A fairly equal distribution is recognizable within the “other food-providers”. However, it should be noted at this point that 14 percent of the food-providers in the category “other food-providers” are “very far” from the home of the student (table 4).

The distance traveled to get to certain food sources strongly varies among the different food-provider groups even though in average it seems to be fairly equal distributed (table 4).

Table 4: Food-provider groups, frequency (how often the codes from this group are identified within all food-scapes (n=100)) and the distance from home that has to overcome to get to the corresponding food-provider in percent per group.

FOOD-PROVIDER GROUP	**FREQUENCY**	**DISTANCE FROM HOME** (% per group)				
[nr. of different codes]		**close**	**medium**	**far**	**very far**	**unclear**
Supermarket, discounter and retail *[25]*	**389**	**42%**	**36%**	21%	1%	0%
Gastronomy *[106]*	**349**	19%	**35%**	**43%**	2%	1%
Private sources *[4]*	**160**	17%	12%	20%	**50%**	1%
Direct marketing *[19]*	**122**	20%	30%	**39%**	**11%**	0%
Organic supermarkets & whole food stores *[8]*	**65**	**28%**	**41%**	**29%**	2%	0%
Other food-providers *[6]*	**35**	**23%**	**31%**	**26%**	**14%**	6%
Sum of all food-providers	**1120**	**28%**	**31%**	**30%**	**10%**	**1%**

5.2.2. Food-Provider Groups and the Associated Preference

When looking at the sum of all food-providers and the corresponding preferences it becomes clear that all three levels of preferences are represented almost identically. A “high” preference is given for 28 percent of all the food-providers, 35 percent of the location connected to a “medium” preference and 34 percent of the food-provider that are used are not really liked by the students (“low” preference) (table 5).

Almost 50 percent of the “supermarkets, discounter and retailers” that are visited by the students are connected to a “low” preference. The majority of the food-providers in the food-provider group “gastronomy” visited are either connected to a “medium” (37 percent) or “low” (38 percent) preference. In contrast 68 percent of the “private sources” have a “high” preference which means the students like them very much. The food-provider group “direct marketing” is also preferred by the students. 46 percent evaluated them as places with “high” preference and 33 percent valued them with a “medium” preference. A lower preference is identified for “organic supermarkets and whole food stores”. 40 percent evaluated this category with “medium” and 34 percent have a “low” preference. 43 percent of the food-providers within the group “other food-provider” are marked with a “high” preference among the students. 34 percent state a “medium” and 17 percent a “low” preference for this food sources (table 5).

Table 5: Food-provider groups, frequency (how often the codes from this group are identified within all food-scapes (n=100)) and the preference that means how much the students like to visit the corresponding food-provider in percent per group

FOOD-PROVIDER GROUP	**FREQUENCY**	**PREFERENCE** (% per group)			
[nr. of different codes]		**high**	**medium**	**low**	**unclear**
Supermarket, discounter and retail *[25]*	**389**	12%	38%	**47%**	3%
Gastronomy *[106]*	**349**	23%	**37%**	**38%**	2%
Private sources *[4]*	**160**	**68%**	21%	7%	4%
Direct marketing *[19]*	**122**	**46%**	**33%**	19%	2%
Organic supermarkets & whole food stores *[8]*	**65**	21%	**40%**	**34%**	5%
Other food-providers *[6]*	**35**	**43%**	**34%**	**17%**	6%
Sum of all food-providers	**1120**	**28%**	**35%**	**34%**	**3%**

5.2.3. Relation of Preference and the Importance of the Food-Providers

Food sources that are coded with a “high” preference are also the most important food-providers in the category “high” importance. 9 percent of the food-providers fall into the category of “high” importance and “high” preference whereas only 4 percent is calculated for the connection “high” importance and “medium” preference; the same is true for the combination of “high” importance and “low” preference (table 6).

The main overlapping concerning all the food-providers that are evaluated as “medium” important is found with “medium” preference (15 percent). 12 percent of all food sources can be put in the category “medium” importance and “high” preference and 10 percent can be count to “medium” importance and “low” preference (table 6).

The highest percentage of correlation can be mentioned for “low” importance and “low” preference with 21 percent. The relation “low” importance and “medium” preference is represented with 17 percent and the correlation between “low” importance and “high” preference is 8 percent (table 6).

Table 6: The correlation between three levels of preference and the three levels of importance for all food-providers in percentage plus the sum for each level of importance* and preference*

IMPORTANCE	PREFERENCE			Sum*
	high	medium	Low	
high	**9%**	4%	4%	17%
medium	12%	**15%**	10%	36%
low	8%	17%	**21%**	47%
Sum*	29%	36%	35%	

* Differences compared to sum in table 3 and table 5 are caused by the exclusion of category unclear.

When looking at each row individually it seems that always the alike levels of importance and preference are dominant. That means “high” and “high”, “medium” and “medium” as well as “low” and “low” level is the dominant percentage (table 6).

5.2.4. Relation between Preference and Distance of the Food-Providers

The highest correlation within the category “close” distances is found with a “medium” preference at a level of 10 percent followed by a correlation of 9 percent between “close” distance and “low” preference. The overlapping of “close” distance and “high” preference is 6 percent (table 7).

The majority of food sources that are located in a “medium” distance around the home of the student are evaluated with a “medium” (12 percent) and “low” (13 percent) preference. The correlation between “medium” distance and “high” preference is 8 percent (table 7).

Table 7: The correlation between three levels of preference and the four levels of distance for all food-providers in percentage plus the sum for each level of distance* and preference*

DISTANCE	PREFERENCE			Sum*
	high	medium	low	
close	6%	**10%**	**9%**	26%
medium	8%	**12%**	**13%**	33%
far	9%	**11%**	**11%**	31%
very far	6%	2%	1%	10%
Sum*	29%	36%	35%	

* Differences compared to sum of table 4 and table 5 are caused by the exclusion of category unclear.

11 percent has been calculated for all the locations that are located “far” away and for which the students have a “medium” preference. The same is true for the correlation “far” distance and “low” preference. The interface between “far” distance and “high” preference is represented with 9 percent in the whole data set (table 7).

The distance “very far” is mainly connected to a “high” preference (6 percent), the combination of “very far” and “medium” preferences exists with 2 percent and the correlation between “very far” distance and “low” preference is only one percent (table 7).

All in all it can be stated that the highest correlation exists between “medium” and “low” preference in combination with “medium” and “far” distance according to the information given in all food-scapes (table 7).

5.2.5. Relation between Distance and Importance of the Food-Providers

Food-providers with a “high” importance are mostly “close” to home (9 percent). 5 percent of the food-providers are of “high” importance and they are located within a “medium” distance. 3 percent of the places are “far away” from the students home and still of “high” importance. Only one percent of the locations belong to the category “high” importance and “very far” from home (table 8).

The distribution of the distances “close”, “medium” and “far” within the category of “medium” importance is fairly similar with about 10 percent each. The correlation between “medium” importance and “very” far away with 4 percent plays a minor role (table 8).

Food-providers that have a “low” importance can be found in further distances. 17 percent of the food-provider’s fall into the category “far” away and “low” importance, 15 percent are represented as “low” importance and “medium” distance. 10 percent of the food-providers are “close” and have a “low” importance. The category “very far” and “low” importance is calculated as 4 percent out of the total correlations (table 8).

At this point it can be stated that the biggest percentage of correlations exists between “medium” and “far” distances with a “medium” and a “low level” of importance (table 8).

Table 8: The Correlation between the four levels of distance and the three levels of importance for all food-providers in percentage plus the sum for each level of importance* and distance*

IMPROTANCE	DISTANCE				Sum*
	close	medium	far	very far	
high	9%	5%	3%	1%	**17%**
medium	9%	**12%**	**10%**	4%	**36%**
low	10%	**15%**	**17%**	4%	**47%**
Sum*	**28%**	**32%**	**30%**	**10%**	

* Differences compared to sum of table 3 and table 4 are caused by the exclusion of category unclear

5.3. Common Arguments for One or the Other Food Source

5.3.1. The Most Common Arguments for the Food Choice

All the reasons for the food choice that are given by the students in the explaining text have been assigned to different umbrella reasons. In total there are 32 umbrella reasons which are applied in different frequencies during the coding process. In total 516 statements concerning the reasons for the food choice are identified. The full list of umbrella reasons and the occurring frequencies can be found in the appendix 9.

Table 9: The 10 most important reasons for the food-provider choice of the students, "number" stands for how often this reason has been mentioned and the percentage is calculated on the base of 516 which is the total number of reasons stated in the data set (full list appendix 9)

	UMBRELLA REASON	FREQUENCY	PERCENTAGE
1	**Price**	96	18.6%
2	**Availability**	83	16.1%
3	**Origin**	63	12.2%
4	**Quality**	60	11.6%
5	**Assortment**	42	8.1%
6	**Time**	37	7.2%
7	**Social aspect**	26	5.0%
8	**Atmosphere**	20	3.9%
9	**Protest**	10	1.9%
10	**Environment**	9	1.7%

The price and availability are the most common arguments for using one or the other food source (table 9). The codes within the umbrella reason "price" have been identified 96 times which are almost 19 percent of all arguments used. The "price" contains all statements that are connected to price and price performance ratio. A closer look this category reveals that price is a promoting factor for supermarkets and discounter whereas it inhibits the purchase of organic products in general and specifically in whole food stores. Also farmers' markets and restaurants are identified as locations where prices are too high for the students' budgets. Arguments for food from the family/parents are appreciated due to the fact that is for free (appendix 5A).

"Availability" as a reason has been detected 83 times in the explaining texts and therefore it covers about 16 percent of all arguments (table 9). The umbrella reason "availability" contains all arguments connected to distance, reachability and opening hours. Short distances and easy accessibility are in general a positive trait for a food-provider. Especially supermarkets and discounter seem to fulfill that criterion whereas the reachability is seen as an obstacle for farmers markets and organic shops. Due to the long opening hours and an easy reachability from almost everywhere supermarkets and discounter are perfect places for unplanned purchases (appendix 5B).

The third most important argument is the "origin". 63 statements are found which makes approximately 12 percent (table 9) of all statements given by the students. The umbrella

reason “origin” covers the origin in the sense of the production method (conventional or organic) as well as place where the food comes from and whether it is in season or not. A closer inspection of the arguments reveals that there is a general structure independent of the food-provider. The students prefer places where the origin of the food is clearly identifiable and where local and seasonal products are present. This seems to be in particular given on the farmers market according to the explaining text (appendix 5C).

Almost 12 percent of the reasons given by the students involve the aspect “quality” (table 9). The 60 statements found in the data set talk mainly about quality as a general term or about taste and freshness. A high quality is obviously a promoting factor for a food-provider whereas bad quality reduces the preference for a certain food-provider. Food from direct marketing, farmers markets and personal production is given as products which are appreciated for their high quality. Hofer seems preferred as a result of the freshness of the products. Organic products are stated to be better in taste than conventional (appendix 5D).

8.1 percent of the reasons are connected to the “assortment” (table 9), its size and the availability of certain product groups and brands. Almost all the arguments within this category concern supermarkets and discounter. Those locations are mostly praised for their wide assortment and the availability of organic products (appendix 5E).

37 statements are given concerning the factor “time” which is also an argument for or against a certain food-provider (table 9). A lack of time is a common reason for fast-food of all kinds as well as for a meal from the bakery. The fact that purchasing food from the farmers’ market and organic stores is more time consuming is stated as an obstacle for these sources (appendix 5F).

The “social aspect” is also among the ten most important reasons for the choice of one or the other food source. Approximately 5 percent (table 9) of all arguments are connected to having contact with the producer, meeting friends and enjoying food together. The reasons are mainly used for food from direct marketers or for restaurants and family meals (appendix 5G).

A further aspect influencing decision-making is the “atmosphere” during the purchasing and consuming process. 20 statements are given as an indicator (table 9). The atmosphere is a positive reason for the choice of visiting a farmers’ market or a restaurant. The atmosphere in the supermarket Zielpunkt is stated as particular argument against frequent visits to this place (appendix 5H).

About 2 percent of the given reasons in this data set are collected under the umbrella term “protest” (table 9). “Protest” covers the 10 statements that relate to students that want to show their disagreement with the present situation. This is the main reason for dumpster diving since the students want to show their protest against the waste of enjoyable food (appendix 5I).

The last reason of the top ten is the “environment”. One percent of the arguments (table 9) given are related to environmental concerns. Most concern traveling distances of the food products. One argument for buying local products is the short traveling distance whereas the opposite is true for products from supermarkets. Organic food is also stated as being more environmental friendly compared to food from conventional production (appendix 5J).

5.3.2. Most Common Arguments for the Different Food-Provider Groups

Below a short summary of the most important arguments concerning each of the food-provider group:

Supermarket, Discounter and Retail

180 different reasons are given in the context of the food-provider group “supermarkets, discounter and retail”. The most important statements for the choice of purchasing food from this food-provider group are that they are close to home and therefore easy to reach, prices are at an affordable level and these stores have a wide assortment. Furthermore it is noticeable that Hofer seems to be popular among students due to the organic brand “Zurück zum Ursprung” which is not as expensive as organic food from other food-providers. Another positive aspect is that the products are fresh and also partly local in Hofer.

Gastronomy

In the food-provider group “gastronomy” 73 reasons for consumption of food in the one or the other place are given. The most important arguments for visiting a restaurant is meeting friends and enjoying a meal together. Facts that hinder such visits are the price which is expensive for a student budget. The main reason boosting fast food is lack of time according to the arguments given in the explaining text.

Private Sources

There are 38 different arguments for using or avoiding “private sources”. All reasons with one exception (time intensive) are one positive side that means reasons that promote the usage of “private sources”. The most important statements are that the origin is known; that the student does not have to pay for those sources and that the products are fresh and healthy.

Direct Marketing

74 reasons for and against purchasing food from a “direct marketer” are provided in the explaining texts. The most important reasons promoting food purchases in this category are the quality of those products as well as the fact that they come from the region. Furthermore direct contact with the producer and the atmosphere are stated on the positive side. Arguments that are named as inhibiting factors are that it is expensive and harder to reach due to further distances that must be traveled from home to get there.

Organic Supermarkets & Whole Food Stores

There are 15 arguments given for the food-provider group “organic supermarkets and whole food stores” by the students. The three most important reasons in this category are all obstacles, namely high prices, time intensive and far distances to get there.

Other Food-Providers

30 arguments are given mostly in the context of the food-coop and dumpster diving. The main reason for doing dumpster diving is, as mentioned before, the protest against the waste of food and that fact that it is free. The most common arguments for joining a food-coop is the contact to the producer and that it is known where the food has been produced and how.

In general it is recognizable that positive statements dominate in the explaining texts. That means the students describe why they visit certain places rather than why they avoid using them. The only food-provider group where this is different is the “organic supermarket and whole food stores” where the opposite relationship is observed.

5.4. The Students Idea for their Future Food-Scape

In the present data set 35 statements of the students are coded that express that a change in future is wanted. The most common statement (7 times) is that the students would like to join a food-coop. The desire to increase the proportion of food from the farmers market or other ways of direct marketing has been raised five times. Also five students indicated that they would like to visit the supermarket less frequently by increasing the amount of products they get from the food-coop in which they are already a member. 5 students plan to either start to grow their personal food or to increase the amount that is grown already. The desire to expand the proportion of local and organic food has been identified on three food-scapes. Two students state that they want to go dumpster diving in the future. If more money is available more food from alternative sources would be bought (2 times) as well as Slow-Food will be bought once a family or shared household occurs (1time) is also stated as future plan. And finally there are two more ideas for the future: on the one hand the general statement that the student wants to change something (1 time); and on the other hand the plan to use more different food-providers (1 time) (appendix 7).

It is recognizable that all the ideas for future changes given in the explaining text concern the extension of the alternative sources. No one mentions using more supermarkets or buying more conventional food.

5.5. The Students Understanding of Local- and Slow-Food

5.5.1. Local Food

The term “local” is mentioned in every food-scape but only one student (ID 86) gave a full definition for it. The student described it as food coming from the region. Two more statements are given; one says that products from the Weinviertel are local in Vienna (ID 5) and that products from Klagenfurt are not considered as local in Vienna (ID 96).

5.5.2. Slow-Food

14 out of the 100 students described in the explaining text what they mean when they are talking about Slow-Food. The student with ID 98 gave a definition that contains most of the elements that are individually given also by the other students. This student states that Slow-Food does not mean being a member of the Slow-Food organization but it is food that is personally produced with passion and with ingredients that have been picked with conscience (“Erzeugung der Lebensmittel in persönlicher Handarbeit mit viel Leidenschaft und mit ausgewählten Zutaten und mit bestem Gewissen.” ID 98). Six students (ID 17, 59, 78, 87, 97, 115) define Slow-Food as food that has been cultivated in their personal garden/farm whereas five other students (ID 13, 46, 47, 58, 68) indicate homemade food as Slow-Food. Whether the food is produced under conventional or organic production methods does not seem to be crucial, while determining is that the food was produced in the region (ID 13, 46, 47, 58, 79, 97, 109).

5.6. The Way of Representation

This chapter looks at the way students present their own behavior in the food-scapes. The first step is to look at it from a technical perspective by analyzing the level of detail in the food-scapes and the length of the explaining text. Afterwards the focus will be on how the students describe their behavior from a more content-oriented side.

5.6.1. Technical Aspects

The way of representation of the food-scapes is very different among students. 50 percent of the students included 8 to 13 different food-providers (figure 3). The food-scapes with a lower number of food-providers generally contain more general elements such as supermarket, bakery, restaurant etc. instead of naming the exact place like Billa, Merkur etc.. Obviously the more food-providers are given on the food-scape the more detailed is the information about the different food-providers. The appearance of the food-scapes varied strongly from basic illustration to very artful pictures. Nevertheless the majority of the food-scapes are more often relatively basic.

Most of the explaining texts are in handwriting. Approximately one half of the explaining texts are more than one A4 page long and the other half have a length of A4 page long or shorter (appendix 8). As for the food-scapes the explaining texts varies in their precision. Some contain almost no additional information, others describe the purchase location and again others give very detailed insight into the decision.

5.6.2. Content Related Aspects

Most of the students describe their food-scape in a realistic way. Instead of justifying their behavior the majority present reasons for why they behave in one or the other way. However, there are some students that regret that they cannot use more food from alternative sources. Many food-scapes contain information about which food sources are used and which products are purchased in these locations (appendix 8)

The majority of the food-scapes express a very positive view on alternative food-providers. All statements that concern the attitude towards food from alternative food sources are positive (chapter 5.1.5). Furthermore all the plans for future changes of the food-providers express a desire for more food from alternative sources (chapter 5.4). In general the students give more reasons that state why they use certain food-provider instead of telling why they do not go to certain locations. The only exception is the food-provider group “organic supermarkets and whole food stores” where the reasons for why those sources cannot be used dominate, namely high prices, time intensive and far distances to get there (chapter 5.3.2).

6. Discussion

6.1. Definition of Local and Slow-Food

Since there are only three definitions for local food in the analyzed data set (chapter 5.5.1) it is reasonable to stay with the definition that local means products from Austria as stated in literature (Warschun et al., 2013:3).

The focus of the definitions of Slow-Food that are given by the students is set on homemade and self-cultivated food. The principles of the Slow-Food movement do not directly contain the homemade concept but by cultivating personal food the three principles “Good”, “Clean” and “Fair” (chapter 2.1.3, Slow-Food, 2014c) are likely to be fulfilled. A factor that determines Slow-Food according to the students is that the ingredients uses for their homemade food come from the region. The production method of the ingredients is not considered much. In this case it can be argued that the principle “Good”, meaning local and fresh ingredients (Slow-Food, 2014c) is the most important criteria for the students.

6.2. Attitude towards Alternative Food Sources

There are no common negative attitudes towards food from alternative sources (chapter 5.1.5,). Therefore the hypothesis that **“the students have a positive attitude towards alternative food sources according to the explaining texts and the preference in the food-scapes”** is confirmed. Furthermore most of the students’ plans for the future contain the desire to enlarge the proportion of alternative food sources (chapter 5.4) which also supports the hypothesis that the students have a positive attitude. An additional reference for a positive attitude towards food from alternative sources is that the preference “high” for the food-provider group “supermarkets, discounter and retail” is particular low compared to the group “other food-provider” (table 5).

There are two different ways to explain this result. The students have a positive attitude towards food from alternative sources due to the fact that they are interested in the topic (proved by the fact that they participated in the lecture). Or the students did not mention anything bad about alternative food sources due to the fact that the focus on of the lecture was clearly set on alternative food sources.

That the information which is given to students before the collection of the data has an influence on the result is shown by a study by Vermeir and Verbeke (2006:179). Students read different texts before the survey started. The result shows that students who read the high involvement text tended to state that they had more positive attitude towards sustainable products compared to the group that read the low involvement text. Therefore it is likely that the same effect appeared in the present study.

6.3. Food Sources

The hypothesis that **"the students purchase and consume only food from alternative food sources (organic, local, Slow-Food) according to the food-scapes"** is rejected. This is justified with the fact that more than half of the students either buy a proportion of fifty percent organic and fifty percent conventional food or even use more conventional than alternative food. Additionally the 44 percent of the food-scapes in which alternative sources are dominant also contain conventional food sources (figure 5). The reason for this phenomena could be caused by the external factors by which the student is influenced especially price (table 9) since students mostly live on a low budget.

The most important food-providers for the students are different supermarkets (figure 4). More than half of the students buy 50 percent or more alternative products (figure 5). This leads to the assumption that students buy a high share of alternative products in the supermarkets which corresponds with the market share at least for organic products (Reuter, 2002:9).

6.4. Decision Criteria for One or the Other Food Source

If the hypothesis that **"the preference for a food-provider is the determining factor for amount of food that is purchased in the one or the other location according to the food-scapes"** would be true the students would only visit places for which they have a high preference. Since the distribution between a "high" preference and "high" importance is lower than for places with "medium" and "low" preference (table 6) this hypothesis has to be rejected. The food-providers with the highest importance are mainly supermarkets (figure 4) that are assigned to the highest level of "low" preference compared to the other food-provider groups (table 5). The importance of a food-provider is therefore not only influenced by the student's preference but also by the distance (table 7) according to the food-scapes.

A similar hypothesis has been raised concerning the explaining text. It reads as follows: **"the food choice of the students is mainly driven by their beliefs about a certain food category or food-provider".** This hypothesis is rejected due to the results of the present data set. This is because price and availability (table 9) are generally the most important arguments for the choice. The distance that has to be traveled to a certain place and price are strongly represented arguments in almost every food-provider group (chapter 5.3.2). However in the case of the food-provider group "direct marketing" one could argue that conviction plays a role due to the fact that the arguments for locality and better quality are on the same level as far distances and a higher price.

The arguments for the purchase of local products namely that they come from the region and that they have a better quality are confirmed by other studies (Warschun et al., 2013:5, Von Alvensleben, 1999:8). Shorter traveling distances of the products and direct contact to the producer is also found as reason for purchasing local organic products in a study by Thelen and Botschen (2005:57). Therefore it can be said that the findings of previous studies and the current one correspond.

The result for the food-provider group "organic supermarkets and whole food stores" that hinders the purchase namely high prices and availability correspond with the findings of previous studies (Hughner et al., 2007:101, Thelen and Botschen, 2005:64). (Hughner et al.,

2007:101, Thelen and Botschen, 2005:64). Low prices and good availability are the main arguments for visiting the supermarkets and discounters in the present study.

Environmental and personal health concerns stated as important reasons for organic products (Hughner et al., 2007:101, Thelen and Botschen, 2005:60) play a minor role in the present data set. This could be due to the fact that the most important argument for the decision of the food choice is the price (table 9). That price is particularly important for a student is also found in the study by Zámková and Prokop (2013:1195) in the Czech Republic.

The hypothesis that **"external factors, especially money, are mentioned as the reason why student's actual behavior differs from their intentions according to the explaining texts"** is only partly answered in the present study. It is true that the most important reasons for the food-provider choice are external factors especially the price followed by the availability (table 9). Unfortunately the conviction of the students is not really extractable from the data set and therefore the second part of the hypothesis cannot be properly proved. However the expression of future plans (chapter 5.4) can be used as an indicator. Two students indicate that they would use more food from alternative sources if more money were available. Furthermore a common reason why the students do not buy organic is the price (chapter 5.3.2) which can also be seen as an indicator that money stops them from consuming more organic products since the positive attitude towards food from alternative sources is fairly high among the students (chapter 5.1.5). Also most of the food-providers with the highest importance are the parents where food is free, Hofer or supermarkets (figure 4) with the argument that the products are cheap (chapter 5.3.2).

When analyzing the results from the perspective of the theory of planned behavior by Fischbein and Ajzen (Ajzen 1991:182) it can be said that the present data set contains all three elements shown to influence purchasing intention. The first element is "attitude" towards alternative food sources which is positive. "Subjective norm" is the pressure that is conceived by the social environment. It is not directly represented by the students in the present data set but the fact that the data was collected at a lecture that clearly focused on alternative food-sources might be considered as a pressure for the student to present as many alternative sources as possible. The last element is the "perceived behavioral control" which means externals factors represented mainly by "money" and the "availability" in the present data set (figure 6).

Those three elements together form the intention of the students' behavior. Whenever a student wrote something about his or her future plan for the food-scape, which is an intention, it suggested a desire to increase alternative sources. The question whether this fact is caused by the pressure due to the lecture topic and the desire to get a good mark or by the positive attitude cannot be answered at this point. But it can be said that money and availability are two strong statements that hinder the ability to purchase more food from alternative food-providers for the students who participated in the lecture "Slow, Fair, Local – Innovation in Organic Farming".

The positive attitude and the context of the lecture probably have a positive influence on the purchase and consumption of food from alternative sources whereas the available money and the availability of different food-providers can have a negative effect on the intention and actual behavior.

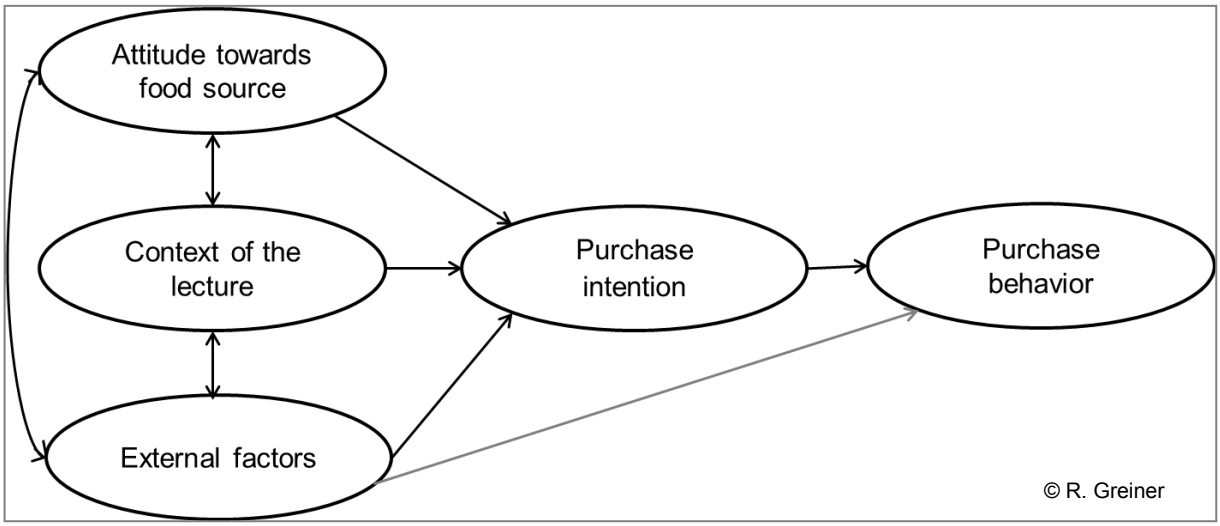


Figure 6: The theory of planned behavior (TPB) modified in way that it matches with the result of the food-scapes and explaining texts.

6.5. How Students Describe their Behavior

The majority of the students describe their behavior just the way it is and state reasons they behave that way. However the hypothesis **"if the students purchase their food mainly from conventional sources they appear to be apologetic and offer justifications in the explaining text"** is not proved since very few people apologized for their behavior in the explaining text. Nevertheless it should be noted that the first part of the hypothesis has not really been analyzed because the proportion of different food backgrounds is hard to assign (chapter 7.3.2).

"The main focus of the food-scapes and explaining text is on alternative food sources" is proven since the majority stated a positive attitude towards food from alternative sources (chapter 5.1.5). More than half of the students purchase 50 percent or more food from alternative sources (figure 5) and all plans for the future aim for an increase in the use of alternative food sources (chapter 5.4). However quite a few statements indicate that students purchase conventional food; they are often accompanied by a statement stating that food from other sources are too expensive or not available. This leads to the phenomenon that even if the student talks about purchasing conventional food the alternative food-source still has priority.

The present data set contains a high amount of information. However there is a potential to improve the precision of the results by improving the methodology according to the planned analysis instead of developing a strategy for the analysis of a data set that already exists. The following chapter will discuss the methodology and present possible improvements.

7. Discussion of the Methodology and Recommendations

This chapter reviews the data collection process, coding and the analysis of the food-scapes along with the explaining text created by the students. It describes issues which arose during the process of the analysis and gives some ideas for improvement which in part were inspired by the individual food-scapes in the present data set.

7.1. Sample Population

The present sample population is neither representative of the University of Natural Resources and Life Sciences nor for Vienna or Austria rather, it is a very specific group of students. There are many possibilities to modify the sampling population. Some examples are given in chapter 8.2 as a recommendation for future research projects.

7.2. Instruction - Technical Aspects

The discussion of the technical aspects aims for all those components of the methodology that are not related to the content but aspects that have an influence on the process of analyzing the data.

7.2.1. Anonymisation of the Data

As described in chapter 4.3 the data had to be anonymized during the scanning process by covering the names of the students with post-it labels. This method has the disadvantage of being work intensive and at the same time the post-it label, for covering the name of the student, covers information in the food-scape. In order to reduce the work during scanning and to avoid the coverage of important information the following simplification measure is suggested: Each student/participant gets an identification number together with the instruction for the food-scape and explaining text. Instead of putting the name in the middle of the food-scape, the identification number is used.

7.2.2. Food-Scape and Explaining Text

Writing and Colors

The majority of the food-scapes and explaining texts are done in handwriting which lead to the following challenges in the present work: Accuracy of data collection is depended on the hand writing and the pen or pencil used and the legibility varies widely from very poor to very good. The pdf file seems to get reduces in quality during the importing process to Atlas.ti. The consequence is that it becomes even harder to read the some of the texts. This resulted in an elimination of 20 food-scapes in the present data set (chapter 4.2.3). Therefore it is suggested to use a strong dark pen and eventually write the explaining text with help of a computer.

The same issue appeared with the colors that indicate the food production type (chapter 4.2.2). When the colors used are too light, they are hard or not easily identifiable in Atlas.ti. Therefore it is again important to use strong colors which are clearly distinguishable.

Format

A further challenge was the orientation of the A3 paper used for the food-scapes and the explaining text. For the food-scape itself it is not as critical as for the explaining text. If the explaining text is landscape format it is hard to read the text in one flow because the monitor is too small. There are three suggestions: the first idea is to write the text in portrait format. The second idea is to separate the A3 page in the middle and write on both sides separately which was frequently done in the present data set. However, the first idea has the advantage that the column in Atlas.ti that shows all the codes is clearer. A third possibility would be to use a bigger monitor but it does not seem to be wise to create a data set that depends on the size of the monitor.

Arrangement

In order to do proper coding it is important that the single food providers in the food-scapes are not too close together. This is due to the fact that complications can arise during the analysis due to overlapping of the coded areas.

7.3. Instruction - Content Related

7.3.1. General

A very general fact is that some students preferred to describe their food-provider in the place where they grew up instead of Vienna. The reason for this could be that it was easier to get food from alternative sources there whereas in Vienna they have a hard time following their principles. The issue with that is that it is likely that the parents still have a big influence on the food-providers; therefore it would be interesting to see how the students actually behave when they are solely responsible for their food. For this reason the instruction for the food-scape should require that the students use their present place of living as the basis for their response. In the case that a student still lives at their parents' home it should also be clearly stated in the food-scape.

7.3.2. Food-Scape

Generally it has been noted that the instructions for the food-scapes are not very detailed (chapter 4.2.2). In order to obtain a more precise analysis it is important to give some more specific instruction to the students. This discussion point has the background that in the present data set it was sometimes hard to identify the factors "distance", "importance" and "preference". This is complicated by the fact that every student had their own scale. Fortunately the chosen method with four steps for "distance" and three steps for "importance" and "preference" (chapter 4.4.2) worked out very well with the present data set. However it is not clear how every student defined the different parameters. What did he or she mean by most important? What did he or she mean by far away? Or how is a medium preference defined? That means the information in the present data set is available but fairly sketchy since all information is evaluated in relation to the other parts in the food-scape but not necessarily comparable to other food-scapes. To erase this issue the following suggestions are made to get a more consistent picture and to simplify the analysis for the researcher.

Distance

Instead of just giving the instruction that the distance between the circle in the center and the circle of the food-provider represents the distance between home and the place of purchase the following instruction could be given inspired by ID 127. This respondent implies that the distance is divided in four categories. Suggestive is the following arrangement: less than 10 minutes [2cm] from home, less than 30 minutes [6cm], under 60 minutes [10cm] and more than 60 minutes [14cm]. Each category has a defined length in centimeter as indicated in square brackets in the previous sentence given to the student in the instruction.

Importance

A similar strategy could be applied for the measurement of importance. Rather than simply giving the undifferentiated instruction that the circle size indicates importance it would be better for the analysis to tell the students/participants exact sizes. That means for example that a circle size with an inside diameter of 1cm indicates that this food source has the least importance whereas the food sources that have the highest importance should be marked with a circle that has an inner diameter of 3 cm. All the food sources with importance somewhere in-between should be indicated with 2 cm inner diameter.

Furthermore it is important to clearly define what is meant with the three stages of importance so that all the participants use the same scale. One possibility is that high importance stands for several times a week, medium importance means once a week and low importance means at least once a month. Food-providers that are used less than once a month are excluded from the food-scape.

Additionally it can be interesting to find out the most important food-providers in the sense of the amount of food that is consumed or purchased in a certain place. A possible way is to ask the student/participant to indicate the three food-providers from where they get the biggest amount with the exponent one to three whereas one means the biggest, two means the second biggest and three means the third biggest amount of food.

Preference

The present instructions say that a very thick line represents the highest preference and a very thin line means the lowest preference. There is also the potential to improve the clarity of the preference in the food-scape. ID 76 found a good solution for that. If the circle in the center and the circle of the food-provider are connected with three lines it means that this is the most preferred food-provider whereas one line indicates the lowest preference. If two lines are used it means the preference is somewhere in-between.

Proportion

The fourth parameter included in the food-scape is the way of production (conventional, organic, local and Slow-Food) of the food sources used. This is done by using four different colors. Besides the issue of difficulty identifying the color as described above, the following challenge appeared: Originally closer analysis of the different food sources in respect of their way of production was planned. This turned out to be an issue since not even two thirds of the students indicated the proportion of each category in their food-scape. Therefore it is important to clearly state in the instructions that the amount of each production category should be indicated with the corresponding color. This will avoid a circumstance in which categories that are available at a food-provider but will be marked by drawing one blue and an additional green circle around the food-provider.

Another fact is that local and Slow-Food is either grown organically or conventionally. If the students included the proportion of the food category, the majority of them used local and Slow-Food as own category. This makes it impossible to identify the proper proportion of organic and conventional food. To solve this issue the following strategy is suggested: color the circle with blue (conventional) or green (organic) and mark in each color with brown lines (local) and red dots (Slow Food) the amount of the corresponding characteristic of the food that is purchased or consumed.

7.3.3. Explaining Text

The instruction in the present study asks the student to describe important aspects of the food-scape in the explaining text. This instruction leads to a high variety of information. As described before some explaining texts merely describe what is shown in the food-scape, others indicate where they make their purchases and some food-scapes give deep insight in the reasons for a certain choices and behaviors. If the goal is to get more consistent information or to focus on certain variables, again more detailed instructions are needed. The present data set is a good basis for the creation of this instruction since it covers a wide range of arguments from 100 different persons. The following sub-chapters present several ideas for aspects that seem to be meaningful for the instruction according to the present data set.

Definition of Local and Slow-Food

In the present data set it appeared that the students seem to have their own understanding of local and Slow-Food. Definitions of local arise are varied because there is no official definition of local food (chapter 2.1.2) and therefore it would be interesting to see what the students mean when they talk about local food in the explaining text. Moreover the present data shows that Slow-Food is also not necessarily defined according to the official definition from the Slow-Food organization (Slow-Food, 2014c) therefore it appears to be useful to ask the student for their definition of this food category as well.

Reasons, Attitude and Future Plans

The students should be asked in the instruction to give the reasons for why they use the one or the other food-provider. Furthermore they can be asked for their personal attitude towards the food-providers used and if this playes a role in their decision process. In order to find out whether the students want to change something in their food-scape they can be asked for their future plans and what hinders them to implement them now.

When including all those parameters a good basis for the analysis of the behavior according to the theory of planned behavior (TPB) by Fischbein and Ajzen (Ajzen 1991) is created. There is still the pressure due to the context of the lecture which could be resolved by collecting the data in a different context. Depending on the focus of the researcher, further elements can be added to the TBP (Conner and Armitage, 1998:1452) through stressing them in the instruction.

Improvements for the explaining texts are dependent on how the researchers set the focus for his project. That means depending on the context one or another aspect might be deemed more important and therefore included or excluded from the instruction for the explaining text. The instruction below is a suggestion for an improved version.

7.4. Improved Instruction

The following instruction shows how the improvements suggested in chapter 7.3. can be applied in a new instruction for future participants:

- Take A3 page in portrait format
- Put your ID number that you have gotten during the lecture in the center of the paper surrounded by a circle.
    - If you live with your parents please add one star next to your ID number
- Add with a dark black pen all your food-providers (markets, supermarkets, parents, internet, restaurant, cafes, CSA, food-coop etc.) each in or next to a circle and place them next to your name (figure 7). Mention as many as you actually use. Please create the food-scape for your present place of living and not for a place where you used to live.
- The size of the circle reflects the importance of each food-provider. Importance means how often you visit the one or the other food-provider (inner diameter of 3 cm means most important (several times a week), 1 cm means least important (at least once a month) and 2 cm means in-between (once a week)) (figure 7).
- Please mark the three food-providers from where you get the biggest amount of food from with the number 1 to 3 (1 biggest, 2nd biggest and 3rd biggest amount) (Figure 7).
- The distance between the circle in the center and the circle of the food-provider shows the distance that has to be traveled to get to this place from home (2 cm = <10 min., 6 cm = < 30 min., 10 cm = <60 min. and 14 cm = >60 min.) (figure 7).
- The number of lines connecting you with the food-provider indicates the preference for each food-provider (3 lines highest preference, 1 lines lowest preference and 2 lines means in-between) (figure 7). The preference can be independent from importance and distance.
- Color each food-provider with blue (conventional food) and green (organic food) according to the proportion of food that is purchased or consumed at this place. Please indicate on top of those two colors the proportion of local food with brown lines and Slow Food with red dots. Important: please use strong colors that are clearly distinguishable (figure 7).
- Comment on the back of the paper (portrait format) important aspects professional and competent and please include the following aspects:
    1. Please describe your understanding of organic, local and Slow-Food (it doesn't has to correspond with the official definition).
    2. Your attitude towards the different food-providers. Do you like, dislike, prefer, regret etc. conventional, organic, local and Slow-Food?
    3. The reasons for one or the other food-provider.
    4. Your plan for the future and in case there are differences to your behavior at the moment please describe what the hindering factors for the realization.

And as mentioned before it is up to the researcher to create the instruction in a way that it contains all the elements needed to answer the research questions.

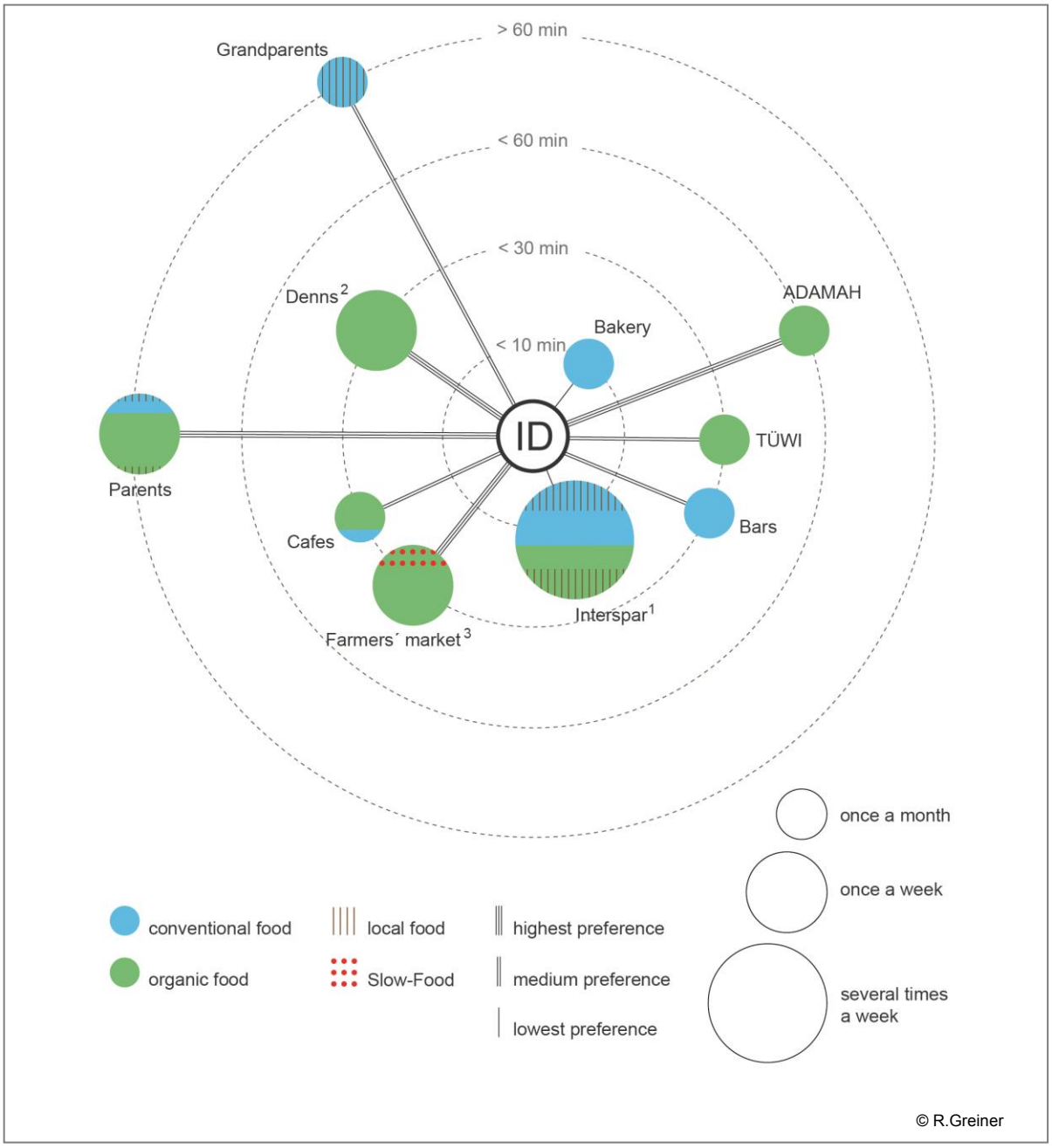


Figure 7: Illustration of a food-scape created according to the improved instruction. The colors indicate the different ways of production. The number of lines connecting the center and the food-provider shows how much the student likes the food-provider. The distance between the center and the food-provider indicates the distance that has to be overcome to get to the food-provider from home (represented in minutes that are needed). The circle size shows the frequency of visits and the exponents 1-3 indicate the three places where the highest amount of food is purchased (1 biggest, 2nd biggest and 3rd biggest amount).

7.5. SWOT Analysis of the Methodology

SWOT is the abbreviation for **s**trength, **w**eaknesses, **o**pportunities and **t**hreads. This analysis tool was developed in the 1960's by the Harvard Business School. The method aims to analyze internal factors in the company and environmental factors on the development (Pelz, s. a.:4-5). This method will be applied on the present data set to evaluate the methodology that has been used. The strength and weaknesses of the applied methodology will be presented and the opportunities and threads of the improved method will be highlighted (table 10).

Strength and Weaknesses of the present Data Set

The strength of the applied method is that is has the potential to get detailed information about the purchasing and consumer behavior of the students in a compact format. However the instruction was sufficiently precise and therefore there are several parameters that should be improved in future research. For example there are no detailed guidelines for the distance, preference importance and proportion in the instruction which is definitely a weakness of the method. A strength of the present data set is that it shows the weaknesses and suggests an improvement of the methodology (table 10).

Table 10: The strength and weaknesses of the present data set as well as the opportunities that are gained through an improvement of the instruction are illustrated with help of a SWOT analysis.

STRENGTH	**WEAKNESS**
- survey of compact and detailed data set - possibility to see what has to be improved in future - attractive way to collect data	- students might be influenced by the content of the lecture - no clear scale for distance, preference, frequency and proportion in the guideline which leads to a subjective evaluation - statistic is not meaningful to apply due to subjective evaluation - open instruction for explaining text - no data about the students background
OPPORTUNITIES	**THREATS**
- detailed compact information on two A3 pages - an objective evaluation is possible due to more detailed instruction and statistics are meaningful at least for the food-scape - the TPB by Fischbein and Ajzen can be used for the analysis of the purchase behavior	- overwhelming the participant with the complex instruction - hard to find a sample population because it needs a big effort to create a food-scape and explaining text - the individual way of presentation gets lost by detailed instruction

Opportunities and Threads of the Improved Methodology

Improvement in the instruction will allow to get more precise data and the data from the food-scape can be objectively analyzed and provide meaningful statistics. The thread for this improvement is that the instruction gets very complex which could make the participant feel overwhelmed. Generally, the methodology is time intensive for the participant, which could lead to difficulties finding enough participants outside the framework of the lecture (table 10).

The method seems to be promising. In general it is wise to create the instruction according to a planned strategy for the analysis instead of using a given data set and then developing a strategy. However, the present work could be seen as a pretest for further studies. The data set helped to develop a method to analyze the food-scapes and explaining text independent from subjective evaluation of the researcher. Furthermore, it shows important elements of instruction that should be added to future instructions given to the student/participant.

8. Shortcomings, Further Research Recommendations and Concluding Thoughts

8.1. Shortcoming Aspects

There are two topics that might have been analyzed in the present data set. The single locations could have analyzed in detailed instead of putting them together in food-provider groups. Also the question for differences between male and female students could have been compared since the sex of the students is known. For future studies it is recommended to take a closer look at the sex since some studies indicate that there are gender-related differences (Zámková and Prokop, 2013:1199, Yiridoe et al., 2005:196) but it is unclear whether this is also true students that participated the lecture “Slow, Fair, Local – Innovation Organic Farming”.

8.2. Recommendations for Further Research

It is also recommended that a questionnaire is included in order to obtain sociodemographic and other information about the students which will allow for further comparisons. Some possible examples are income (Zámková and Prokop, 2013:1197) as well as age, family size, occupation, education (Yiridoe et al., 2005:196) etc. which could all have an influence on the decision-making and purchasing process of alternative food sources.

It would be very interesting to get data from a group of people in the agricultural and nutritional sector that corresponds to the students but 20 to 30 years later. Furthermore it would be interesting to do a comparison with students which a different subject focus and compare it to the students with the agricultural and nutritional science background. Another possibility is to choose a sample population that is representative of society and compare the result of the current students with that control sample.

In order to prove how much influence the lecture had on the students attitude which then may have influenced the food-scape one could create a design where the data is collected from two groups which each received a different introduction to the topic.

There are many possibilities which could be explored by collecting the data in different ways in addition to gathering some more personal information about the students.

8.3. Conclusion

The present thesis provides detailed information about the students’ consumer and purchasing behavior. Even though the context of the lecture might have had an influence the results mostly correspond with the findings in previous studies. Furthermore there is the potential to explain the behavior of the students with help the theory of planned behavior by Fischbein and Ajzen.

The applied methodology indicates that the food-scapes and explaining text have the capacity to give detailed information about the complex area of consumer and purchasing behavior. Nevertheless an improvement of the method is necessary for more precise results.

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Appendix

German Instruction

Appendix 1: Original instruction for creation of food-scape and explaining text.

PÜFUNG Teil2
SLOW FAIR LOKAL
Innovationen in der Ökologischen Landwirtschaft

Die Benotung für einen positiven Abschluss der Lehrveranstaltung setzt sich aus zwei Teilen zusammen:

Multiple-Choice Test:

Diese Prüfung findet nach der zweiten Einheit, also am Mittwoch, 23. Oktober 2013 statt. Geprüft werden Inhalte, die von den Vortragenden angesprochen werden.

Hausarbeit:

- Nehmen Sie ein weißes A3 Blatt.
- Tragen Sie deutlich lesbar Ihren Nachnamen, Vornamen und ihre Matrikelnummer ein.
- Zeichnen Sie Ihre Lebensmittelversorgungslandschaft (LMVlandschaft) mit Bleistift. Die Vorgaben hierzu sind einzuhalten: Zeichnen Sie sich selbst als Kreis mit ihrem Vornamen in die Mitte. Gruppieren Sie ihre Versorger (Märkte, Supermärkte, Eltern, Internetversand, Beisl, Kaffeehaus, CSA, Coop) als Kreise neben sich ein und benennen sie diese. Zeichnen Sie so viele Versorger wie möglich, aber nur so viele, dass diese deutlich erkennbar und die Bezeichnungen lesbar sind.
- Die Größe des Kreises im Vergleich zu den anderen Kreisen gibt die Bedeutung wieder: Je größer, desto öfter kaufe/esse/trinke ich dort.
- Die Entfernung der Kreise gibt die Erreichbarkeit oder Entfernung an, die Sie zurückliegen müssen.
- Die Farbe der Kreise (Kreise sollen durch verschiedene Farben gekennzeichnet sein! Sie können nach dem Zeichnen mit einem Bleistift einfärben) gibt die Zuordnung zu diesen Kategorien wieder:
  - Hier beziehe ich lokale Lebensmittel: Braun
  - Hier beziehe ich Biolebensmittel: Grün
  - Hier beziehe ich Slow Food: Rot
  - Hier beziehe ich konventionelle Lebensmittel: Blau
- Tragen Sie mit der Dicke eines Striches zu dem Versorger ein wo sie am liebsten einkaufen / essen (dies kann ja unabhängig von Entfernung oder Häufigkeit sein!): Von "sehr fett" für "am liebsten" zu ganz dünn (am wenigsten gern).
- Kommentieren und erklären sie auf der Rückseite (Bezug zur LMVlandschaft z.B. mit Endnoten herstellen) einzelne Ihnen wesentliche Aspekte der LMVlandschaft fachlich kompetent.
- Ergänzen Sie Ihnen fachlich sinnvoll erscheinende Aspekte grafisch oder als Text.

Empfehlung: Machen sie sich zuerst eine Skizze!

Beurteilt werden u.a. Lesbarkeit, Nachvollziehbarkeit und Verständlichkeit, Realitätsnähe des dargestellten Umfanges an Elementen der „Landschaft"; Qualität der Kommentare; Qualität der individuellen Ergänzungen

Geben Sie das Blatt bis spätestens am 20.11.2013 im Sekretariat des IFÖL ab. Benotet werden nur Personen, die beide Prüfungsteile (Test und Versorgungslandschaft) abgegeben haben.

All Codes that Have Been Used in this Master Thesis

Appendix 2: The frequency of the food-providers sorted by the food-provider groups (A-F).

A) Supermarkets, Discounter and Retail

FREQUENCY	CODE	EXPLANAITION
37	#S_bak_X	S = Laden (store)
16	#S_bak_ Felber	bak = Bäckerei (bakery)
10	#S_bak_Sonstige	
8	#S_bak_Ströck	
5	#S_bak_Anker	
4	#S_bak_Gradwohl (bio)	
3	#S_bak_Backwerk	
2	#S_bak_der Mann	
57	#S_dis_Hofer	dis = Discounter (discounter)
10	#S_dis_Penny	
4	#S_dis_Lidl	
62	#S_leh_Billa	leh = Lebensmitteleinzelhandel (food retailing)
50	#S_leh_Spar	
33	#S_leh_Merkur	
32	#S_leh_X	
16	#S_leh_Zielpunkt	
9	#S_leh_Interspar	
6	#S_leh_Sonstige	
3	#S_leh_Adeg	
3	#S_leh_Sonnentor	
3	#S_leh_Türkischer-Laden	
2	#S_leh_Asia Supermarkt	
2	#S_leh_Maran Vegan	
10	#S_me/fl_X	me = Metzger (butcher)
2	#S_me_Radatz	

B) Gastronomy

FREQUENCY	CODE	EXPLANATIONS
6	#G_bc_X	G= Gastronomie (gastronomy)
1	#G_bc_Blue Tomato	bc = Bar/Klub (bar/club)
1	#G_bc_Dachboden	
1	#G_bc_K.u.K	
1	#G_bc_Ratz Haus	
1	#G_bc_Schikaneder	
1	#G_bc_Speak Easy	
19	#G_c_X	c= Café (café)
4	#G_c_Weltcafe	
3	#G_c_Starbucks	
2	#G_c_Freiraum	
2	#G_c_Latte	
2	#G_c_Ludwig und Adele	
2	#G_c_Tunnel	
1	#G_c_12 munchies	
1	#G_c_Augustin	
1	#G_c_Beno	
1	#G_c_Blaustern Cafe	
1	#G_c_Cafe Aumannplatz	
1	#G_c_Cafe Möbel	

1	#G_c_Cafe Tunnel	
1	#G_c_Deli	
1	#g_c_Eduscho	
1	#G_c_Frame	
1	#G_c_Gagarin	
1	#G_c_Isola und Bella (eis)	
1	#G_c_Kanzlei	
1	#G_c_Palmenhaus	
1	#G_c_Phil	
1	#G_c_Posthof	
1	#G_c_Segafredo	
1	#G_c_Strozzi	
1	#G_c_Veganista (eis)	
1	#G_c_Winter	
21	#G_i_Imbissstand	i = Imbiss (snack)
7	#G_gastronomie	
39	#G_r_X	r = Restaurant (restaurant)
32	#G_r_fastfood/Take away/Lieferservice	
10	#G_r_Deewan	
8	#G_r_Pizzaria	
6	#G_r_Vapiano	
5	#G_r_Heurige	
4	#G_r_Sushi	
2	#G_r_Centimeter	
2	#G_r_Kais (asiatisch)	
2	#G_r_Werkzeug	
2	#G_r_Yamm	
1	#G_r_Aida	
1	#G_r_Alegro	
1	#G_r_Alfa	
1	#G_r_Apfelbaum	
1	#G_r_Asiat	
1	#g_r_AudimaxBuffet	
1	#G_r_Beisl Kringers	
1	#G_r_Bitzinger	
1	#G_r_Bizzo (bio)	
1	#G_r_Burger de Ville	
1	#G_r_Coeo (thai)	
1	#G_r_Dorfgasthaus	
1	#G_r_Famosa (vegan)	
1	#G_r_Fischbräu	
1	#G_r_Gagarin	
1	#G_r_Galaxy	
1	#G_r_GOA	
1	#G_r_Helmahof	
1	#G_r_Hitomi	
1	#G_r_Koinonia	
1	#G_r_Kult	
1	#G_r_Landgasthaus Assl (alternativ)	
1	#G_r_Le Bol	
1	#G_r_Lendie (veg)	
1	#G_r_Luculus	
1	#G_r_Mauls Wirtshaus	
1	#G_r_Medl bräu	
1	#G_r_Mosoon (indisch)	

1	#G_r_Motte	
1	#G_r_Motto am Fluss	
1	#G_r_Müslibar	
1	#G_r_Neni	
1	#G_r_nordsee	
1	#G_r_Panchos	
1	#G_r_Panorama	
1	#G_r_Pars	
1	#G_r_Pepino	
1	#G_r_Pizza Gwölb	
1	#G_r_pizza mediterano	
1	#G_r_Pizzeria Posta	
1	#G_r_ragazzi (it)	
1	#g_r_Rasouli	
1	#G_r_Rochus	
1	#G_r_Sap-Kantine	
1	#G_r_Schilligner (vegan)	
1	#G_r_Schlossbräu	
1	#G_r_Schlosserei	
1	#G_r_Sebastiano (it)	
1	#G_r_Sesante Pizza	
1	#G_r_Spring Asia	
1	#G_r_Theli (ind)	
1	#G_r_Victos und Mili (it)	
1	#G_r_XPEDIT	
1	#G_r_Yoi	
48	#GU_r/nl_TÜWI&/Hofladen (Uni)	GU = Gastronomie an Uni (gastronomy on campus)
25	#GU_r_Mensa (Uni)	
8	#GU_i_Innenhofstand (Uni)	
5	#GU_i_Kebab Stand (Uni)	
3	#GU_Kaffe- & Snackautomat (Uni)	

C) Private Sources

FREQUENCY	CODE	EXPLANATIONS
81	#P_Familie	P = Private Quellen (private source)
41	#P_Bekannte/Freunde/Partner	
21	#P_Familie Eigenanbau	
17	#P_eigener Anbau	

D) Direct Marketing

FREQUENCY	CODE	EXPLANATIONS
20	#M_X	M = Markt (farmers market)
19	#M_Naschmarkt	
14	#D_Abhof	D = direct am Hof (on farm)
11	#M_Bauernmarkt	
8	#M_Brunnenmarkt	
8	#M_Sonstige Märkte Wien	
7	#D_Adamer Laden/Gemüsekiste/Markt)	
6	#M_Kutscher Markt	
5	#M_Freyung	
4	#D_Bauernladen	
3	#D_Biobauer	
3	#M_Hannover Markt	
2	#D_Imker	

2	#D_Ochsenherz (Hof/CSA)	
2	#D_Weingut	
2	#M_Handelskai	
2	#M_Kammeliter Markt	
2	#M_Markt der Erde	
2	#M_Meiselmarkt	

E) Organic Supermarkets and Whole Food Stores

FREQUENCY	CODE	EXPLANATIONS
24	#S_dr_DM/Alnatura	dr = Drogerie (drugstore)
15	#S_nl_Reformhaus	nl = Naturkost laden (whole food store
11	#S_bs_Denns	
6	#S_bs_X	bs = Bio-Supermarkt (organic supermarket)
3	#S_bs_BioBasic	
3	#S_bs_Sonstige	
3	#S_nl_Sonstige	
1	#S_dr_Müller	

F) Other Food Sources

FREQUENCY	CODE	EXPLANATIONS
10	#A_Food Coop	A = andere Quellen (oterh sources)
8	#A_Online Versand	
6	#A_Sonstiges	
5	#A_Dumpstern	
3	#A_Food Sharing/Kartoffeldealer/Nachernte Feld	
3	#A_Versuchsstation Jedlersdorf	

Appendix 3:Frequency of the food-provider with the highest importance and the corresponding code that has been used in Atlas.ti.

FREQUENCY	FOOD-PROVIDER	CODE
20	Parents	H_parents
17	Hofer	H_Hofer
17	Main source not identifiable	H_X
14	Supermarket X	H_supermarket
13	Billa	H_Billa
10	Spar/Interspar	H_Spar/Interspar
8	Merkur	H_Merkur
5	Farmer' market	H_Markt
4	Food Coop	H_Coop
2	Personal production	H_Eigen
2	Friends	H_Freunde/Bekannte
2	TÜWI/Hofladen (on campus)	H_TÜWI
1	Adamer (CSA)	H_CSA
1	Out of home	H_Außerhaus
1	DM/Alnatura	H_DM/Alnatura
1	Dumpster diving	H_Dumpstern
1	Lidl	H_Lidl
1	Mensa (on campus)	H_Mensa
1	Online order	H_Online
1	Penny	H_Penny
1	Zielpunkt	H_Zielpunkt

Appendix 4: Frequency of the codes distance (*dist), importance (*imp), preference (*pref) and proportion (*prop).

CODE	FREQUENCY
*dist_?	8
*dist_1	310
*dist_2	354
*dist_3	339
*dist_4	111
*imp_?	0
*imp_1	194
*imp_2	403
*imp_3	525
*pref_?	32
*pref_1	319
*pref_2	391
*pref_3	380
+prop_1	22
+prop_2	34
+prop_3	44

Appendix 5: The frequency of the reasons given by the students for using the one or the other food- sources sorted by the assigned umbrella reason (A-K). *Explanations of the abbreviations are at the end of the list.

FREQUENCY	CODE	UMBRELLA REASON
A)		
14	GS_allg_Preis +	Price
13	G_allg_Kosten +/-	Price
8	G_bio_teuer -	Price
6	GM_teuer/verfügbare Geld-	Price
5	GB_Preis -	Price
5	GF_muss nicht dafür bezahlen +	Price
4	GD_Hofer_günstige Bio Produkte +	Price
3	G_konv_Preis +	Price
3	GD_allg_Günstig +	Price
3	GG_allg_Preis -	Price
3	GS_Zeilpunkt_günstig +	Price
2	GC_kostenlos+	Price
2	GD_Hofer_günstig +	Price
2	GG_Deewan_pay as much as you wish +	Price
2	GG_Mensa_günstige Preise +	Price
2	GS_allg_Aktionsangebote (günstig) +	Price
2	GX_Dumstern_umsonst +	Price
1	GE_günstig +	Price
1	GG_TÜWI_Studenten Rabatt+	Price
1	GG_TÜWI_teuer -	Price
1	GM_Preisnachlass wegen arbeit+	Price
1	GS_Merkur_teuer -	Price
1	GS_Spar(Gourmet)_günstige Eigenmarke +	Price
1	GS_Zielpunkt_günstige Markenprodukte +	Price
1	GX_Abverkauf_um Geld zu sparen +	Price
1	GX_Food-Coop_preiswert +	Price
1	GX_me_Preis -	Price
1	GX_Online Versand_günstiger wie Supermarkt +	Price

2	G_allg_Preis-Leistungsverhältnis +/-	Price/Performance
2	GD_Hofer_gute Qualität im Bezug auf Preis +	Price/Performance
1	GS_Gutes Preis/Leistungsverhältnis +	Price/Performance
1	GS_Spar_gutes Preisleistungsverhältnis +	Price/Performance
B)		
25	GS_allg_gute Erreichbarkeit/Nähe +	Availability
16	G_allg_Kurze Wege+	Availability
12	G_allg_Entfernung/Erreichbarkeit +/-	Availability
6	GM_weite Enfternung -	Availability
3	GG_Mensa_Abwechslung/Auswahl +	Availability
2	GB_nicht in nächster Nähe -	Availability
2	GD_allg_Nähe +	Availability
2	GG_Fastfood_was grad in Nähe ist +	Availability
2	GG_TÜWI_Nähe zu Uni +	Availability
2	GS_allg_Dauerverfügbarkeit (öffnungzeiten) +	Availability
1	G_bio_nicht alle Produkte Verfügbarkeit-	Availability
1	G_konv_Nähe +	Availability
1	GA_Entfernung -	Availability
1	GBä_kein Biobäcker in Nähe -	Availability
1	GM_einer direkt in unmittelbarer Nähe +	Availability
1	GS_allg_unüberlegte Spontaneinkäufe+	Availability
1	GS_Merkur_nähsten+	Availability
1	GS_Spar_Spontaneienkäufe Nähe +	Availability
1	GS_Zielpunkt_Nähe +	Availability
1	GS_Zielpunkt_Spontaneinkäufe +	Availability
1	GG_i_auf dem Weg +	Availability
C)		
6	G_allg_Unklarheit über Ursprung -	Origin
6	GM_Regionalität+	Origin
5	GE_kennt Herkunft +	Origin
4	G_allg_Herkunft +/-	Origin
4	GS_allg_Unklarheit über Herkunft -	Origin
3	GD_Hofer_regionale Produkte (einige) +	Origin
3	GG_allg_Unwissheit Herkunft -	Origin
2	GF_weiß 100% wie produziert wurde +	Origin
2	GG_allg_Speisen oft konventionell -	Origin
2	GG_allg_Unwissen Qualität -	Origin
2	GX_Food-Coop_Information über Herkunft +	Origin
1	G_regional_schwerer Zugang in Wien -	Origin
1	GA_gringe Transportwege +	Origin
1	GA_weiß wie produziert +	Origin
1	GB_wenig regionale Produkte -	Origin
1	GBä_konventionell -	Origin
1	GBä_Ursprung der Zutaten nicht klar -	Origin
1	GD_allg_keine lokale Lebensmittel angeboten -	Origin
1	GD_Hofer_regionale Bioprodukte +	Origin
1	GD_Hofer_saisonale Produkte +	Origin
1	GD_Lidl_wenig regionale Produkte -	Origin
1	GE_regional +	Origin
1	GE_saisonal +	Origin
1	GG_Deewan_keine Angabe über Herkunft der Produkte -	Origin
1	GG_spez. restaurants_Regionalität+	Origin
1	GM_Saisonalität +	Origin
1	GM_Ursprung bekannt+	Origin
1	GM_Ursprung des Produkts nicht klar ersichtlich -	Origin

1	GS_allg_wenig lokale Produkte -	Origin
1	GS_Interspar_regionale Produkte +	Origin
1	GX_Bier_sollte reginal sein +	Origin
1	GX_Food-Coop_regional+	Origin
1	GX_Food-Coop_saisonal+	Origin
1	GX_Liefersive_Herkunft unklar -	Origin
1	GX_me_Regionalität +	Origin
D)		
8	G_allg_Qualität +/-	Quality
7	GM_Qualität+	Quality
4	GD_Hofer_Frische +	Quality
4	GM_Geschmack+	Quality
3	GM_Frische +	Quality
2	G_bio_besserer Geschmack +	Quality
2	GBäBio_besserer Geschmack +	Quality
2	GD_allg_gute Qualität +	Quality
2	GF_frisch und gesund +	Quality
2	GG_Mensa_Qualität -	Quality
2	GM_Zweifel an Qualität -	Quality
2	GS_allg_Qualität -	Quality
1	GA_Qualität +	Quality
1	GBä__Qualität -	Quality
1	GBä_Frisch +	Quality
1	GE_guter Geschmack +	Quality
1	GE_Qualität +	Quality
1	GF_ähnliche Qualitätsvorstellung +	Quality
1	GF_frisch gekocht +	Quality
1	GF_frische Produkte +	Quality
1	GG_fastfood_schmeckt nicht -	Quality
1	GG_i_lecker +	Quality
1	GG_spez. restaurants_Geschmack +	Quality
1	GG_spez. restaurants_Qualität +	Quality
1	GG_T_Gute Qualität +	Quality
1	GG_Uni_mittlere Qualität -	Quality
1	GM_kein Norm-Gemüse +	Quality
1	GS_Interspar_Qualität +	Quality
1	GS_Merkur_gute Qualität +	Quality
1	GS_Spar(Gourmet)_gute Qualität +	Quality
1	GX_Dumstern_niedrige Qualität -	Quality
1	GX_me_Qualität +	Quality
E)		
9	GS_allg_großes Sortiment +	Assortment
6	GD_Hofer_Marke:Zurück zum Ursprung +	Assortment
4	GS_Merkur_großes Sortiment+	Availability
2	GS_Billa_großes Sortiment +	Assortment
2	GS_Interspar_großes Sortiment +	Assortment
2	GS_Interspar_gutes bio Sortiment +	Assortment
2	GS_Merkur_gutes Angebot bio und regional+	Assortment
2	GS_Zielpunkt_kein gutes Sortiment -	Assortment
2	GS_Billa_Eigenmarke +	Assortment
1	GB_Reformahaus_exlusivere Produkte +	Assortment
1	GD_Hofer_Heumilch Produkte +	Assortment
1	GM_ausgefallene Produkte (Vielfalt) +	Assortment
1	GS_allg_gutes Sortiment alternative Resourcen +	Assortment
1	GS_Billa_gute Bio Produkte +	Assortment

1	GS_Interspar_biologische Produkte +	Assortment
1	GS_Spar(Gourmet)_großes Sortiment +	Assortment
1	GS_Spar_gutes Biosortiment +	Assortment
1	GS_Zielpunkt_gutes Sortiment +	Assortment
1	GS_Zielpunkt_regional im Sortiment +	Assortment
1	GX_DM_ausgefallene Produkte +	Assortment
F)		
7	G_allg_Zeit	Time
7	GBä_schnelles Essen+	Time
7	GG_Fastfood_Zeit +	Time
5	GG_i_wenig Zeit+	Time
4	GM_Zeitaufwand -	Time
3	GB_Zeitaufwendig -	Time
1	GG_Mensa_Zeit +	Time
1	GX_eigener anbau_Zeitaufwand -	Time
1	GX_lieferservice_Zeitmangel +	Time
1	GX_Online Versand_Zeitersparnis +	Time
G)		
5	GG_allg_Freunde Treffen und Entspannen +	Sozial aspects
5	GM_Kontakt und Gespräch mit Produzenten +	Sozial aspects
5	GX_Food Coop_Kontakt zum Produzenten +	Sozial aspects
3	GA_Kontakt zu Produzenten +	Sozial aspects
3	GG_allg_gemeinsames Essen+	Sozial aspects
2	GG_c_Freunde treffen +	Sozial aspects
1	GF_gemeinsames Essen +	Sozial aspects
1	GG_i_gesellschaftliche Gründe +	Sozial aspects
1	GX_Food-coop_Kontakt mit anderen Mitgliedern +	Sozial aspects
H)		
5	GM_Atmosphere +	Atmosphere
3	GG_TÜWI/Hofladen_Atmosphere +	Atmosphere
3	GS_Zielpunkt_Atmosphäre -	Atmosphere
2	GG_allg_Atmosphere +	Atmosphere
1	G_allg_Atmosphere +/-	Atmosphere
1	GB_Reformhaus_Atmosphere +	Atmosphere
1	GD_Hofer_Atmosphere -	Atmosphere
1	GD_Lidl_Atmosphere -	Atmosphere
1	GS_allg_Atmosphere -	Atmosphere
1	GS_Interspar_Atmospere +	Atmosphere
1	GS_Interspar_zu groß -	Atmosphere
I)		
7	GC_zeichen gegen Lebensmittelverschwendung +	Protest
1	GX_Adama (Gemüsekiste)_Konkurenz zu Supermarkt +	Protest
1	GC_nicht unterstützen von großen Ketten +	Protest
1	GX_Food Sharing_ Zeichen gegen Lebensmittelverschwendung +	Protest
J)		
1	G_allg_Kurze Transportwege +	Environment
1	G_bio_umweltschonend+	Environment
1	G_regional_umwelt+	Environment
1	GB_Umwelt +	Environment
1	GD_Hofer_Förderung Artenvielfalt (WWF) +	Environment
1	GE_keien Transportwege +	Environment
1	GS_allg_ökologische Bedenken -	Environment
1	GS_allg_Transportwege -	Environment
1	GX_eigener anbau_Reduzierung Fußabdruck +	Environment

K)		
4	GE_Bezug zum Lebensmittel +	Awareness
1	GE_Bezug zu Natur +	Awareness
1	GX_eigener Anbau_Bezug zur Umwelt +	Awareness
1	GX_Food-Coop_Nähe zu Produkt +	Awareness
3	G_allg_Bequemlichkeit +/-	Comfort
2	G_konv_Bequemlichkeit +	Comfort
1	GX_lieferservice_Bequemlichkeit +	Comfort
2	GD_Hofer_biologische Produkte (einige) +	Organic
1	G_allg_Bio +/-	Organic
1	GBä_wenig Bio -	Organic
1	GF_Bio +	Organic
1	GG_TÜWI_ökologische Produkte +	Organic
1	GA_Kein Zwischenhändler +	Economy system
1	GA_Unterstützung Kleinbäuerlicher Betriebe +	Economy system
1	GA_Wertschöpfung bleibt beim Landwirt +	Economy system
1	GS_allg_Förderung Monopols -	Economy system
1	GS_allg_Geschäftsbedingungen für Klein-Produzenten -	Economy system
1	GS_Wie viel geld bekommen Betrieb?	Economy system
2	G_allg_Verpackung +/-	Packaging
1	GBä_Plastiktüten -	Packaging
1	GE_keine Verpackung +	Packaging
1	GM_wenig (Plasitk-)verpackung +	Packaging
1	GS_allg_Verpackung -	Packaging
1	GB_Gesundheitaspekt +	Health
1	GF_gesund gekocht +	Health
1	GG_i_nicht gesund -	Health
1	GG_TÜWI_gesundes Essen +	Health
1	G_bio_besseres Gewissen +	Emotions
1	GC_Angst vor Konzequenzen -	Emotions
1	GC_gutes Gewissen+	Emotions
1	GE_gutes Gefühl +	Emotions
2	G_bio_artgerechte Tierhaltung +	Ethical concerns
1	GG_fasfood_ethische Bedenken -	Ethical concerns
1	GS_allg_ethische Bedenken -	Ethical concerns
2	G_allg_Abverkaufprodukte +	Sale
1	GD_Hofer_Reduzierung Artikel vor Ablauf +	Sale
2	GS_allg_Informationsmangel -	Information
1	GM_nicht informiert wo -	Information
3	GM_Menge selbst bestimmbar +	Amount
1	GS_Billa_Keine Schlange an Kasse +	Service
1	GS_Spar_nettes Personal +	Service
1	GX_me_gute Beratung +	Service
1	G_allg_Gewohnheit +/-	Habit
1	G_bio_Gewohnheit durch Eltern +	Habit
1	GS_allg_Wegwerfpolitik -	Criticism
1	GX_Adama (Gemüskiste)_kein kleiner Betrieb -	Criticism
2	GG_TÜWI_gutes Konzept +	Philosophy
1	GBä_verdrängung handwerklicher Bäcker -	Tradition
1	GX_me_altes Handwerk bleibt erhalten +	Tradition
1	GS_allg_soziökonomische Bedenken -	Others
1	GE_Selbstversorgung +	Others
1	GE_nach eigenen Vorstellungen Hergestellt +	Others
1	GA_Vertrauen +	Others

1	G_allg_Vorliebe +/-	Others
1	GM_Witterung -	Others

***Explanation of the abbreviations:**

GA = Grund Abhof (reason from farm)

GB = Grund Bio (reason organic)

GBä = Grund Bäcker (reason bakery)

GBäBio = Grund Biobäcker (reason organic bakery)

GC = Grund Containern (reason dumpster diving)

GD = Grund Discounter (reason discounter)

GE = Grund Eigenanbau (reason personal production)

GF = Grund Familie (reason family)

GG = Grund Gastronomie (reason gastronomy)

GM = Grund Markt (reason farmers market)

GS = Grund Supermarkt (reason supermarket)

GX = Grund gemischt (mixed)

Appendix 6: The student's attitude (X) towards different foods and food-providers and the frequency of application in the present data set (X_category_attitude)

FREQUENCY	ATTITUDE
34	X_allg_potitive Einstellung gegenüber biologischen Lebensmittel
32	X_allg_positive Einstellung gegenüber regionalen Produkten
11	X_allg_positive Einstellung gegenüber alternative Lebensmittel
9	X_allg_positive Einstellung gegenüber saisonalen Produkten
8	X_Gastronomie_nicht so sehr auf Herkunft geachtet
3	X_alllg_Zweifel an Bio
2	X_allg_Kleinbäuerliche landwirtschaft fördern
2	X_allg_Nachhaltikeit ist wichtig
1	X_allg_bereit mehr Geld für besseren Geschmack und Qulität auszugeben
1	X_allg_Gentechnikfrei wichtig
1	X_allg_höhere prefernz -->bereit mehr zu zahlen
1	X_allg_nicht alle Produkte müssen biologisch sein
1	X_allg_Preis spiegelt Qualität
1	X_allg_schade das vielen Meschen egal was essen
1	X_allg_Wo geht Geld für regional und bio hin?
1	X_allg_Wohlfühlen ist wichtiger als Preis
1	X_bio_bereit mehr Geld dafür auszugeben
1	X_Gastronomie_bio ist wichtig
1	X_Gastronomie_Regonalität wichtig
1	X_Gemüse und Obst_Herkunft und Produktionsweise besonders wichtig

Appendix 7: Frequency of codes that indicate what the students want to change in future (Y) (Y_future plan)

FREQUENCY	PLAN FOR FUTURE CHANGE
7	Y_möchte an Food Coop teilnehmen
5	Y_mehr über Direktvermarkter/Markt
5	Y_weniger in Supermakt gehen
4	Y_Anteil selbstanbau (erhöhen)
3	Y_mehr biologische Produkte
3	Y_mehr regionale Produkte
2	Y_dumpstern
2	Y_mehr Geld =mehr alternative Sourcen
1	Y_Slow Food wenn Familie/Haushalt teilt
1	Y_Wunsch anderst zu handeln
1	Y_würde gerne an mehr Orten einkaufen

Appendix 8: The frequency of codes that describe way how students present their own behavior (W_how)

FREQUENCY	HOW
	Technical aspect
55	W_ausführlich
45	W_kurz
	Content related
46	W_sachlich Verhalten beschrieben
27	W_beschreiben was es wo gibt/ welche produkte wo gekauft
11	W_bedauernd das nicht mehr alternative Quellen nutzt bzw. auf konv. ausweichen muss
11	W_reflektiert
7	W_betont/hervorgehoben das alternative Sourcen wichtig
6	W_beschreibend
6	W_sehr aktiv bemüht biologsich und regionale Produkte zu kaufen und konsumieren
5	W_kaum neue Information
4	W_Diskutiert allgemeiner Zustand
4	W_es wird kein Aufwand für alternative Sourcen betrieben
1	W_bio und reginal nicht wichtigste

Reasons

Appendix 9 Hierarchical list of reasons stated by the students sorted by the 32 umbrella terms

	UMBRELLA REASONS	FREQUENCY OF CODED REASONS	NUMBER OF CODE REASONS IN %
1	**Price**	96	18,6
2	**Availability**	83	16,1
3	**Origin**	63	12,2
4	**Quality**	60	11,6
5	**Assortment**	42	8,1
6	**Time**	37	7,2
7	**Social aspect**	26	5,0
8	**Atmosphere**	20	3,9
9	**Protest**	10	1,9
10	**Environment**	9	1,7
11	**Awareness**	7	1,4
12	**Comfort**	6	1,2
13	**Organic**	6	1,2
14	**Economic system**	6	1,2
15	**Packaging**	6	1,2
16	**Heath**	5	1,0
17	**Emotions**	4	0,8
18	**Ethical concerns**	4	0,8
19	**Sale**	3	0,6
20	**Information**	3	0,6
21	**Amount**	3	0,6
22	**Service**	3	0,6
23	**Habit**	2	0,4
24	**Criticism**	2	0,4
25	**Philosophy**	2	0,4
26	**Tradition**	2	0,4
27	**Others**	1	0,2
28	**Others**	1	0,2
29	**Others**	1	0,2
30	**Others**	1	0,2
31	**Others**	1	0,2
32	**Others**	1	0,2
	Sum	**513**	**100.0**

Data Storage Device (CD)