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Targeting language markets through Web localization: A case study of a digital cloud service

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Abstract of master's thesis

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Abstract

Language and translation issues are a current and important topic in international business and marketing, as companies operate in an increasingly global and multilingual business environment. Yet, language issues have received relatively little attention in academic research due to the fact that language is often seen as a sub-category of culture and thus studied as a part of other cross-cultural aspects. In this study, the focus is on language and translation. Most people use the Internet in their non-native language, hence it is important to understand how language affects Internet usage and user attitudes. The objective of this study was to better understand the role of language in Web localization, and more specifically, in localization of a digital cloud service. The issue was studied from both the perspective of the service provider and the service user. The service provider's perspective focused on studying the language-related issues that occur during a localization process. The user's perspective, on the other hand, relied on a single user's attitudes and perceptions towards the importance of using one's native language in a cloud service.

The study was conducted as a mixed-method case study including both qualitative and quantitative data. The object of the case study was a recently launched Finnish cloud service, *younited* by F-Secure. The qualitative data was collected through individual and group interviews of six people at the case company and the quantitative data through an online survey of the users of the cloud service. The survey instrument was provided in four languages: English, Finnish, Swedish, and German. A total of 315 responses were obtained. The qualitative data was analyzed through thematic content analysis and the quantitative data through various quantitative research methods, including cross-tabulation, exploratory factor analysis, t-tests and analysis of variance.

The results of the study indicate that even though a digital service can plausibly be launched in English, reaching a significant market share requires localization. Therefore to reach full market potential, localization of digital services should be targeted to language markets instead of geographical areas. In addition, the survey results show that the need for localized Web content varies between users depending on age, English-language competence, level of technological adaptation, and English orientation. Furthermore, early adopters of a new digital cloud service do not seem to desire localized Web content, but they highly appreciate the quality of the language. This group of users is characterized by competent language skills and heavy use of Internet and other IT services. The majority of early adopters were men between the age of 21 and 45. In conclusion, the concept of localization should be seen in a new way in the context of digital services. The development cycle of digital services is too fast for traditional, profound localization systems to function effectively. Consequently, the findings illustrate that translation, language quality and technical suitability of the language are the key drivers of successful localization in the context of digital services.

Keywords Web localization, translation, language, digital service, cloud service, user experience, online customer experience

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Tiivistelmä

Kieleen ja kääntämiseen liittyvät kysymykset ovat yhä tärkeämpi osa kansainvälisten yritysten toimintaa ja erityisesti markkinointia. Kielen merkitystä ja vaikutuksia liiketoimintaan on kuitenkin tutkittu suhteellisen vähän, sillä kieli nähdään usein osana kulttuuria ja näin ollen kielitutkimus on keskittynyt pääosin tutkimaan kielen merkitystä yhtenä osana muita kulttuuritekijöitä. Tämä tutkimus keskittyy tarkastelemaan kielen ja kääntämisen merkitystä verkkolokalisoinnissa. Verkkopalveluita käytetään usein vieraalla kielellä, joten on tärkeää ymmärtää, miten kieli vaikuttaa asiakkaan käyttäytymiseen ja asenteisiin. Tutkimuksen tavoitteena oli ymmärtää paremmin kielen merkitystä digitaalisen palvelun lokalisoinnissa sekä palveluntarjoajan että asiakkaan näkökulmasta. Palveluntarjoajan perspektiivi keskittyi tutkimaan kieleen liittyviä haasteita ja mahdollisuuksia lokalisointiprosessin aikana. Asiakkaan näkökulma puolestaan tutki yksittäisen käyttäjän suhtautumista kieleen ja siihen, kuinka tärkeää asiakkaalle on, että hän voi käyttää digitaalista pilvipalvelua omalla äidinkielellään.

Tutkimuksessa hyödynnettiin sekä laadullisia että määrällisiä tutkimusmenetelmiä. Tutkimus oli case-tutkimus suomalaisesta pilvipalvelusta, *younited* by F-Secure. Kvalitatiivinen aineisto kerättiin haastattelemalla kuutta case-yrityksen työntekijää sekä yksitellen että ryhmissä. Kvantitatiivinen aineisto puolestaan kerättiin kyselytutkimuksella, johon vastasi yhteensä 315 *younited*-pilvipalvelun käyttäjää. Kyselylomake tarjottiin neljällä eri kielellä: englanti, suomi, ruotsi ja saksa. Kvalitatiiviset haastattelut analysoitiin temaattisen sisältöanalyysin menetelmällä. Kvantitatiivisen aineiston analysoinnissa hyödynnettiin erilaisia tilastollisia menetelmiä, kuten ristiintaulukointia, eksploratiivista faktorianalyysia, t-testiä sekä varianssianalyysia.

Tutkimuksen tulokset osoittavat, että digitaalinen pilvipalvelu voidaan lanseerata onnistuneesti englannin kielellä, mutta tavoittaakseen suurimman osan käyttäjistä, yrityksen kannattaa harkita lokalisointia. Jotta digitaalisten palveluiden lokalisoinnilla voidaan palvella mahdollisimman suurta kohdeyleisöä, tulisi lokalisointi kohdistaa kielimarkkinoille maantieteellisten alueiden sijaan. Lokalisoinnin tarve ja tärkeys vaihtelevat käyttäjien välillä riippuen käyttäjän iästä, kielitaidosta, teknologian omaksumisesta ja englanninkieleen suhtautumisesta. Lisäksi tulokset indikoivat, että uuden pilvipalvelun käyttäjät ovat kielitaitoisia ja teknologiasta kiinnostuneita. Tämä käyttäjäryhmä ei tarvitse lokalisoituja, omalle äidinkielelle käännettyjä digitaalisia palveluita, mutta kielen laatu on heille erittäin tärkeää. Tutkimuksen perusteella digitaalisten palveluiden yhteydessä lokalisoinnin käsite täytyy ajatella täysin uudella tavalla, sillä digitaalisten palveluiden kehityssyklit ovat liian nopeita perinteisten lokalisoinninprosessien hyödyntämiseen. Digitaalisten palveluiden lokalisoinnissa korostuvat erityisesti kieli, käännöksen laatu sekä kielen tekniset vaatimukset.

Avainsanat verkkolokalisointi, kieli, kääntäminen, digitaalinen palvelu, pilvipalvelu, käyttökokemus, online-asiakaskokemus

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1. INTRODUCTION

1.1. Background to the study

Over the past decade the number of Internet services has increased and the importance of the Internet as a communication medium and market place has grown at an exceptional pace. Such developments have radically changed the way companies interact with their customers (Holmqvist 2009). On one hand, the Internet allows companies to internationalize fast and compete globally already at a very early stage of business which creates many new opportunities for companies (Singh and Kundu 2002). On the other hand, operating in a global and multilingual business environment creates unprecedented challenges especially in terms of language, translation and technical requirements.

Global service providers are increasingly facing the question whether to provide Internet content in a number of languages, or whether a site in English is enough (Fletcher 2006). Managing and creating international web content is costly and time-consuming (Ray & Kelly 2012). Thus, it is impossible for service providers to adapt Internet content in all languages. Consequently, service providers are forced to balance between multilingual Internet content, information quality and quantity (Berendt & Kralisch 2009).

Currently, most companies target their websites and marketing for specific countries or cultural groups. However, in order to reach the full market potential, companies should see the Internet environment through a more global lens, as there are no country borders in the Internet. "Websites do not just communicate with one segment of consumers: instead, they are "born-global" for all global consumers to see" (Singh, Zhao & Hu 2005, p. 83). Hereby, Sargent (2012) and Sargent and Ray (2013) suggest that global service providers should rather target users from certain "language markets" than from certain cultures in order to leverage the advantages of providing multilingual Internet content.

Currently, English is the dominant language of the Internet but this might change in the near future. The importance of other languages is increasing, as the number of non-English-speaking web users is growing fast. In 1996, close to 80 percent of the Internet users were native English speakers but today the number has fallen close to 26 percent (Zurckerman 2013; Internet World Stats 2011). For instance, the number of Chinese Internet users is likely

to overtake the number of English speakers in the near future (Internet World Stats 2011). Pimienta, Prado and Blanco (2009) have been researching linguistic diversity of the web since 1996 and the research illustrates that the portion of English online content has been steadily decreasing: In 1996, their research estimated that 80 percent of the Internet content was in English but in 2008 the portion was only 45 percent.

The increasing number of Internet users and languages has made the question of localization increasingly important. Localization requires resources but it has been studied that companies investing more in translation are more likely to announce higher revenues than those who are investing less (Ray & Kelly 2012). However, the financial motives are not the only reason for companies to invest in translation. Most Fortune 500 companies invest in translation to better meet their customers' expectations, maintain or enhance their brand value, target new customers, or meet local regulations and legal requirements (Ray and Kelly 2012).

1.2. Research gap

Language forms an extensive field of study in marketing and services but it has received relatively little attention in academic research until recently (Holmqvist 2009). A lack of research is partly due to the fact that language is often seen as a sub-category of culture, therefore studied as a part of other cross-cultural aspects (Kralisch 2006; Hofstede 2005). Researchers, including Holmqvist and Grönroos (2012) argue that language, language skills and language difficulties will increasingly impact how consumers perceive, experience and evaluate services. Consequently, language is an increasingly important topic in multinational management and marketing research (Holmqvist and Grönroos 2012).

Language issues have been studied to some extent in international marketing (see e.g. Luna & Peracchio 2005; Singh, Zhao & Hu 2003, 2005). However, previous studies have focused mainly on indirect marketing, such as advertising, branding and written messages (see e.g. Luna & Peracchio 2005; Bishop & Peterson 2010) as well as website design, graphic and layout factors (See e.g. Cyr et al. 2005; Cyr 2013; Bartikowski & Singh 2014) ignoring the interactive nature of communication (Holmqvist and Grönroos 2012).

Even though most people use the Internet in their non-native language, there are only a few studies that investigate the impact of language on Internet usage and user attitudes (see e.g.

Berendt & Kralisch 2009; Nantel & Glaser 2008). Luna, Peracchio & de Juan (2002) point out that it should be studied how consumers' attitudes towards second-language websites versus native language websites vary between different user groups. It is likely that some cultures or language groups need and value native language use more than others.

Holmqvist (2009) recently opened a new chapter in services marketing literature by studying the impact of language in an interactive setting, service encounters. The empirical study by Holmqvist and Grönroos (2012) indicates that language has a great influence on how a consumer perceives a service during a face-to-face service encounter, and that bilingual consumers always prefer using their native language, particularly in high-involvement services that involve little control and comfort but contain high levels of risk (Van Vaerenbergh & Holmqvist 2013; McDougal & Levesques 2000). Holmqvist and Grönroos (2012, p. 439) also emphasize the importance of studying the influence of language in the Internet context:

> *"The development of the Internet has fundamentally changed communication; it has made it easier, cheaper, and faster to communicate regardless of geographical distance, thus contributing to a marked increase in international and intercultural communication. While this opens up several new possibilities for service companies, it also increases the challenges precisely due to the increase in intercultural communication. Serving consumers from many different countries can be a challenge, and while web translators support the efforts of some service providers to help consumers understand the basic meaning of messages, but they remain unable to provide grammatically accurate translations. The challenges arising from this new type of service communication, which is so different from face-to-face interactions, represent an interesting and timely research".*

As argued by Holmqvist and Grönroos (2012) the multilingual Internet creates new challenges for service providers in terms of communication and translation. Companies are investing an increasing amount of resources in localization and managing global web content, thus more research is needed to better understand language-related issues occurring in online environments. Due to the importance of language, also translation forms an excessive part of the localization process. Sandrini (2005) adds to the previous quote by Holmqvist and Grönroos (2012) and stresses the importance of studying translation as a part of localization:

> *"There has to be a convergence between translation studies and localization, or in other words, translation studies must address localization issues, or else we will end up having an academic field of localization studies, independent from translation, which will compete with translation forever diminishing funding. Website localization, on the other hand, should account for the progress made in translation research and put it into use. The interrelationship of localization and translation, therefore, opens up a new research paradigm" (Sandrini 2005, p. 137).*

As stated by Sandrini (2005) language and translation form an important part of Web localization, therefore to fully understand the phenomena, translation should be included in localization studies. Understanding the challenges occurring during a localization process, as well as the importance of using native language versus English in digital services will be one step forward in understanding better localization of digital services and its impact on customer preferences and attitudes. Consequently, in my study I follow the recent calls by Holmqvist and Grönroos (2012), Luna, Peracchio & de Juan (2002) and Berendt & Kralisch (2009) by studying the role of language in an Internet-based digital service.

1.3. Research objectives and questions

The research objective was to study the role of language in B2C context in a technical cloud service[1]. The issue is studied from two different perspectives: from a service provider's perspective and from a service user's perspective. The service provider's perspective focuses on the language-related issues occurring during a localization process and localization decision-making. This part was conducted through qualitative interviews at the case company. The user's perspective, on the other hand, relies on a single user's attitudes and perceptions towards native language use in a cloud service. The importance of native language use was studied through the online customer experience. This was conducted as a multilingual, quantitative survey of the *younited*[2] users.

[1] Cloud service is a service accessible via the Internet enabling a user to store digital assets on the remote servers hosted by the service provider instead of a local server or a personal computer (Oxford Dictionary 2014).

[2] *younited* by F-Secure is a cloud service provided by F-Secure Corporation.

The two perspectives will be analyzed separately throughout the study and combined only in the final discussion section. Based on the findings, the aim of the thesis is to provide recommendations for digital service providers on how to improve their localization processes, as well as to increase understanding of the user preferences in terms of localization. The research questions are the following:

1. ***What is the role of language in Web localization?***
2. ***How important do users perceive the native language in using a digital service?***
3. ***Do users differ in terms of perceptions and preferences?***

Answers to these questions will benefit both the digital service providers and the academic research by increasing knowledge of the role of language in digital services. First, the research aims to increase the knowledge of the Internet users and their language preferences. Second, the study will help service providers in localization-related decision-making. The study is academically important since there is not much previous research of the role of language in the context of digital services.

This case study was conducted in cooperation with Aalto University School of Business and *younited* by F-Secure. The case study is academic in nature but it also aims to provide practical recommendations for the case company. The aim of the study is to understand what role language plays in the localization process of a global cloud service, *younited* by F-Secure. The case company, F-Secure, is a Finnish IT company specialized in Internet security services. Recently, the company has launched a new, cutting-edge cloud service called *younited*. The focus of the thesis is not in the company itself but in the cloud service and in its localization.

F-Secure was found to be an interesting company for the case study due to its long experience as a global Internet services provider. In addition, F-Secure was currently launching the *younited* cloud service when this thesis project took its first steps, giving an excellent context to investigate the localization process of a digital service. *Younited* was launched first in English, but soon after the launch, the company translated the websites to three additional languages - Finnish, Swedish and German.

1.4. Definition of key terms

Web localization

"Web localization means that the given site is provided in a specified language so that users can read text and navigate in their own language when they access the localized site. In other words, a localized Web site retains the same functionality as the original site" (O'Hagan & Ashworth 2002, p 12). Localization may also include some content and package adjustments, such as modification of design features depending on the target audience and the strategy taken by the service provider (O'Hagan & Ashworth 2002). Even though translation is an important part of localization, localization is much more than translation of text. In addition to lingual knowledge of a given context, Web localization requires extensive technical understanding of the service environment (O'Hagan and Ashworth 2002).

Translation

Translation is a process of rendering words or text from one language into another (Oxford Dictionary 2014). In addition, translation is about finding the right meaning to the text, as the author has intended it to be. Thus, in this study the process of translation is described as a complicated process of finding right meaning and corresponding expressions for words and expressions in a specific context (Hillier 2003).

Language

Language can be defined in different ways in different contexts. The Oxford dictionary lists six different meanings to the concept of language:

a) A tool of verbal and written communication enabling people to exhange information
b) A system of communication used by a certain group of people or nations
c) A specific style of speaking or writing
d) The language and words used by a certain occupation or domain
e) A system of symbols and signs used in writing and programming
f) A system of expressing feelings and thougts non-verbally

Due to the nature of the Internet and digital services, in this study the focus is solely on written language. Thus, language is seen a) as a tool of information exchange, b) as a system of communication by a group of people or a nation, c) as a style of writing text, and d) as a way of communication by certain occupation or domain. The focus of this study is in language groups, and the concept of language group is used for differentiating people based on their native language. The concept of culture, on the other hand, covers aspects, such as values heroes, symbols, rituals affecting consumers' attitudes and behavior (Luna, Peracchio & de Juan 2002, p. 398).

Native language and foreign language

In this study, the Internet-users are divided in two groups: those who speak English as a native language (L1) and those who speak English as a foreign or additional language (L2) (Graddol 2000, p.10). Bilingual users, those who have been speaking two languages since childhood, are studied as part of L1 and L2 speakers depending on their native language. In general, the distinction between bilingual users and those who speak language as a foreign language is minimal, and the competence in English might vary between very poor and native-like fluency in both groups (Graddol 2000).

Digital Service

Digital services, in other words e-services, are technology mediated and interactive services that are delivered through a digital transaction (Rowley 2006). The party that provides the service or activity is seen as a digital service provider. The party receiving the activity or service is the digital service user. Already a single transaction is adequate to deliver a digital service, but usually digital services are provided in groups or continuous transactions (Williams, Chatterjee & Rossi 2008).

Cloud computing and cloud service

Cloud computing is "the practice of using a network of remote servers hosted on the Internet to store, manage, and process data, rather than a local server or a personal computer" (Oxford Dictionary 2014). Cloud service enables a user to store digital assets in one place and access them regardless of location, more securely, and, more cheaply (Odom et al. 2012). The revolutionary feature of cloud service is that it allows consumers to access computing services nowadays like any other utility services (Buyya et al. 2009).

User experience and online customer experience

User experience and online customer experience are used interchangeably in this study. Both terms illustrate the way users perceive their interaction with a website or with a digital service. However, it is important to note that the terms originate from two different disciplines. User experience is relatively new concept and it has been adopted by computer science and more specifically by the human – computer interaction (HCI) research and it concentrates on usability features and digital touch points of the service (Hassenzahl & Tractinsky 2006). Online customer experience, on the other hand, originates from marketing literature and it is a broader concept covering the whole online experience (Novak, Hoffman & Young 2000; Schmitt 1999). Regardless of the differences, both concepts aim to understand the customer better and to provide better experiences. Both concepts are needed in this study, since the study includes attributes from both disciplines.

2. REVIEW OF PREVIOUS LITERATURE

2.1. Setting the scene: the multilingual Internet

English is widely used as a lingua franca in many contexts, such as in scientific and technological developments, in economics and management as well as in literature and entertainment (Graddol 2000). The status of English as a lingua franca in international business has been reinforced by the development of the Internet, as well as, by an increase in usage of English as a second language in numerous countries (Fletcher 2006). In the Internet, the influence of English has been stronger than in any other context leading to a creation of a new type of language "net English" (Graddol 2000).

In 2011, there were 2.1 billion Internet users in the world divided by language, of which just over one quarter spoke English as their native language (see Table 1). Due to difficulty of counting the number of people who speak a specific language, in Table 1, every user has been assigned with only one language, even though there are an increasing number of bilingual and multilingual people in the world. The difference between the number of online speakers between Tables 1 and 2 can be explained by the different method of counting the number of speakers. This illustrates the difficulty of counting the exact number of speakers of a given language (Internet World Stats 2011).

Table 1 illustrates that, in 2011, only 10 languages were needed to reach 82.2 % of the online population. However, the number is likely to increase as more people can access Internet and the economic power of new language groups rises (Sargent 2012). According to Sargent (2012) in the future, an estimate of 20 or even more languages will be required to reach 80 % of the online population. Graddol (2000) has estimated that the number of people who speak English as a foreign language will overtake the number of native speakers in the near future. This will likely affect the nature of communication and raise a question of what type of English service providers should use on the Internet, as well as, what other languages are required.

Table 1: Top ten languages used in the Internet

Top ten languages used in the Internet in 2011	Internet users by language	Internet users % of total users	World population for this language 2011 (estimate)
1. English	565,004,126	26.8 %	1,302,275,670
2. Chinese	509,965,013	24.2 %	1,372,226,042
3. Spanish	164,968,742	7.8 %	423,085,806
4. Japanese	99,182,000	4.7 %	126,475,664
5. Portuguese	82,586,600	3.9 %	253,947,594
6. German	75,422,674	3.6%	94,842,656
7. Arabic	65,365,400	3.3%	347,002,991
8. French	59,779,525	3.0%	347,932,305
9. Russian	59,700,000	3.0%	139,390,205
10. Korean	39,440,000	2.0%	71,393,343
Top ten languages	1,615,957,333	82.2%	4,442,056,069
Rest of the languages	350,557,483	17.8%	2,403,553,891
World Total	2,099,926,965	100%	6,930,055,154

Source: Adapted from Internet World Stats 2011 (www.internetworldstats.com)

The table above illustrates that the number of Chinese Internet users is reaching the number of English users. Furthermore, the top three languages: English, Chinese and Spanish form 58.8 % of online users. Thus, offering services in those three languages allows a service provider to reach over half of the online population.

From a company's point of view it is not only important to understand the size of a certain language market, but also the economic power of different language groups (see Table 2). Language does not equate the purchasing power of the given group. The top three Internet languages, sorted by the number of speakers, are English, Chinese and Spanish. However, in terms of economic power, the top three languages are English, Japanese and German.

Sargent (2012) suggests that the purchasing power of a language group can be measured with online GDP (e-GDP). The measurement takes into account the purchasing power, both online and offline, of a given language group. The e-GDP is calculated by first dividing the country's gross domestic product GDP by the percentage of citizens using Internet in a specific country. Next, the country's e-GDP is divided by the main languages spoken in the country. Finally, the total e-GDP is calculated for each language group across all countries where the language is spoken. The relative spending power of a certain language, on the other hand, illustrates the spending power of a given language group from the world's total e-GDP in percentages. Thus,

despite the raw e-GDP in dollars increasing, the relative spending power might decrease if the e-GDP increases more within other language groups (Sargent 2012).

Table 2: Top online languages sorted by economic power in 2012

Top online languages by economic power	Total online population (Millions)	Share of world online population	2012 e-GDP (US$ billions)	Percentage of the world's total e-GDP
1. English	488.67	21.6 %	$16,205.66	36.3 %
2. Japanese	101.23	4.5 %	$4,684.00	10.5 %
3. German	78.36	7.8 %	$3,743.36	8.4 %
4. Spanish	203.90	9.0 %	$3,496.20	7.8 %
5. French	70.94	3.1 %	$2,770.30	6.2 %
6. Chinese Simplified	513.47	22,7 %	$2,704.35	6.1 %
7. Italian	36.14	1.6 %	$1,347.30	3.0 %
8. Portuguese	84.92	3.7 %	$1,105.27	2.4 %
9. Dutch	21.09	0.9 %	$1,031.49	2.3 %
10. Korean	40.33	1.8 %	$962.63	2.2 %
11. Arabic	82.36	3.6 %	$912.81	2.0 %
12. Russian	73.82	3.3 %	$870.86	2.0 %
13. Swedish	8.67	0.4 %	$543.00	1.2 %
14. Chinese Traditional	20.86	0.9 %	$515.01	1.2 %
15. Norwegian	4.56	0.2 %	$465.88	1.0 %
16. Polish	23.96	1.1 %	$331.00	0.7 %
17. Turkish	31.96	1.4 %	$310.27	0.7 %
18. Danish	4.95	0.2 %	$295.12	0.7 %
19. Finnish	4.43	0.2 %	$227.76	0.5 %
20. Persian	29.83	1.3 %	$180.58	0.4 %
Next ten languages	143.85	6.4 %	$1,229.11	2.8 %
World total	2, 262.36	100 %	$ 44,643.69	100 %

Source: Adapted from (Sargent 2012, p. 4) Common Sense Advisory Inc.[3]

The figures above illustrate that providing services in English is not enough in today's global business environment. In the past, English formed almost 50 % of the world's total e-GDP. Even though English e-GDP has expanded from 12 trillion to 16 trillion, the language group currently covers only 36.3 % of the world's online spending power. "That's a limited market" (Sargent 2012, p. 7). World e-GDP is today 44.6 trillion US dollars. This suggests that companies cannot rely solely on providing services in English in the future if they want to reach the full market potential.

[3] Common Sense Advisory is an independent Massachusetts-based market research company helping companies profitably grow their international businesses and gain access to new markets and new customers.

2.2. Language in the context of digital services

As mentioned in the previous section, localization is usually studied through different cultural aspects, but in this thesis the focus is on language. However, language and culture are very interrelated and they cannot be fully separated. Thus, cultural factors cannot be fully excluded from the context but the differences between language and culture have to be understood (Luna, Peracchio & de Juan 2002). Despite the fact that language is often seen as sub-category of culture, several characteristics of language goes far beyond its function as a cultural attribute or as a tool of communication (Kralisch 2006; Luna, Peracchio & de Juan 2002). The definition of language by Luna, Peracchio and de Juan (2002, p. 398) well illustrates the multi-layered nature of language:

> "*Language is a symbol expressing the concepts and values embedded in culturally bound cognitive schemas. Thus, language used and processed in a particular instance (e.g. while navigating website) may activate culturally specific concepts and values that another language may not*".

Referring to the quote, language is much more than just a neutral tool of communication. Language forms a significant part of our identity and and affect our behavior even in situations where only little communication is needed (Holmqvist 2009). Thus, it can have a strong impact on our perceptions towards a service or service provider. In digital services, as in many other Internet services, the communication relies much more on written language than in a face-to-face context (Kralisch 2006). Therefore, the concept of language can be limited to the written language in the context of a cloud service.

In this thesis, a cloud service is seen as an interactive, digital service that enables creating, accessing, sharing and storing digital assets on the Internet (Odom et al. 2012; Williams, Chatterjee & Rossi 2008). In the literature, there is a wide range of definitions for electronic services and digital services. All definitions agree that digital services are technology mediated and interactive, allowing the exchange of information (Rowley 2006). Terms such as web-based service (Reynolds, 2000), interactive service that is delivered on the Internet (Boyer, Hallowell & Roth 2002), digital service (Williams, Chatterjee & Rossi 2008), and information service and self-service (Rowley 2006) are often used interchangeably between researchers. In this study, the terms electronic service (e-service) and digital service are both

used for referring to a cloud service. Digital service has been defined by Williams, Chatterjee, and Rossi (2008, p. 507) as follows:

> *"The strict definition of a digital service is 'an activity or benefit that one party can give to another, that is, provided through a digital transaction".*

Thus, "cloud computing refers both to the application delivered as services over the Internet and the hardware and systems software in the datacenters that provide those services" (Armbrust et al. 2009 p. 1). In this study, as in in the marketing literature in general, cloud service is defined as a service that enables to store digital assets in one place and access them regardless of location, more securely, and, more cheaply (Odom, Sellen & Thereska 2012). In this interaction the need for written communication is often minimal but understanding of the text and instructions are necessary.

2.3. Differences between traditional services and digital services

The nature of services has changed radically over the years as more and more services are enabled by information and communication technology. "Since the development of telecommunications, data networks, Internet and, most recently, mobile Internet, services are becoming even more virtual" (Bouwman & Fielt 2008, p. 20). Table 3 illustrates that the main difference between traditional services and electronic services is the role of customer in the service delivery. An electronic service is not delivered by people but by software programs via computers and communication technology. In addition, in electronic services, the interaction does not require personal interaction between a customer and a company but it happens through technology. Furthermore, electronic services are less personal and they are often delivered through websites, web form or email (Bouwman & Fielt 2008).

Table 3: Distinguishing features of goods, e-services and services

GOODS	E-SERVICES	SERVICES
Tangible	Intangible but needs tangible media	Intangible
Can be inventoried	Can be inventoried	Cannot be inventoried
Separable consumption	Separable consumption	Inseparable consumption
Can be patented	Can be copyrighted, patented	Cannot be patented
Homogeneous	Homogeneous	Heterogeneous
Easy to price	Hard to price	Hard to price
Cannot be copied	Can be copied	Cannot be copied
Cannot be shared	Can be shared	Cannot be shared
Use equals consumption	Use does not equal consumption	Use equals consumption
Based on atoms	Based on bits	Based on atoms

Source: Adapted from Hofacker et al. (2007, p. 20)

Since the focus of the thesis is on language and localization, the study will not go in more detail to the features of a cloud service but the role of language is studied at a more general level though website adaptation. A cloud service is an interactive service (Odom, Sellen & Thereska 2012) but the interactivity involves mainly sharing digital content and not a significant amount of interactive verbal communication. Thus, the interactivity is not the focus of this study. However, it is important to notice that the perceived interactivity of the service might affect the consumer preferences.

It has been studied that language has an impact both on interactive marketing communication and non-interactive communication. Interactive communication occurs in service encounters, in which a consumer communicates directly with a company either face-to-face or via technology. Non-interactive communication means situations in which there is no mutual interaction between a customer and a company, including advertising, company signs, and websites (Holmqvist 2009; Holmqvist and Grönroos 2012). On the Internet, the distinction between interactive and non-interactive communication can be blurred, since the level of interactivity varies depending on the service and its purpose. The key point is that in digital services, the interaction between a customer and a company happens through technology, such as a website (Rowley 2006).

2.4. Web localization from service provider's perspective

Traditionally web localization has been understood as a process of adapting all features of a website to the target audience, including language, culture, content, technical, legal, marketing and infrastructural requirements (Singh & Boughton 2005). Conceptually website localization has been defined by Singh, Toy & Wright (2009, p. 282) as "the process of customizing a website for a specific cultural group so that it seems natural or "local" to members of that particular culture".

Web globalization, on the other hand, has been defined as a process of creating standardized and culturally neutral web templates while web "glocalization" is a process of mixing elements from globalization and localization. In practice, web glocalization is a strategy where the globalized constraints are implemented in harmony with local environment and end users preferences (Tixier 2005). Fletcher (2006) describes the "glocalisation" as a process of keeping the consistency of underlying themes, structures and strategy but including the "local look and feel" in the features.

I argue that localization of digital services is more about glocalization than localization. As Singh & Boughton (2005) claim that in order to become a global player on the Internet, companies have to go through two compelemtary processes: web globalization and web localization. Therefore, create global templates that can be easily leveraged to the local audiences. This way companies can save time, cost and effort when creating localized websites. The statement by Singh & Boughton (2005) well illustrates the way localization is seen in this study:

> *"Web localization means that the given site is provided in a specified language so that users can read text and navigate in their own language when they access the localized site. In other words, a localized Web site retains the same functionality as the original site" (O'Hagan & Ashworth 2002, p 12).*

According to the definition above, the web template should be global but the language local. Thus, the definition emphasizes the importance of language in the localization process. O'Hagan and Ashworth (2002) point out that localization might also involve adaptation of some design features to a specific audience depending on the target market and service

provider's strategy. Yet, language is the main element and other features are adjusted depending on the context.

Even though the focus of localization is on language, localization is much more than translation of text (O'Hagan and Ashworth 2002). Cheng (2000, p. 30-33) describes the localization process with three phases: 1) front end, 2) back end, and 3) long-term website development. The front end describes the outcome that the user sees. The back end illustrates the technology and process behind the scenes. The long-term development allows the implementation of new features. Thus the process involves much more than just translation. When localizing digital services, also the technical features set limits to the process, as the following quote demonstrates:

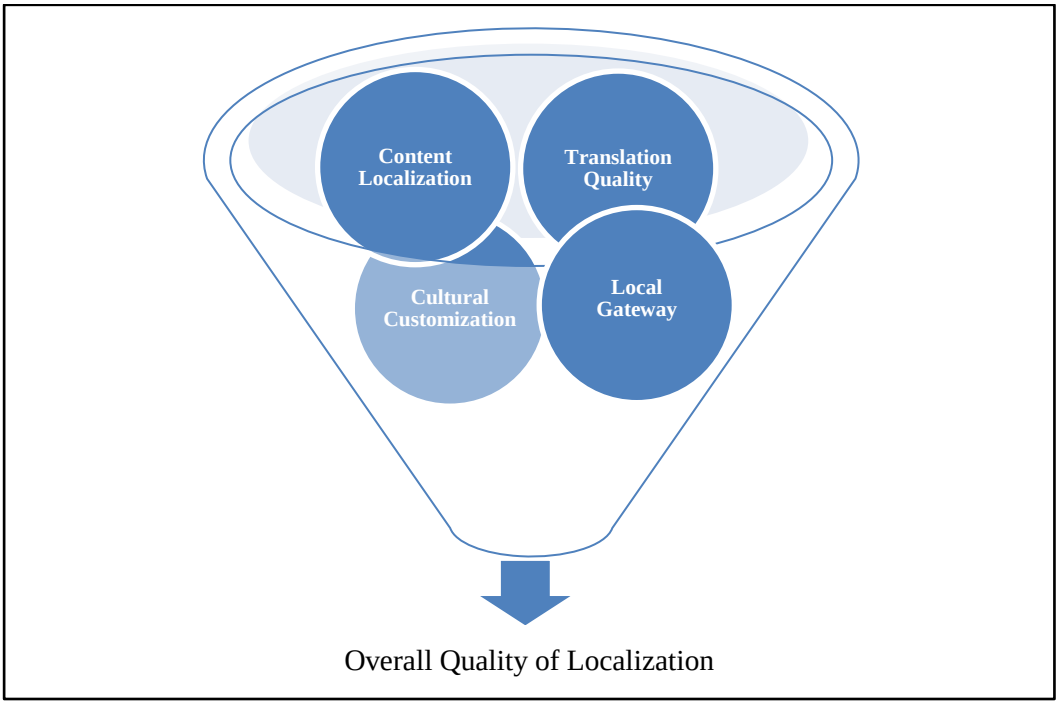
> *"Software localization involves engineering tasks as well as translation to enable the product to function in a given language environment. Web localization has made a significant impact on the translation process, as the Web as a communication medium has changed the nature of the Message in a number of ways" (O'Hagan & Ashworth 2002, p. 12).*

As the quote illustrates, the process of localization requires both technical knowledge, as well as lingual knowledge. It is not enough to translate the text, but the text also has to fulfill the technical requirements of the service platform. This all sets limitations and challenges to the translation process as well as to translation quality. It is useless to have a good translation if it does not fit in the given space.

2.4.1. Quality of Web localization

A recent study by Singh, Toy & Wright (2009, p. 283) represents a framework that can be used for evaluating the quality of website localization (see Figure 1). The study suggests that the quality of localization can be measured at four different levels: 1) Content localization, 2) Cultural customization, 3) Translation quality, and 4) Local gateway. The study was conducted by comparing several U.S. websites targeted to the Hispanic online market.

Figure 1: Different levels of localization



Source: Adapted from Singh, Toy & Wright (2009, p. 283)

Localization of content measures how well the company has succeeded in customizing the basic web content to the specific target audience including equivalency, relevancy, navigation, support, and currency of the website. *Cultural customization* measures the cultural sensitivity of the website. It evaluates how well the company has targeted the offering of the website to the local needs, as well as, to what extent colors, graphics and design have been adjusted to the local needs. *Translation quality* evaluates the equivalence of vocabulary, conceptual and idiomatic meanings. *Local gateway* assesses the easiness of finding county-specific or language specific websites.

The findings of the study by Singh, Toy & Wright (2009) indicate that translation quality is the most important component in terms of localization quality. On the contrary, cultural customization was found to be significantly less important. Thus, the findings clearly emphasize the importance of language and translation quality in the localization of web content. Singh, Toy & Wright (2009) state that from the service provider's perspective the first step towards a high-quality website is to translate the website. The study supports my decision to concentrate on language and translation instead of cultural customization in the localization of digital services.

Also Fletcher (2006) suggests that web localization can occur at different levels, including content, structure and design features (Fletcher 2006). However, he claims that the need for localization is partly affected by whether the website is intended to be interactive or passive. Interactive marketing site allows a recipient to react to the message and send a reply, whereas, a passive marketing site only allows a recipient to read the message but not reply to it. According to Fletcher (2006) an interactive website requires more adaptation than a passive marketing site.

Thus, the context is important when defining the concept of localization. I argue that the dynamic nature of the Internet will lead companies to put less effort on cultural customization and make them concentrate more on translation, translation quality and local gateway in the future. Also the study by Singh, Toy & Wright (2009) supports this view since the findings indicate that none of the industries involved in the study were doing excellent job in terms of localization due to low scores, mainly, in cultural customization. The problem might be that the model presented in Figure 1 assumes that in order to successfully localize web content, cultural customization is required. I claim that in several Internet contexts cultural customization is not needed and the model should be also tested without this component.

2.4.2. Translation of Web content

There are different strategies to translate Internet content and the translation behavior is often linked to the company's internationalization process (Yonatany 2011: Shneor 2008). Yonatany (2011) studied empirically the internationalization process of digital service providers by comparing different digital service providers and their internationalization strategies. The results indicate that translation of web content can work as a tool of internationalization. According to the research, most companies translate the web content internally. However, new user-centered translation strategies (UCT) are constantly emerging. In the digital services user-centered translation has been taken to a new level and in many cases the user itself is the translator (Suojanen, Koskinen & Tuominen 2012).

For example, Facebook employed users in crowdsourcing the translations to globally launch foreign language versions of their service. The company released 36 languages during the first year of internationalization. EBay, on the other hand, created country versions of the market place internally with help of professional translators. By employing crowdsourcing Facebook

internationalized much faster than eBay (Yonatany 2011). Even though crowdsourcing can be seen as an efficient tool of internationalization, it has to be noted that, companies have less control over the translation process in crowdsourcing than in traditional in-house translations. Consequently, applying crowdsourcing might lead to severe quality issues, and might in the worst case scenario damage the whole brand (Yonatany 2011; Suojanen, Koskinen & Tuominen 2012).

The challenge with the translation of digital services is to find a balance between user-centered translation, in-house translation and machine translation methods. In the end, users are the best tool for getting feedback on translation, thus by utilizing users to some extent can help the company to improve the quality of translation. For example, Dropbox uses professional translators in the actual localization process but before publishing the translation, the text is sent to the active users of the service who can suggest changes and improvements to the language (Suojanen, Koskinen & Tuominen 2012).

Translation is a complex process involving many stages. According to Ahmad et al. (1992 in White, Matteson & Abels 2008, p. 578) a translation process can be divided into three stages: input, processing and output. Input is the stage of receiving the document for translation. Processing is the stage of translating the document. Output is the stage when the translated document is sent back to the original source (Larson 1991 in White, Matteson & Abels 2008). Nord (2005) on the contrary, states that the process of translation is not linear but a spinning process involving many overlapping stages. The length of the process depends on the complexity of the text. The complexity of the text, on the other hand, is affected by the context, culture and purpose of the text (Larson 1991 in White, Matteson & Abels 2008).

Usually translators are specialized in a few languages, thus, they are normally familiar with syntax and semantics of the language. However, new contexts and different translation strategies might cause challenges (White, Matteson & Abels 2008). Typically, the main points translators consider are lexicon, grammatical structure, communication situation, and cultural context (Larson 1998 in White, Matteson & Abels 2008). Thus, translation process includes among other things maintaining the meaning of the words, translating the context-specific terminology, and finding equivalent meanings to the words and concepts. In addition, there are many different spelling conventions and dialects even within one language (e.g. British

English and American English). Also formats of dates, times and names may vary (Biguenet and Schulte 1989; Tan 1998; Gerding-Salas 2000 in Hillier 2003).

Languages also include many culture specific words that do not have equivalent terms in other languages (lexical structure of the language). In addition, there might be languages that have many different words for one item but there is only one similar item in a foreign language. Usually these are items that are very important for the certain language group. For example, Asian countries have many words for rice. In the same way, experts have more words at their disposal in their corresponding vocabulary than non-experts (Kralisch 2006). Kralisch (2006) also states that the structure of a language's lexicon might affect considerably consumer's information categorization and behavior in the Internet. Furthermore, the patterns of discourse vary between languages. For instance, in one language the most important point is said in the beginning of the sentence, in other languages they are stated in the end of the sentence. Thus, even if the text was grammatically correct it might not fulfill the needs of a local user (Hillier 2003).

Translation process of web content differs considerably from translation of traditional paper material. O'Hagan and Ashworth (2002, p. 13) list six points that make the translation of Internet content different compared to traditional translation assignments.

1) The target audience is unspecified
2) The text will be most likely read on screen instead of paper
3) The text might be read in different contexts and in any order
4) The text may need frequent updates
5) The content of the text might have to be adapted to several audiences
6) The text might include multimedia components, for instance, audio or graphics

The characteristics of web localization make the job challenging for translators. The translator has to understand the technical limitations of the language as well as the context of the language in order to successfully manage the job (Suojanen, Koskinen & Tuominen 2012). Language has to feel natural for the reader and the information has to be constantly up to date in every language supported (O'Hagan and Ashworth 2002).

2.4.3. Quality of translation

With the growing need and speed for translation it is important to consider the quality of translation (White, Matteson & Abels 2008). There are so much data to be translated that companies have to often balance between quantity and quality of the translated content (Berendt & Kralisch 2009). Machine translation seems to be one good solution in terms of speed and growing need for translated content in addition to crowdsourcing. The critical question is if the machine translators are able to provide good enough translations (White, Matteson & Abels 2008). Same challenges apply to user-centered translation methods.

The problem with machine translators, as well as with human translators, is often the fact that translations are done outside the context. In addition, the quality of translation is too often evaluated solely in the light of the source text even though the content of the text is usually more important than individual words (White, Matteson & Abels 2008). White, Matteson & Abels (2008) also point out that in order to meet the quality requirements of a translation, human translators should be always involved in the process.

On the Web, different translator tools, such as Google translator allow quick translations of websites and other information to several languages (Twomey 2007). White, Matteson and Abels (2008) claim that in the Web context, the quality requirements of a translated text or document might be lower than in many other contexts, and imperfect translations are acceptable to some extent. This can be partly explained by the dominance of English and by the fact that most people are using the Internet in a foreign language. Consequently, users are less demanding in terms of language. In addition, instant messaging is the key in an Internet environment, thus people most likely prefer fast replies with lower quality to slow replies with high quality. Perception of quality is always a subjective concept thus it varies between users and is hard to evaluate.

Fletcher (2006) studied conceptually the impact of culture on website content, design and structure and found out that the **e**ffectiveness of communication is affected by sensitivity to culture. However, the degree of cultural sensitivity is suggested to depend on the level of interaction and the purpose of the website. If the website is seen as an information medium and the main purpose is to provide information, the cultural sensitivity is less important than

in a situation where the site is used as a promotional marketing vehicle and the purpose is to appeal to the feelings of the recipient.

Traditional quality control models evaluate the quality of translation based on how well the text technically corresponds the source text (Suojanen, Koskinen & Tuominen 2012). This approach ignores the fact that a translation is a combination of the source text and the target text (Nord 2005). The target text, on the other hand, is often affected by the target audience, target style and the client's instructions (Gouadec 2010). Fletcher (2006) like many other academics suggests that back translation should be applied in order to ensure the cultural and lingual sensitivity of a translation. This approach also mirrors the quality of translation in the light of the source text.

Usunier (2011) on the contrary argues that back translation is not the best way to ensure the quality of translation because it ignores the emic meaning of the text and focuses only on finding right words instead of meanings. Usunier (2011) suggests that translations should be done in small multilingual teams. In this way the validity of translation can be ensured instantly and the cultural aspect of language is included automatically. When back translation is applied the language is handled as an instrument and the cultural context is often forgotten (Usunier 2011). If the cultural and lingual aspects are ignored, the meaning of the text may disappear leading to wrong meanings or even funny translations that might destroy the image of the company (Fletcher, 2006).

Nantel & Glaser (2008) undertook an empirical study on the impact of web designer's linguistic background on user experience. The users were asked to use two different websites and fill out a web questionnaire after. In the questionnaire users evaluated the ease of use of a website based on their experience. The results indicate that the website designed by the native designer was easier to use than the other one. Also Hillier (2003) emphasizes the importance of the web designer's background in the translation process. According to him, the designer or translator will automatically rely on his or her own cultural norms and culture-specific cognitive schemas when creating a website. This on the other hand might lead to information misfit between the user and the service provider (Nantel & Glaser 2008).

2.4.4. Benefits and drawbacks of localization

Localization is said to have positive effects on business in terms of consumer preferences, purchase intentions and online sales (Singh et al. 2004; Singh et al. 2006; Tixier 2005), as well as customer satisfaction and perceived ease of use on the Internet context (Berendt & Kralisch 2009; Nantel & Glaser 2008). However, in these studies, apart from Berendt & Kralisch (2009) and Nantel & Glaser (2008) the main focus has not been language, therefore the results gives some direction to the study but cannot be fully integrated in this study. The study by Singh, Furrer & Ostinelli (2004) claims that the more localized the web content is, the more satisfied users are.

From the service provider's perspective, the main advantage of offering different language options is gaining more customers globally as well as the societal goals of the company (Kralisch 2006). Tixier (2005) states that well-planned localization can create a 200 % increase in the e-sales of a company outside its language borders. A study by Singh et al. (2006) indicates that local consumers prefer culturally adapted web sites and argues that culture has an impact on consumer beliefs, attitudes, and purchase intention on the Web. Bartikowski & Singh (2014) supplement the previous views by providing empirical evidence on that website cultural congruity has a positive effect on both attitude toward the website and trust. Ray and Kelly (2012) claim that offering service in a user's language can communicate that the marketer respects the user's culture and in this way creates a bond between the brand and a consumer.

On the contrary, based on theoretical marketing justification Levitt (1983) and other supporters of standardization argue that due to globalization, consumers' tastes are becoming more similar across cultures, and therefore consumers are more tolerant towards global, and more specifically, glocal content, indicating that consumers seem to be satisfied with less localization today than before. This statement could be interpreted in a way that cultural customization is not needed anymore in the context of global Internet.

Previous studies indicate that consumers may choose a service provider based on the languages they offer (Holmqvist & Grönroos 2012). Furthermore, customers seem to be ready to pay more for a service to get in their native language (Holmqvist 2009). The academics also agree that promotional messages should be created in the language of the target market

since there are lots of examples from international marketing where companies have had to withdraw from a market due to lack of adaptation to the local needs. In addition, cultural mistakes, such as wrong currencies and funny translations are increasingly common on the Internet (Fletcher 2006). Finally, managerial interest in the challenges related to translation, internationalization, and quality assurance has been studied to be linked to increased web content localization (Singh, Baack & Bott 2010).

Table 4 shows the benefits and drawbacks of localization from a service provider's perspective and Table 5 from a service user's perspective. It is important to note that most components have an impact on both parties. For instance, increased interactivity, purchase intention, trust, and user satisfaction benefit both the service provider and the service user: When a user is satisfied, he or she is more likely to continue to use the service. The service provider, on the other hand, is satisfied to be able to retain the customer. In the end, all components have an impact on both parties. The service provider always aims to create best possible experiences for customers, thus any activity that makes the service user more satisfied is also good for the service provider and vice versa.

Table 4: Benefits and drawbacks of localization – service provider's perspective

BENEFITS	DRAWBACKS
• **Global reach** (Kralisch 2006) • **Societal goals** (Kralisch 2006) • **Goodwill and bonding** (Ray & Kelly 2012) • **Competitive advantage** (Lynch and Beck 2001) • **Increased sales and revenue** (Tixier 2005; Holmqvist & Grönroos 2012) • **Increased interactivity** * (Fletcher 2006) • **Impact on purchase intention** * (Singh et al. 2006) • **Increased user trust*** (Bartikowski & Singh 2014; Cyr 2005) • **Increased user satisfaction*** (Berendt & Kralisch 2009; Kralisch 2006)	• **Time-consuming and costly** (O'hagan & Asworth 2002, p.20-22) • **Increasing number of languages** (O'hagan & Asworth 2002, p.20-22) • **Digital content requirements** (O'hagan & Asworth 2002, p.20-22) • **Quality issues** (Fletcher 2006) • **Image/brand fit** * (Luna, Peracchio & de Juan 2002)

* The component impacts both the service provider and the service user.

There are also drawbacks of localization. First of all, it can be time-consuming and costly. In addition, the increased number of languages used online makes localization challenging and time-consuming (O'hagan & Asworth 2002). Service providers have to balance between quality and quantity in terms of localized content. Having too many languages to manage might lead to quality issues in language and translation (Fletcher 2006). Thus, it should be carefully decided if it is better to provide less content at high quality in fewer languages than more content at lower quality in several languages. In the end, bad language quality might make the company look bad in the eyes of a user. In some cases a user might be ready to pay more for a service that is in their native language but this is likely to depend on the nature of the service (Holmqvist 2009). Thus, the service provider has to know its customers and understand their preferences in order to make right decisions in terms of localization.

Table 5: Benefits and drawbacks of localization – user's perspective

BENEFITS	DRAWBACKS
Functional impacts: • **Reduced cognitive effort** (Luna et al. 2002) • **Ease of use** (Luna et al. 2002) • **Increased interactivity*** (Fletcher 2006) Emotional impacts: • **Consumer Preferences** (Singh et al. 2004; Luna et al. 2002) • **Purchase intention*** (Singh et al. 2006) • **Increased trust** * (Bartikowski & Singh 2014; Cyr 2005) • **Satisfaction** * (Berendt & Kralisch 2009; Kralisch 2006) *	Functional impacts: • **Low quality** (Kralisch 2006) • **Less features or information** (Kralisch 2006) • **More expensive services** (Kralisch 2006) Emotional impacts: • **Image/brand fit** (Luna, Peracchio & de Juan 2002)

Overall, it seems that the benefits of localization outweigh the drawbacks of localization in many cases. However, as discussed earlier the context is expected to have a great impact on the localization preferences. Therefore, the key is to know your target audience. The service provider has to decide if localization is suitable for the brand/image or not. All services might not need localization (Luna, Peracchio & de Juan 2002).

2.5. Web localization from service user's perspective

Sociolinguistic studies illustrate that language has a great influence on forming a sense of identity and emotional belonging (Holmqvist 2009). Thus, language is likely to affect our decisions on both functional and emotional level. Functional level deals with the language competence and ease of use. Emotional, on the other explains our behavior through our feeling and perceptions towards a language or language group (Holmqvist 2009). In Table 5, the benefits and drawbacks of localization have been listed from a user's perspective.

Today, the fundamental goal of online business is to create positive experiences for potential buyers (Cyr 2013). Understanding target market, creating effective messages and captivating online experience are important factors, and critical for gaining competitive advantage (Singh, Kumar & Baack 2005). Customer experience is a broad concept and there is not an unambiguous definition of customer experience since it is a subjective concept and depends on the context:

> *"Customer experience is the internal and subjective response customers have to any direct or indirect contact with a company. Direct contact generally occurs in the course of purchase, use, and service and is usually initiated by the customer. Indirect contact most often involves unplanned encounters with representatives of a company's products, service or brands and takes the form of word-of-mouth recommendations or criticisms, advertising, news reports, reviews and so forth" (Meyer and Schwager 2007, p. 118).*

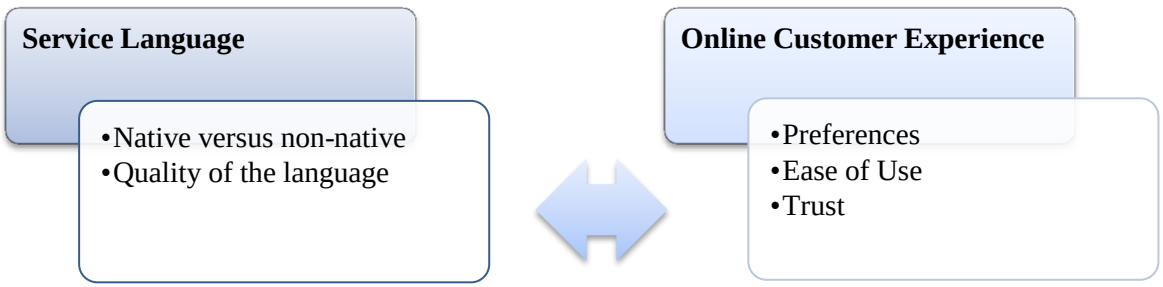
Rowley (2006) studied conceptually the definition of online customer experience within e-services. According to the study, a customer evaluates the service based on site features, security, communication, reliability, customer support, responsiveness, information, accessibility, delivery and personalization (Rowley 2006). Rose, Hair & Clark (2011), on the other hand, studied online customer experience in an online purchase context and suggest that customer experience can be divided in cognitive and affective states. Based on their study, a customer evaluates a service based on information processing, perceived ease of use, perceived usefulness, perceived benefits, perceived control, skill, trust propensity, perceived risk and enjoyment.

Ghosh, Surjadjaja & Antony (2004) supplement the previous definitions by stating that online service experience integrates service delivery and marketing communication which both include the exchange of information. Thus, marketing communication has to be well aligned with the actual service. If the marketing message differs considerably from the actual service and from the customer expectations, service experience might lead to dissatisfaction (Novak, Hoffmann and Young 2000).

The impact of language on how a consumer perceives a service has been proven and thus it can be expected to be a part of a customer experience formation (Holmqvist 2009). Language might affect our perceptions of the service or the service provider even before we use the actual service or product. Thus, service providers have to consider carefully how they promote themselves in multilingual markets – through advertising, signs and messages (Holmqvist & Grönroos 2012).

In this study the importance of native language use is studied through online customer experience - in other words, through user experience. Online customer experience has been divided to three components: preferences, ease of use and trust. There is not a single way to measure online customer experience but since the language has been studied to have an impact on consumer preferences, ease of use and trust to some extent, these components were found to be the most relevant in terms of language research.

Figure 2: Service language and online customer experience



Now Figure 2 will be unpacked:

2.5.1. Preferences

Naturally, people are most comfortable reading and writing in a language they know best and normally there is some level of trade off when using a non-native language. The reason for using a non-native Internet site or service, from a user's perspective, may be higher quality of the product or service, more or better features of the product, better price, or easier access to information (Kralisch 2006).

The perceived importance of native language use has been found to depend on the context (Berendt & Kralisch 2009). In some situations the tolerance of using a foreign language might be higher than in other situations. For example, based on Holmqvist's (2009) study it could be assumed that it is more important for a consumer to be able to operate in his or her native language when using Internet banking than when playing an online game. On the other hand, in banking services the importance of the language might be still lower than, for instance, when reading philosophy or economics (Hillier 2003; Homqvist 2009). Holmqvist (2009) studied the importance of native language use in different service encounters. The results indicate that the importance of native language use varies between services depending on the level of interaction and risk involved in the service.

Luna, Peracchio & de Juan (2002) on the other hand, have stated that some consumers may feel that English is the standard language of the Internet, and might not react positively to the websites that are in their native language. This is argued by the fact that users might be used to process information in English in certain contexts. Thus, standardized, English-only strategy may work better for some brands. Examples of these types of contexts are international pop music bands and technology-oriented sites. The fit between the image/ values and language might be the key factor of success in certain services or products (Luna, Peracchio & de Juan 2002).

2.5.2. Ease of use

Technology Acceptance Model (TAM) by Davis (1989) has been widely used and cited in different Internet research. The model gives theoretical basis for linking technology with attitudes and behavior. The validity of the model has been tested by numerous studies. The findings illustrate that that ‘‘usefulness’’ and ‘‘ease of use’’ of a technology system have a significant impact on the attitudes towards the system-usage and the user satisfaction (Berendt & Kralisch 2009; Cao, Zhang & Seydel 2005). The study by Flavián, Guinalíu, & Gurrea (2006) supports and supplements these results by showing that usability improves customer satisfaction, trust, and eventually also customer loyalty. TAM has been also utilized in cross-cultural Internet studies (see e.g. Berendt & Kralisch 2009; Kralisch 2006).

TAM model assumes that user acceptance of any system is dependent on two variables (1) perceived usefulness; and (2) perceived ease of use. Perceived usefulness describes how much the usage of the system will enhance his or her performance. Perceived usefulness can be understood as a satisfaction toward the system. Ease of use, on the other hand, can be seen as saved effort. In other words, how much an individual saves effort when using a system in one’s native language versus non-native language (Berendt & Kralisch 2009; Kralisch 2006).

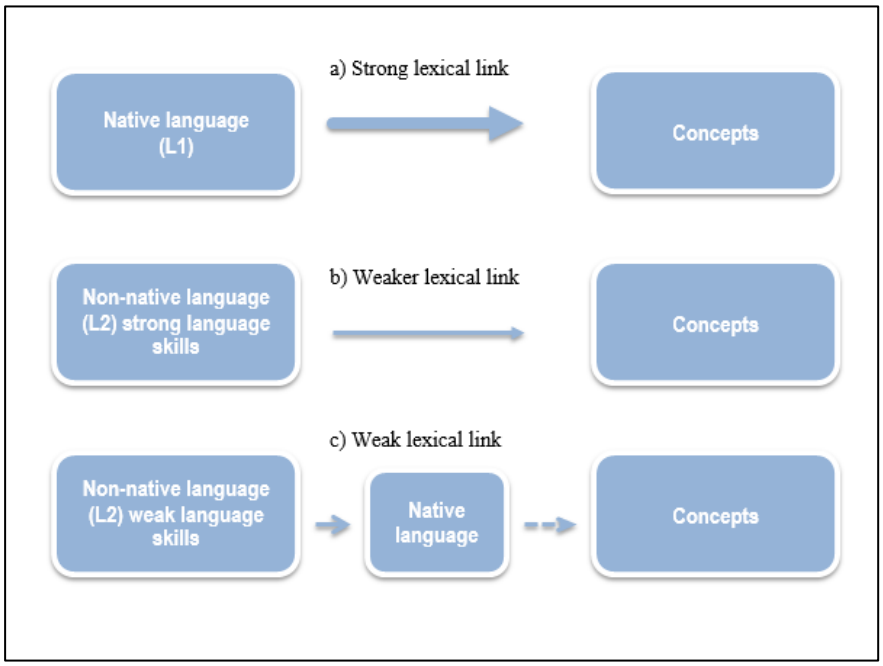
In addition, user satisfaction is an important aspect when evaluating the quality of a web site or service. Marketing literature strongly agrees that satisfied consumers are more likely to use company’s products, have a greater re-purchase intention, favor positive word-of-mouth and are less likely to look for alternative service providers (Oliver 1999; Kim, Jin & Swinney 2009). User satisfaction seems to be affected by both by the cognitive effort of searching information, as well as, by the accessibility of substitute information in that language (Berendt & Kralisch 2009). In addition, customers are more likely to be satisfied if the service fulfills or exceeds expectations (Oliver & DeSarbo 1988).

The cognitive effort of searching infromation in a non-native language can be explained by the language processing of non-native users based on the The Revised-Hierarchy Model by Dufour and Kroll (1995). The model is commonly used in cross-linguistic research to explain the language processing of bilingual users (Berendt & Kralisch 2009). The model describes the process how people match words to concepts in their native language versus in their non-native language (see Figure 3). According to the model, we need always more effort when

procesing information in our second language than in our first language and the use of native language can be seen as a saved effort (Dufour & Kroll 1995; Kralisch 2006).

In Figure 3, lexical link describes the process of finding a meaning to the words. The strength of the lexical link describes how much effort is needed to match the words to the concepts, in other words, to internalize the meaning of the words. The figure illustrates that the conceptual presentation is much stronger in one's native language than in a foreign language. Non-native language is associated with higher cognitive burden because the mechanism of acquiring and storing the language is different (Dufour & Kroll 1995).

Figure 3: Information processing in native language and non-native language



Source: Adapted from Dufour and Kroll (1995, p.167)

a) Even if the user has strong language skills, the lexical link always remains stronger in one's native language. This is because conceptual presentation comes automatically in our native language but has to be learnt in a foreign language. Thus, even though an individual is fluent in two languages, the cognitive effort remains higher with non-native language because processing a message in a second language is always slower and less accurate than coding the message in one's native language (Berendt & Kralisch 2009; Luna, Peracchio and de Juan 2002). Thus, the first language we have learned will always remain the one that shapes our cognitions and emotions (Nantel & Glaser 2008).

b) Once we become more fluent in a foreign language we are able to match the words straight to the concepts without native-language involvement. The more fluent we are in a language, the less cognitive effort is needed to process the infromation.

c) First, when we learn a new language, we rely on our native language in finding meanings to the words, which requires more effort and leads to higher cognitive cost than using a native language.

2.5.3. Trust

Holmqvist (2009) claims that language may have an important role in trust building between companies and consumers. Trust can be influenced by the quality of language as well as by the perceived importance of native language use. The cross-cultural nature of the Internet makes the concept of trust challenging since culture and language are likely to affect the formation of consumer perceptions of trust (Jarvenpaa, Tractinsky & Saarinen 1999).

The Internet is a relatively new marketing and communication channel, thus there is always some level of uncertainty present when surfing online and trying new services. When there is some level of risk involved in the transaction and usage, trust is needed to overcome these obstacles. Consumer trust towards a service provider has been found to reduce the perceived riskiness of a specific website (Jarvenpaa, Tractinsky & Saarinen 1999). Cyr et al. (2005) studied that local web sites are perceived more trustworthy than foreign web sites of the same vendor. However, in this study the focus was on design features and the language impact was ignored and assumed not to be a problem.

The image a company gives of itself to the consumers affects the perceived trust. In addition, company reputation and size are widely suggested to be important elements to affect consumer trust (Jarvenpaa, Tractinsky & Saarinen 1999). A user has a certain perception of a company that is formed based on the information and experience that a customer has. Based on the theory of reasoned action (Fishbein & Ajzen 1975) and the theory of planned behavior (Ajzen 1985), beliefs also impact the user's attitudes and this way their behavior and decision-making.

Ferreira (2002) claims that the quality of the language has a great impact on website usability especially when the language corresponds well with the cultural dimensions, such as metaphors, attitudes and preferences of its target groups. Better usability of the web site has been argued to enhance the consumer perceptions towards a web site, reduce uncertainty and increase sales (Becker and Mottay 2001; Belanche, Casaló & Guinalíu 2012). Thus, by providing content in a customer's native language, a service provider is likely to improve the usability of a service as well as increase trust.

2.5.4. Impact of demographics

Language competence has recognized to affect consumer choices in sociolinguistic research (Holmqvist & Gronroos 2012; Gopinath & Glassman 2008). In addition, demographic features, such as, gender, age and technological skills might affect the perceived importance of native language use (Berendt & Kralisch 2009; Homqvist 2009; Rogers 2003). Thus, it is likely that consumers' attitudes toward native language use versus English use on the Internet vary between consumer segments and language groups.

Sargent and Ray (2013) point out that minority languages might become extremely important when targeting certain user segments because serving this language group with their native language might be the only way to reach the given audience. This can be due to their language skills or attitudes toward the non-native language. Thus, it is valuable for companies to recognize the differences between certain groups in order to apply the right localization strategy.

Nantel and Glaser (2008) studied empirically the impact of language and culture on perceived website usability. In the study, users were asked to evaluate different websites and their usability. The results illustrate that users are more likely to leave a website if it is not in their own language and if their foreign language skills are not strong enough to manage the information (Nantel & Glaser 2008).

Also Berendt & Kralisch (2009) studied empirically that there is a relationship between a user's English language skills, perceived saved effort of using native-language, and satisfaction. Internet users who were using a website in their non-native language, and who

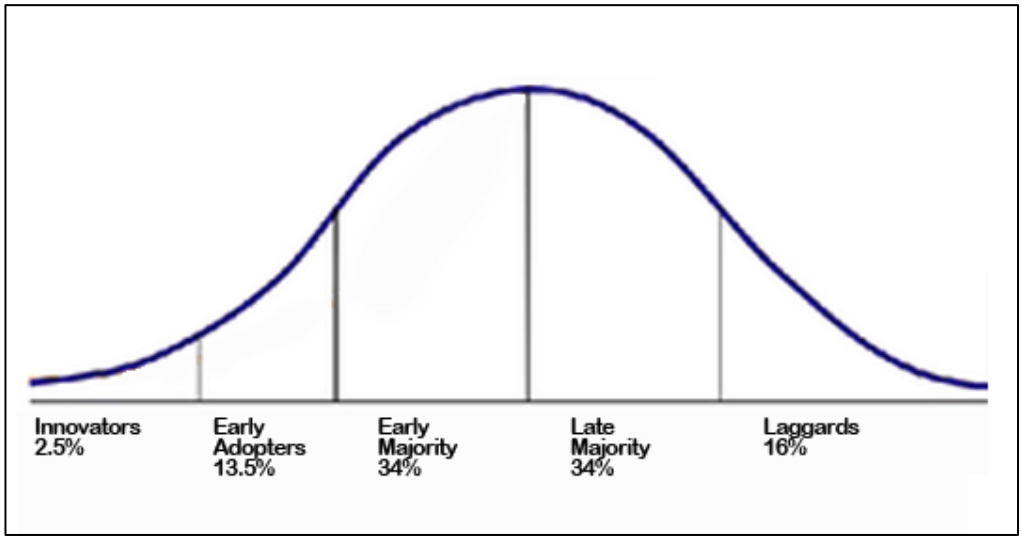
had poor English skills, were less satisfied with the website than those who could use the website in their native language or had competitive English skills.

Berendt & Kralisch (2009) also point out that service providers have to consider different tools and strategies when targeting users in originally English-language web environments. Users can be divided to two groups: "linguistic upper class" and "linguistic lower class". The first group is those who are competent in English, often prefer using Internet in English and are very critical towards translated content. The latter group is those who are not as competent at English and therefore highly appreciate content in their native language (Berendt & Kralisch 2009). This illustrates that language competence seems to significantly affect the perceived importance of native language use. Consequently, the group of users that lack language skills most likely appreciate more translated content and language tools than those who are competent at English (Berendt & Kralisch 2009).

Also the age of the user has been found to impact the perceived importance of native language use on the Internet. Gandal (2006) studied empirically the relationship between native language and use of the Internet in Quebec where both English and French are national languages and most people are bilingual. The differences were studied based on the time each user spent at the English-language website. The results indicate that the perceived importance of native language use on the Internet varies between age groups: the younger the users the smaller the barrier to use the Internet in English. The study also suggets that if the younger generation drives the dynamics of the Internet, English will maintain its first mover advantage as a lingua franca on the Internet (Gandal 2006).

The impact of language is likely to be influenced by the level of innovativeness and technological adaptation of the user as well. Rogers (2003) has created a model for diffusion of innovation, which is a process through which an innovation is spread through certain channels over time among the people in the social system (See Figure 4). According to the model the members of a social system can be divided in five categories based on their level of innovativeness: innovators, early adopters, early majority, late majority and laggards. The criterion for adopter categorization is innovativeness - how fast an individual or a group of individuals are adopting new ideas compared to other members of a social system. According to Rogers (2003) members of the five categories differ in terms of socioeconomic status, personality values and communication behavior.

Figure 4: Technological adaptation



Source: Adapted from Rogers (2003, p. 281)

Innovators (venturesome) are the first users to try a new innovation. This group of users is characterized by willingness to take risks, highest social status, great financial liquidity, and closest contact to the scientific sources and close interaction with the group members. Innovators are not afraid of failures, thus, they try easily new services.

Early adopters (respect) are the second group to adopt a new innovation. They are a little more risk adverted and it takes a little longer from them to adopt new ideas. This group of users has the highest degree of opinion leadership and potential adopters often follow these users in order to seek information about an innovation.

Early majority (deliberate) is one of the largest groups of the adopter categories, forming one third of all members of a system. Members of this group adopt new innovations just before the average user in the whole system. This group is interested in new innovations and willing to try new services but they seldom lead the adoption process. This is the most important group of users in terms of sales. Thus, from a marketing point of view, this group needs to be reached as soon as possible.

Late majority (skeptical) adopt new services just after the average user and are another large group of users, forming also one third of the users in the whole system. People in this group are skeptical and do not adopt new innovations until their peers do so. The members of this

group are likely to need as much customization as possible due to their high skepticism towards new innovations.

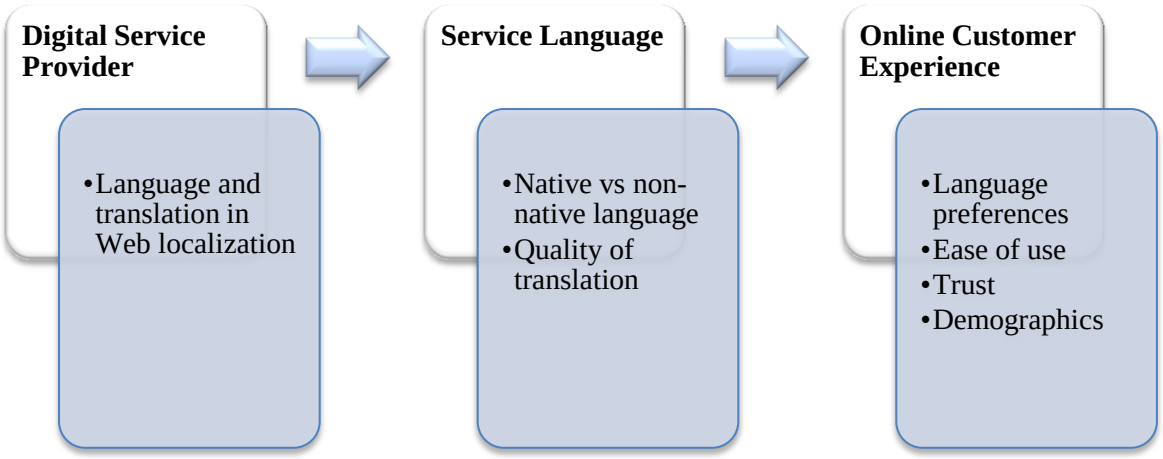
L*aggards* (traditional) are the last ones to adopt a new service. This group respects traditional values and the economic position forces these individuals to be careful in adopting new innovations (Rogers 2003, p. 282-285).

2.6. Theoretical frame of reference

Based on the literature review, the theoretical frame of reference for this study is presented below in Figure 5. The first part of the research question, *"What is the role of language in Web localization?"* is studied in the context of the service provider. The aim is to understand the process of localization from a service provider's perspective, as well as the challenges and opportunities involved in the localization process.

The second and third research questions: *"How important do digital service users perceive the native language in using a digital cloud service?"* and *"Do users differ in terms of perceptions and preferences?"* focus on the service user. This part is studied through a quantitative online questionnaire and the aim is to understand how language impacts the service experience: Do consumers prefer using a technical cloud service in their native language or in English, as well as, are there differences between user preferences and attitudes based on demographic characteristics of the users?

Figure 5: Theoretical framework



Digital service provider

Digital service provider forms another of the two perspectives to be studied. Service provider is responsible for the delivery of the service and localization decisions. The aim of the service provider is always to create best possible customer experience. This part of the framework includes the components discussed in the section of "localization from a service provider's perspective". Thus, it aims to explain the localization process from a service provider's perspective and recognize the components of localization in the context of digital services. The concept of localization was discussed widely in the theory: First the traditional definition of localization was presented, and then it was argued that localization should be seen in a new way in the context of digital services. Thus, this section aims to test the argument of seeing language and translation as the main functions of the localization of digital services.

Service language

Service language acts as a link between the service provider and the service user. The aim is to understand if the possibility to use a digital service in one's native-language versus non-native language will improve the service experience. In the literature review it was discussed that language is likely to have both functional and emotional impact on a user. Therefore, language is likely to affect the consumer perceptions as well as the perceived usability of the service. Furthermore, this part of the framework aims to find out if the quality of language has an effect on user preferences and attitudes.

Online customer experience

Digital service user forms the other perspective of the study. This part of the framework includes the components discussed in the section of "localization from a service user's perspective". This part of the framework explores the language impact on service experience. As stated in the theory, user preferences and attitudes towards localization are studied through online customer experience. Thus, the components of the survey instrument have been constructed based on the constructs of online customer experience, including preferences, ease of use and trust. Furthermore, the online survey seeks to understand how satisfied the current users are with the language and translation of the cloud service. Furthermore, it will be studied if there are differences between users based on their demographic characteristics. The goal of the thesis is to link these two perspectives together and understand how the service provider can improve the customer experience by its language-related decision-making and localization activities.

3. RESEARCH DESIGN AND METHODOLOGY

This section clarifies the research design and methods chosen for the study. It breaks down the whole research process and justifies the methods choices. In addition, it evaluates the issues of validity and reliability of the research. First, the research process will be discussed briefly. Second, the case study approach will be introduced and justified. Third, both qualitative and quantitative data collection procedures and data analysis methods will be discussed. Finally, the validity and reliability of the research is evaluated.

3.1. Research process

Table 6 illustrates the whole research process in chronological order. The thesis project started in November 2013 by finding a topic, creating a research plan and contacting the case company. Since the purpose of the study was to explore the role of language in the Internet, it was clear that the case company had to be a company that provides global Internet services. F-Secure was chosen because it has long experience as a global Internet-service provider and it has a variety of Internet services provided in different languages.

Table 6: Research process

<table>
<tr><th>Nov 2013</th><th>Dec 2013</th><th>Jan 2014</th><th>Feb 2014</th><th>Mar 2014</th><th>Apr 2014</th><th>May 2014</th><th>June 2014</th><th>July 2014</th><th>Aug 2014</th><th>Sept 2014</th></tr>
<tr><td colspan="7">Literature review</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Research plan</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Contacting the case company</td><td>1st and 2nd interview</td><td></td><td>3rd interview</td><td></td><td>Interview data analysis</td><td>Final interviews</td><td>Interview data analysis</td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td colspan="3">Survey preparation</td><td>Pilot testing the survey</td><td>Survey translation and posting</td><td colspan="2">Survey data analysis</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td colspan="2"></td><td>Final report</td></tr>
</table>

In January 2014, we visited F-Secure for the first time with my supervisor. During a two-hour interview session we build ideas about the thesis topic and discussed possible approaches to it. Second and third interviews took place in February 2014 and March 2014 respectively. All meetings took place at the company's premises. The most time-consuming part of the research process was the creation of the survey instrument since it required broad understanding of the topic both from the academic and from the case company's perspective. Furthermore, the questionnaire was provided in four different languages, thus the translation process as well as combining the results from all language versions required time.

3.2. Mixed-method single case study approach

I chose to approach my research with a single case study strategy because a case study is seen as a useful method when the arena of research is relatively unknown, the purpose of the research is theory building, and the main objective is to gain a holistic understanding of the topic (Ghauri 2004; Tellis 1997). In order to gain a broad understanding of the phenomena both the perspective of the service provider and of the service user had to be included in the study.

A case study can be exploratory, descriptive, or explanatory. However, usually case studies are used in exploratory and descriptive research and the approach enables a researcher to develop an initial, rough description and understanding of the topic (Yin, 2009). Ghauri (2004) and Stake (1995) claim that a case study should be seen rather as the object of the study than a method. This statement supports my approach to the research well since the topic is studied from two different angles in order to understand the phenomena as a whole. A case study can be defined in many ways depending on the context. In my study the definition by Ranging (1992) is used as it gives a broad understanding of a case study.

> *A Case Study is "a research strategy that examines, through the use of a variety of data sources, a phenomenon in its naturalistic context, with the purpose of ''confronting'' theory with the empirical world. This confrontation can take the form of either identifying constructs for later theory testing or searching for a holistic explanation of how processes and causes ''fit together'' in each individual case*" (Rangin 1992 in Piekkari, Welch & Paavilainen 2009, p. 569).

The definition explains both the inductive and deductive way of approaching a research problem. Inductive reasoning is the process of establishing general conclusions from our observations and/or particular facts. Deductive reasoning, on the contrary, is the process of building hypothesis based on the existing literature, and testing the hypothesis leads to accepting or rejecting the hypothesis. The approaches are not exclusive and in many cases a study includes some features of them both (Ghauri 2005). My study has been theory-driven therefore it can be classified as deductive.

A case study can feature either one case or multiple cases depending on the purpose of the study (Yin 2009). Stoecker (1991) differentiates single and multiple case studies between intensive and extensive case studies. An intensive case study aims at understanding a unique case with in-depth analysis, and providing a thick and holistic description of the subject. A multiple case study, on the other hand, tends to test a theory and look for generalizable theoretical constructs by comparing different cases (Stoecker 1991).

My research subject is relatively unknown, thus it is more important to understand the topic in general than find replication logic between multiple cases. Yin (2009) suggests that a case study can also involve embedded design; meaning that the case study combines multiple levels of analysis within a single case study. My study is conducted at two levels of analysis: the company and the customers. This approach was chosen in order to understand the phenomenon in depth and from both perspectives.

A case study can be qualitative (e.g. words) or quantitative (e.g. numbers) or a combination of both (Yin 2003). My study will include both qualitative and quantitative data since the primary data will be collected through qualitative interviews and a quantitative customer survey. The case company's perspective will be studied through interviews and the user's perspective through an online survey. Due to cross-cultural nature of the study, an online survey was regarded as a best and most efficient way to collect data from global users (Malhotra, Birks & Wills 2014).

Researchers widely agree that the major strength of a case study strategy is the possibility to combine data from multiple sources (Creswell 2003). However, researchers understand the benefits of incorporating multiple sources in different ways. One approach is to strengthen a single explanation with a variety of sources. This is a positivist way of thinking and supports

the idea of triangulation. Constructionist researchers, such as Stake (2000), agree that employing multiple sources is a good method in order to validate a case study. However, he also points out that multiple sources allow a researcher to identify different ways of seeing a phenomenon. Consequently, the objective of a case study is not always to strengthen a single explanation for a problem but rather to find multiple ways of seeing the phenomenon. According to his perception the quality of a case report is based on the researcher's ability to represent and justify the variety of perspectives regarding the issue (Piekkari, Welch & Paavilainen 2009).

3.3. Primary data collection

My study was divided in two empirical phases: qualitative interviews and a qualitative survey. According to Bryman (1992) the selection of multiple methods is justified if important elements of the research problem require it. The purpose of mixing methods is to gain a complete and holistic picture of the area of study (Jick 1979). In addition, the method encourages the researcher to find innovative solutions. Despite qualitative and quantitative methods providing different types of data and it possibly making the data analysis complicated (Piekkari & Welch 2004) in my research I see the mixed method approach as an advantage. My purpose is not to compare the qualitative and quantitative data but to increase holistic understanding of the area of research.

The mixed method approach was chosen to get deeper understanding of the research problem as well as to increase validity of the research (Hurmerinta-Peltomäki & Nummela 2006). The research process started with the qualitative interviews, which helped to familiarize myself with the topic in the specific context. In addition, the survey instrument was constructed based on the data retrieved from the interviews together with the literature. Hurmerinta-Peltomäki & Nummela (2006) state that increased pre-understanding of the topic will lead to more accurate interpretation of the results, thus increase the validity of the findings.

Creswell (2009) states that in mixed method study, it is important to consider carefully timing, weighting, mixing and theorizing of the data in order to shape the structure of the study. In my research the data collection was done sequentially. First, the interviews were conducted with the case company. Second, an online survey was created and translated together with the company. Third, the survey was posted on the company's social media channels. Lastly, the

final interviews were conducted. Both primary data sources are seen as important. The interview data is more descriptive and is used as background information for the quantitative analysis. The quantitative data provides statistical evidence of the research problem. The qualitative and quantitative data were analyzed separately and combined only in the final discussion section. Mixing quantitative and qualitative data could decrease the validity of the research by providing unreliable and contradictory results.

3.3.1. Qualitative data collection

The qualitative data was collected through group interviews and individual interviews. In total seven interviews were conducted and six people interviewed. The interview process was seen as a part of the whole methodological process, as Kvale (1996, p. 81) has presented it. The process consisted of the following steps: thematizing, designing, interviewing, transcribing, analyzing, verifying and reporting. Only the final group interview was recorded but careful notes were taken in all interviews, and the notes and recordings were transcribed straight after the meetings. First two meetings were group interviews and the latter interviews included both group and individual interviews. The final interviews were conducted after the initial results of the survey were ready.

3.3.1.1. Qualitative interviews

I chose to apply unstructured, conversational interviews as a method of study since the topic was novel in the academic field, and as I was interested in understanding the phenomena in an organizational context without guiding the conversation too much. Structured questions would have most likely restricted the discussion. However, the topics and issues were already outlined in the presentation that was sent to the company beforehand, as well as, presented during the first meeting. Thus, everyone was familiar with the background of the research. This helped in keeping the focus of the interviews and allowing listeners to reflect the topic already during my presentation.

An interview guide, including all the topics to be discussed, was used in the interviews. Planning is the most important part of interviews since inappropriate reparation will waste both the respondents and the researcher's time. Thus, the topic guide is an important part of the research process and needs careful attention (Gaskell 2000). The topics had been developed based on the literature review and the first meeting with the company. The idea was to create themes during the first discussion that could be then studied deeper in the following interviews. The interview guides can be found in the appendix 3.

The purpose of the first interview was to discuss the topic in general and find connections between the topic and the case company. Second interview was also conducted as an unstructured, conversational group interview where new points of views were raised and discussed from a little different point of view. In the first meeting the focus was on the localization and translation processes, whereas the second meeting was with the marketing department. Thus, the point of view in discussion was more user-oriented. This meeting was relevant in terms of building the questionnaire instrument and understanding the research context better. In addition, the interview deepened my understanding of the topic by giving me a chance to pose follow-up questions based on the first meeting.

Based on the two first meetings, it was suggested that it would be useful for me to observe and see what happens at the localization department. Therefore, I spent a day at the department by interviewing people. I had prepared questions for this meeting based on earlier meetings and literature but the interviews were relatively conversational and the pre-designed questions were only used for ensuring that all relevant topics were discussed. During the day I had interviews with three people in groups of two or three, and separately.

The final interviews were conducted in order to get initial comments on the survey results, as well as, fill gaps from the former interviews. When conducting these interviews I had already analyzed the earlier interviews as well as pre-analyzed the quantitative data. Thus, this meeting gave me a possibility to clarify questions that came up during the analysis as well as hear some comments regarding the pre-analysis of the survey. All this helped me to find the interrelations between the quantitative and qualitative data, as well as, build the big picture of the study.

3.3.1.2. Group interviews versus individual interviews

I chose to use both group and individual interview techniques in the study because the methods complemented each other. Group interviews provided broader understanding of the topic and helped me to understand different point of views on the area of study, while the individual interviews allowed more detailed questions to be asked, therefore provided deeper understanding of specific questions. Gaskell (2000) has stated that academic research usually prefers individual interviews and commercial research group interviews due to time demands. Individual interviews take more time and commercial research is often time pressured (Gaskell 2000).

According to Gaskell (2000) the social interaction of group interviews is likely to lead to more creative insights and different point-of views. On the contrary, individual interviews allow hearing more personal opinions and detailed stories. It might be easier for an interviewee to express personal opinions during an individual interview than in a group interview where colleagues can argue against your opinion. The combination of the two techniques seemed to be the right approach to my research since the group interviews provided me with the initial topic areas to be studied and the individual interviews allowed me to further explore these topics and hear personal opinions and experiences. The group interviews involved employees from different departments, which made the conversations creative and informative. Furthermore, this strategy made it possible to triangulate the data throughout the process.

Table 7: Interview data

Date	Type of interview	Duration	Gender	Interviewee
14.1.2014	Group interview	02:00:00	Male Female Female	*Senior Manager, Localization & Documentation* *Senior Technical Writer, Localization & Documentation* *Marketing Manager*
31.1.2014	Group interview	01:45:00	Male Female	*Senior Manager, Head of User Experience Design* Marketing Manager
14.3.2014	Group interview	02:00:00	Male Female	*Project Manager, Localization* Senior Technical Writer, Localization & Documentation
14.3. 2014	Individual interview	00:45:00	Male	Senior Manager, Localization & Documentation
18.6.2014	Group Interview	00:51:30	Male Male	Senior Manager, Localization & Documentation *Project Manager, Localization*
18.6.2014	Individual Interview	00:48:35	Male	Senior Manager, Localization & Documentation
18.6.2014	Individual interview	00:30:00	Male	Project Manager Localization

Total number of interviews	**7**		**Total number of interviewees:**	**6**

* With cursive font when interviewed for the first time

3.3.2. Quantitative data collection

The survey instrument was constructed based on the interviews and literature review. Since the topic was new, there were no tested scales to measure the role of language in this context. Thus, the interview data was used as background information in the instrument development. The survey instrument consisted of structured, number-coded questions, and in the end of the survey, some space was left for general comments.

In general, the popularity of online surveys is increasing because they are seen as an effective way of doing research. In addition, online surveys enable to study international, overseas and cross-cultural research settings. Online surveys constitute around 22 percent of the worldwide spend on research methods. In Finland the spending is exceptionally high being 33 percent compared for example to Greece where the spending is only 1 percent (Malhotra, Birks and Wills 2012).

Usually, participants are not recruited to take part in the online surveys, but those who happen to visit a website on which the survey has been posted, is invited to take part in the survey. In this study simple random sampling was applied, meaning that sampling units were selected by chance among the *younited* users. Online surveys have several advantages compared to email surveys because they enable a researcher to guide the respondent through the survey, as well as, restrict the amount of blank boxes and multiple answers. An online survey can be personalized, and it can be much cheaper and faster than other survey methods. In addition, online surveys can be accessed using a mobile phone (Malhotra, Birks and Wills 2012).

3.3.2.1. Web survey structure and construction

The survey constituted of six sections that are all covered in the literature review. The sections were a) demographics, b) user experience; c) *younited* cloud service and language; d) localization preferences; e) translation quality; and f) general preferences. In the end there was a section for comments and feedback but this was not used for the thesis analysis. Since the survey instrument was created solely for this study, the validity and reliability of the instrument had to be tested with factor analysis, which is presented in the section of quantitative findings.

The survey was conducted by using an online survey tool, Webropol. This tool was chosen because both parties, F-Secure and Aalto University are using the system. The survey was posted on the *younited* Facebook page and Twitter account in the beginning of June 2014. In order to attract participants to take part in the survey, a competition was included in the survey. However, the anonymity of the participants was secured by not combining the answers to the email addresses given for the draw.

Building the survey instrument was a long process including various stages. First, the initial version of the survey instrument was created based on previous literature and the interviews. Second, the instrument was verified and modified together with the case company. Third, the instrument was pilot tested within *younited* users and suitability of the instrument was tested. Based on the pilot test a few adjustments were done: The scale for user experience and perception of the *younited* website was added. In addition, two variables were removed in order to increase the reliability of the scale. Also wording was changed in a few variables based on user feedback.

After all adjustments and many rounds of proofreading, the instrument was translated into three languages. Thereafter, the language copies of the instrument were created and the survey was posted on the Facebook and Twitter accounts of *younited*. The length of the survey had to be considered carefully because the Internet environment is dynamic and people will not be ready to spend too much time on a survey. This is the reason why the questionnaire constituted only of structured questions.

3.3.2.2. Question wording and translation

Question wording is one of the most important and difficult parts of creating a questionnaire. The question content and structure should be expressed clearly so that it is easily understood by participants. If a question is worded poorly, participant may understand the question incorrectly or reject to answer it (Malhotra, Birks and Wills 2012). Malhotra, Birks and Wills (2012) provide several suggestions how these issues can be avoided, including using ordinary words, avoiding leading or biasing questions and avoiding implicit assumptions.

In my research the wording had an important role since the survey was translated into several languages. The instruction from the case company was that "you should write for translation", meaning that the wording has to be clear and the main point has to be understandable. In addition, passive should be avoided, as well as, unnecessary words deleted. The questionnaire was first created in Finnish, which is the researcher's native language, in order to ensure the validity of the questionnaire. It is easier to understand the meaning of the text in one's native language than in a foreign language. To achieve a successful translation it is important that the source language is easy to read and understandable (Chidlow, Plakoyiannaki and Welch 2014).

After the Finnish version of the survey instrument was finalized and pilot tested, the survey was translated into English by the case company. The translation was done by two in-house localization managers with translator background. Both managers had been involved in the development of the survey instrument. Therefore, they were familiar with the topic and knew the target vocabulary as well as the target audience. This was seen as the most reliable method of conducting the translations. Usually, translations are done from the original version but in this case, English is the official language of the company and all company documents are translated from English to other languages. In order to ensure the quality of translation, the questionnaire was sent back to me for verification before translating it to other languages. This enabled me to check that all questions were as intended. At this stage no changes were done. Thus, the English version of the survey was sent to Sweden and Germany for translation.

All translation work, except the version from Finnish to English, was done by native speakers. It was not seen as a problem that the English version was not created by a native speaker. The English version had to be suitable for global audience as most people answer the survey in English if their native language is not available. Thus, the English version had to be simple and easily understood. Furthermore, respondents with weaker English skills had to be also able to understand the questions. On the contrary, it was expected that most people answering the Finnish, German and Swedish versions were native speakers, therefore, the translations were done by native speakers.

3.4. Data analysis

As mentioned earlier, the empirical data was collected through two different methods: qualitative interviews at the case company and a quantitative online survey of the cloud service users. The interview data was used for answering the first research question. The quantitative data, on the other hand, was used for answering the second and third research questions.

3.4.1. Qualitative data analysis

The qualitative data was analyzed with thematic content analysis, which a common way of analyzing interviews. The primary goal of content analysis is to reduce data by simplifying, structuring and summarizing data (Malhotra, Birks and Wills 2012). First, interviews were written in a word-document based on the field-notes. Second, the data was coded by highlighting the common themes discussed during the interviews. Finally, the sub-themes were categorized under the main themes. The process of coding is important in qualitative research since it enables researcher to find the most important themes in the data, as well as, reduce irrelevant data (Malhotra, Birks and Wills 2012). Since only some of the interviews were taped there are a limited number of quotes presented in the findings.

3.4.2. Quantitative data analysis

The survey data was transferred from Webropol to Microsoft Excel 2010 and modified to suitable form. The final statistical analyses were conducted by using IBM SPSS Statistics 2.0. The questionnaire consisted of structured questions and all the variables were coded with numbers. In addition, all the variables were either in nominal or in ordinal scales. Thus, retrieving the data was quite straightforward. After the data had been modified to a suitable form, it was analyzed with a set of quantitative research methods. The data analysis included cross-tabulation, factor analysis, t-test and analysis of variance.

Cross-tabulation:

Cross-tabulation demonstrates the conditional frequency distribution of two variables. In other words, cross-tabulation enables us to see how the respondent groups have answered to specific questions (Malhotra, Birks & Wills 2012). Cross-tabulation is applied in analyzing the survey language chosen by respondents.

Factor analysis:

Exploratory factor analysis (EFA) is a statistical technique whose goal is to find the underlying relationships between measured variables, thus it is used for grouping variables. EFA is often used for the scale development purposes (Malhotra, Birks & Wills 2012). Since the scale was developed for this study based on literature, interviews and pilot test, it is important to test the scale and find the underlying relationships between variables before conducting further analysis.

Thus, exploratory factor analysis was applied. There are some important data requirements that have to be tested before conducting factor analysis: The input data has to be measured on interval or quasi-interval scale. In this study Likert scale was used, therefore fulfilling the requirements. In addition, the number of cases should be at least 5 times the number of variables used in the analysis (Malhotra, Birks & Wills 2012). The subjects-to-variables ratio is 8.6 in this factor analysis, thus well above the minimum of five.

T-test and Analysis of Variance:

In order to investigate the differences between user groups, t-test and analysis of variance (ANOVA) were conducted. T-test and ANOVA are common ways to measure the differences between groups. The two-sample t-test is used for testing differences between the means of two groups, for instance native speakers and non-native speakers, while ANOVA is used as a test of means for two or more groups, for instance four different age groups. Both analyses need an independent and one or more dependent variables. The independent variable is the grouping variable and it has to be categorical (non-metric). The dependent variable, on the other hand, has to be metric (Malhotra, Birks and Wills 2012).

T-test assumes that the dependent variable is normally distributed. In t-test we look at the t-statistic, t-distribution, and degrees of freedom. Based on these, we check the significance of the probability to decide whether there is a difference between the two groups in terms of one variable or several variables. In the ANOVA analysis, on the other hand, the null hypothesis assumes that the means are equal. The independent variables has to be categorical (non-metric) and dependent variables has to be measured on a matric scale thus interval or ratio scale (Malhotra, Birks & Wills 2012).

3.5. Validity and reliability of the study

Validity is about the trustworthiness and accuracy of the study. In order a study to be valid, all the parts of the study, including research questions and research methods, have to measure properly what they are supposed to measure. Reliability, on the other hand, is about consistency and stability of the study (Nardi 2006). Reliability can be increased for example by documenting all the steps taken during the research process in detail (Yin 2009).

It is important to notice that validity measures are different between qualitative and quantitative studies, and even though a study is valid it is not necessarily reliable. Qualitative validity means that the researcher checks for the accuracy of findings through certain steps. In quantitative research, on the other hand, validity means that the study can be tested and findings replicated (Creswell 2009).

In qualitative research the most common ways of validating data is through triangulation of data sources, member checking and detailed description of the study. Common validity issues in a mixed method approach are sample selection, sample size, follow up or contradictory results, bias in data collection, inadequate procedures or use of conflicting research questions (Creswell 2009, p. 190). In order to avoid these issues, all the steps are explained and planned carefully in my study. In addition, the qualitative and quantitative data were analyzed separately, which helped to avoid the issues of mixing data or finding contradictory results.

Eisenhardt (1989) and Yin (2009) strongly support the use of multiple cases in order to validate a study. Their emphases are on general constructs and not on the context of the constructs and the role these constructs play in a specific context. Other researchers, such as Dyer and Wilkins (1991) strongly support the single case study approach because it allows a researcher to describe both unique and typical experiences in the case context as bases for theory building. The idea is to get as close as possible to the object of the study and the world of managers, and see the company and its problems from inside (Dalton 1959). Therefore, the strength of my study is in the in-depth understanding of the issue in my research context and the triangulation of the qualitative data. In addition, multiple sources including both qualitative and quantitative data increases the in-depth understanding.

Since a single case study approach was used in my study, the findings apply only in the context of the case company. In order to increase the validity and reliability of the research, the research process is documented step by step and explained in detail. All the relevant documents, such as the interview guide and the survey instrument can be found in the appendices at the end of my thesis. This enables another researcher to conduct the same study in another setting. In order to avoid mistakes, the questionnaire was pilot tested and adjusted based on the feedback. Furthermore, multiple managers were interviewed so that the information could be triangulated. In addition, a close contact to the company enabled to confirm data and to ask additional questions if needed.

According to Yin (2009) the mixed methods research approach forces the methods to share the same research questions, to collect complimentary data, and to conduct counterpart analysis. The mixed methods approach allows investigator to tackle more complicated research questions and collect richer and stronger evidence for the study. The validity of my research is therefore increased by the use of multiple data sources and embedded perspectives.

4. FINDINGS

In this section I will present the findings. The section is organized as follows: First, the case company and the *younited* by F-Secure cloud service will be introduced. Second, the findings regarding the case company's localization processes, challenges and best practices will be discussed. It should be noted that all interviews were conducted in Finnish, thus, all quotations have been translated by the author.

4.1. The case company and younited by F-Secure

F-Secure is a Finnish IT company mainly known for its Internet security services. The company was founded in 1988 and employs around 940 employees in 20 offices around the world. The headquarters of the company are located in Helsinki, Finland. The company is listed on the NASDAQ OMX Helsinki Ltd (F-Secure 2014).

F-Secure has three main business sectors: consumers, operators and companies. In the past, the company's main focus has been in B2B operations and traditional anti-virus products. Due to changes in software business, F-Secure has recently revised its strategy and is now increasingly focusing on cloud-based security, as well as B2C sector. Cloud technology has revolutionized the way people interact and use technology: People want to access Internet and digital content no matter when or where. Due to such changes, the security market has to be reorganized and only the companies that can adopt the new business model rapidly will survive (F-Secure, Annual Report 2013).

F-Secure has reacted fast to the transition in software business and launched more new products in 2013 than any year before. In spring 2014, F-Secure launched a new cutting-edge, global cloud service, *younite*d. *Younited* is a personal cloud service where consumers can store and manage their digital lives regardless of location. In addition, *younited* enables users to combine content from different cloud services and devices in one place (F-Secure, Annual Report 2013). Security is a crucial part of cloud storage services since consumers trust all their digital assets in one place. F-Secure has a long history as a trusted Internet security service provider and reliability is one of F-Secure's core values. This asset will most likely help the company to compete against other cloud service providers, such as Dropbox.

4.2. Younited and language

F-Secure employs two different language strategies for external communication: Official language and "*younited* language". The *younited* language is relaxed and friendly, and the information loading is high. In other words, the language itself describes the service and is an important part of marketing communication. This makes localization and translation of the service challenging. Consequently, management is tackling questions such as how to keep the tone of voice aligned in all language markets and whether the relaxed language style suits all markets or if adaptation is needed.

Currently, there is an on-going debate among digital service providers about the localization of digital services. Service providers are unsure if digital services need to be localized, and if yes to what extent, or is it sufficient to provide services only in English. On one hand, most digital services are free and translation only creates additional costs for the service provider. On the other hand, if translation creates value for the user, it should be provided. Thus, in terms of service provider the question is whether there is a need for localization and if yes, what are the quality requirements of the language

The *younited* cloud service was originally launched in English, but soon after the launch, the service was translated into three languages – Finnish, Swedish and German. This created a perfect setting to investigate the role of language in the context of a digital cloud service. According to the interviewees, a digital service, such as *younited* can be launched in English, since early adopters and technologically advanced users are usually comfortable using a service in English. However, the current perception is that reaching the early majority of the users requires localization and especially translation.

Localization becomes more challenging if the source language radically differs from a formal language. This is the case with *younited*: The tone of voice is relaxed and the service is supposed to be fun, fresh and speak like a human being. For instance, *younited* language includes phrases, such as, "put your stuff in the cloud". In this context "stuff" means file or folder. In Finnish this expression would be translated "pistä kamasi pilveen" which relates to drug usage and could not be used in this context. The company overcame such problems by keeping the text formal in the particular segment but used relaxed language style in another

part of the text where suitable phrases could be found in the target language, such as "homma hanskassa" translation for "Get it together".

According to the interviewees, the main challenge with *younited* is to keep the credibility of the service aligned globally. The tone of voice is supposed to be relaxed, "hip and cool" as described by the localization manager. Hence, the language is far away from F-Secure's traditional communication and may confuse some customers. For example, in Japan managers had commented that, "a product that speaks a language like that, cannot be reliable". Thus, understanding the target market is extremely important. Currently, all *younited* translators and marketers have received the same guidelines in terms of *younited* language. Consequently, *younited* language should be equally relaxed in all language markets including English, Finnish, Swedish, and German. Despite the guidelines the interviewees have a feeling that, for example, in German the language is more formal compared to other language markets

4.3. Qualitative findings

4.3.1. Localization at the case company

Localization is a familiar concept at F-Secure and it is an important part of the company's daily processes. Localization is seen as a vital support function for sales and marketing and a lot of resources are allocated to it. F-Secure deals with around 30 languages constantly and has an estimate of 15 000 translation assignments yearly including millions of words. The company has a whole department specialized in documentation and localization. The department employs 12 people and most of them are qualified translators. Yet, the actual translation work has been outsourced to native translators.

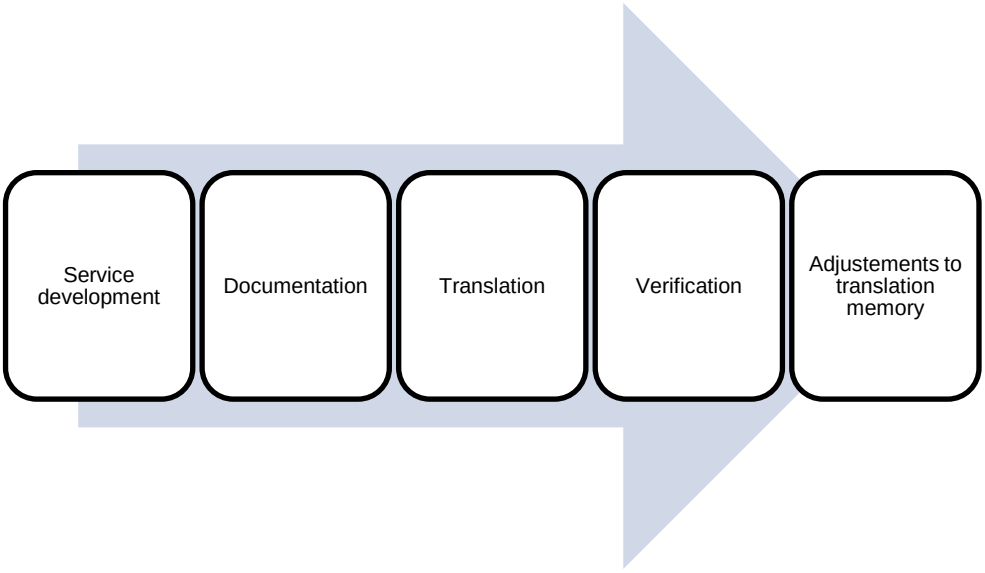
According to the interviewees, localization is seen as a process of cultural adaptation. However, the more we discussed the topic, the clearer it became that language and translation are the most visible parts of the process. In addition, the nature of digital services creates technical requirements for the language: a translation is useless if it does not fit in the given space. A common perception among the interviewees was that customers want to operate in their native language and that companies have to provide information in consumers' language in order to stay competitive. Currently, the localization decisions of the company are made based on the company's strategy and general market outlook. Usually, the company expands

first to the countries where it already has a local country office. The country office is able to help both in localization and in marketing activities.

It seems that a need for full localization is disappearing due to fast globalization of the services and the governance of consumer tastes. By full localization the localization manager means adaptation of colors, layout and numbers. Fast development cycles of digital services would not even allow such extensive localization practices. Instead, a common opinion was that a need for translation is increasing. However, one of the interviewees pointed out that as language is a set of symbols, the importance of visualization and interactive elements will increase relatively more than the importance of language. This was argued by the fact that Internet is constantly expanding to the markets where literacy rates are low, making the visual appearance of the websites and Internet services more important than the language.

4.3.2. Localization process

Figure 6: Localization process



At the case company, localization is started already during the service development phase. The faster localization is started the better. At least one person from the documentation and localization department is always involved in the product/service development process. This person creates the English version of the service and is responsible for ensuring that the original source language meets the requirements for localization - “writing for translation”.

According to the requirements, the source language has to be simple English so that it can be translated unambiguously to other languages. In addition, passive and unnecessary words should be avoided. If it is difficult to recognize the main word of the text, it is impossible for the translator to get the meaning right.

> *"Well internationalized is already well localized."*
> *(Localization project manager)*

The citation emphasizes the importance of localization and language in the product development phase. Understanding already in the beginning of the service development that the language will be used as a source language for number of other languages, helps in the localization process in terms of time, costs and quality.

English is the official, corporate language of F-Secure. Thus, documentation and service descriptions are always done in English, which is therefore the source language for all translated documents. In addition to the documentation team, the translators are involved in the localization process from the very beginning. Usually, the first draft of the text is sent out to the translators as soon as possible. The earlier the text is delivered, the more time the translators have for quality control. It is likely that if one translator needs clarification in the text, others need as well. When a mistake is reported, the source text is usually modified so that the translator's question disappears. The strength of fixing the source text is that the mistake or unclear expression can be changed to all 30 languages at one time.

Once the text has been translated, the marketing department checks the quality of the text in the actual context. At this stage, the text is also send out to the local country offices where the final text is approved. If a country office has some improvements, the changes are discussed and usually done. Finally, the changes have to be added to the translation memory. By updating the translation memory constantly, the translations will reflect the changes across instances and content types at the time of development.

4.3.3. Translation

Translation business is a big, hidden business. Organizations do not share information regarding the translation processes and there are no common pricing models for it. One of the interviewees pointed out that "The bigger the firm, the more demanding the users are in terms of translation quality". He argued this by stating that that a translation sounds always bad in one's native language. This can be partly explained by the fact that we understand a deeper meaning of the message in our native language than in a foreign language. Consequently, when we operate in our non-native language we might imagine the meaning of the words differently. Thus, evaluating the quality of translation is all about perceptions, therefore a good translation is a very subjective concept.

F-Secure outsources nearly all its translation assignments due to time, cost and quality -related reasons. Furthermore, all translators the company employs are native speakers of a given language. However, it was discussed that native speakers are not always the best translators, as they might often use too fancy language for a standard user. The marketing manager told an example of this type of a case: A native English speaker assured that a translation was good and accurate for the given context but the non-native users did not understand the expression in this particular context. Consequently, it is important to understand the target audience and their preferences. International English is usually the most secure option when targeting global customers. In addition, it is important to know the language of today since language changes constantly. With technical services, such as *younited*, it can be difficult to find accurate terms in all target languages since many words come from English, and it takes time before the corresponding words and concepts are developed in other languages.

4.3.4. Current challenges

A common opinion within the interviewees was that the importance of localization is increasing constantly together with the growing number of Internet services and non-English speaking Internet users. The main challenges that came up in the interviews are an increasing amount of content to be localized, limited resources and time required to translate and localize the content. The development cycles of digital services are fast, new content is needed constantly and the quality of language has to be maintained.

One of the localization managers pointed out that the nature of localization has changed. Earlier the service was translated and adapted to the local needs once. Nowadays, localization is a constant process, and the standards and requirements of localization are increasing. The requirements for localization can be summed up in three words: "More, faster, and higher". Consequently, the pressure for quality, speed and costs are constantly increasing. The speed of releasing and updating new language versions is high. An important question is how to maintain the cost-efficiency and avoid bottlenecks in the localization process. Another question is how to control the global brand and keep it aligned in all markets. Localization of digital services is more about well-functioning and highly automated processes than about single words and nuances. There is no time to improve and polish single translations but the focus is on the big picture and the processes.

> *"Translations are always as good as possible considering the cost-efficiency" (Documentation and localization manager).*

According to the localization manager, it seems that the Internet era has changed the standards of translation: there simply is no time for checking individual words or nuances in the text. However, every translation goes through a professional translator, which is an important part of the company's quality control process. At times, small errors might be fixed in-house but even those are sent afterwards to a professional translator for approval.

The findings show that the three most common problems in translating digital services are: 1) Translators do not understand the context of the text and the quality of translation suffers, 2) The language style of the source text does not fit to the target market 3) It is impossible to translate the content because equal words or phrases cannot be found in the target language or cannot be used for this particular purpose. The point three is two-fold because F-Secure actually encourages the translators to adjust the text to better meet the local needs. However, if adjustments are done out of control it can be a problem. The most difficult part is that the translations are usually done outside the actual context. Furthermore, information is always lost during a translation process and the translation is never better than the original text.

> *"If translation is better than the original text, it is not a translation anymore" (Localization and documentation manager)*

Translating a text is always challenging for many reasons. First of all, the original text creator is a professional in his or her field of business but the translator is not. Second, translators have to often translate the content to the global markets without fully knowing the target audience. This means that a Western-European, Scandinavian translator tries to think how an American user would use the product. The risk of a bad translation increases together with the distance between the R&D and the translator.

4.3.5. Quality control of translation

The process of quality control has to be seen in a different way in the context of *younited* than in traditional software services. The development cycles of *younited* are fast and improvements are done constantly. In the past, a software development phase took from one to one and half years and the localization phase around two months. After this the software was tested for a while before the launch. Today, software development cycles are radically faster and localization is done weekly. Thus, the localization process must be done and seen in a totally new way.

Even though the quality of the language is an extremely important aspect of localization, the technical features of the service are even more important. *Younited*, for example, is technically identical in all language versions. This means that regardless of language, there is always the same amount of space for the text. Thus, a good translation is not only evaluated based on the quality of the language but also based on the technical suitability of the language. As mentioned earlier, a good translation is useless if it does not fit into the service platform. Consequently, the translators are required to balance between the quality of the language and the technical requirements of the language.

F-Secure has a highly automated and well-functioning translation processes that include quality control at all stages of the process. According to the interviewees, the quality of the translation is ensured by both the internal and external quality assurance. One of the key points is that the translators are responsible for the quality control together with the company's internal localization department. Next, the best practices for ensuring the high quality in the localization of *younited* have been presented.

1) The employees working at the localization department have excellent language skills combined with good technological knowledge, and the majority of the employees have a translator background. In addition, the documentation and localization department has its own budget for localization. Thus, the localization department does not have to wait for product or marketing managers' decision of localizing a service but they can concentrate on developing new language versions constantly. In this way, the localization process runs systematically and there is enough time left for quality control. The localization manager stated that when all language versions are done as soon as possible, more time is left for proofreading and testing. Furthermore, having an own budget for localization creates significant cost-savings, as the department is able to allocate translation costs between different projects.

2) Nearly all translation assignments, regardless of workload, are outsourced at F-Secure. By outsourcing the translation work the company is able to maintain the cost-efficiency and quality of the translation. F-Secure has long partnerships with its sub-contracted translators. Accordingly, committed and trustworthy translators are one of the key drivers of the high-quality translation work at the company. Customer feedback is another important part of the quality control process. As the goal of the service business is to create best possible customer experiences, it is important to receive feedback from customers as well.

3) The Localization department does not see crowdsourcing as an option for the localization of *younited* because the company would be unable to control the quality of translation. Furthermore, the costs of managing the system would be higher than the current system. The fact is that even though the translation work was done by the users, the quality control should be provided by the company. This, on the other hand, would create costs as well as endanger the brand. Currently, F-Secure has highly automated localization and quality control processes, which enable the company to keep the localization costs at the minimum but provide a high-quality content. F-Secure believes that it has one of the world's most cost-efficient language and translation management systems.

4) The company orders translation services from a few main partners. F-Secure has a long history with a few reliable sub-contractors who know the language and the requirements of the company. Using freelancers would not be possible as the management overhead of communicating with a sufficient amount of freelancers is higher than the premium paid to a multi-language vendor. Usually there is not space for creativity in a translation process but F-

Secure encourages the translators to express their opinions. This is a part of the company's engagement system. The quality of translation is ensured by the use of native translators. Tone of voice cannot always be given to the translators - it is their responsibility to create text and understand the company's needs. This is another way to engage the translators. A translator is compensated for taking the time to familiarize him/herself with the project as F-Secure pays the translators by the hour as opposed to per word.

5) Both internal and outsourced translation work is usually done individually. Even though working in groups would be optimal, it would require too much time. Internal validations often cause trouble due to the subjective nature of the language. Everyone has his or her opinion in terms of good translation, and there is never one right way to translate a text. However, the text is always proofread by a colleague before it is published. In addition, the translators are constantly responsible for ensuring the quality of the published text. This is only possible due the long-term partnerships with translators.

> *"We sometimes translate texts, such as CEO's greeting, in our office. Either the text cannot make it to the translator due to a tight schedule or the text includes confidential information. When we are five people working with the text, it takes considerably more time and the conversation often goes off the topic." (Documentation and localization manager)*

As the statement describes, in order to keep the translation process as cost-efficient as possible, the work is nearly always done individually.

6) The localization process at F-Secure is highly automated, well planned and therefore very cost-efficient. The company has a huge number of languages in relation to people working at the localization department. As the processes are highly automated they are less vulnerable to mistakes. The development cycles of digital services are so fast that there is no time for testing and verification. Usually, by the time the tests are done new changes have occurred. Since the quality of translation is a subjective concept, F-Secure has stopped to rate the quality of its translation. If you evaluate the quality and look for mistakes your attitude towards a text is not objective.

Many big, well-known corporations still rate all translation work according to an index. If the translation quality falls below the target value, the sub-contractor will be changed. This is a very common way to control the quality of translation. However, corporations using this type of a system have difficulties to find translators because no one wants to work for a company that treats translators like machines. According to the localization manager, as long as the translation sounds natural and a customer is satisfied the company is satisfied.

7) The key drivers of high-quality translation are open communication, transparency, and trust between the company and the translators. The fair remuneration system is also an important part of the cooperation and appreciation of the translators. Traditionally, translators have been paid cents per word but F-Secure has changed this to euros per hour. This is an important part of the company's strategy to increase trust and commitment between the company and the translators. F-Secure believes that this system leads to a better quality of work since the salary is not dependent on speed. In fact, it seems that translators do their work faster now than before. This might be partly explained by the trust and commitment achieved though the new payment system.

8) The company is constantly trying to improve its translation processes and get them more efficient without losing the quality of the text. One big step forward will be the automation of translation. The company is hoping that a big part of translation work can be machine translated in the near future. However, in order to program the translation machines properly the consumer preferences, especially in terms of language, have to be understood better. F-Secure is currently developing platforms where translators can do the translation work in the actual context. This will make the translation work easier, as currently, most translations are done outside the context.

4.3.6. Summarizing qualitative findings

To maintain the quality of localization along with the speed of changes require well-functioning processes. In conclusion, well-functioning processes and systems are the key factor that enable F-Secure to manage over 30 languages on daily basis. The localization manager assured that once the processes are working, it is easy to manage even more languages.

The findings indicate that language plays an important role in the localization of digital services, and cultural adaptations are rarely done due to the global nature of digital services as well as due to the speed of developments. It seems that there is no need for cultural adaptations and profound localization in this type of services. However, an open question that will be discussed in the next chapter is whether there is a need for localization of digital services at all. Based on the interviews, a common opinion was that a digital service can be successfully launched in English, but reaching the majority of users requires localization. However, there is no empirical evidence on this.

When looking at the localization process in Figure 6, we can see that language-related questions have to be managed throughout the process. Even though we argue that language is the main actor in the localization process, it is important to note that the cultural sensitivity of the language is also taken into account in localization through using native speakers as translators. Currently, F-secure makes its expansion-related decisions mainly based on where its subsidiaries are located and on the general strategic outlook. This illustrates that the company is targeting mainly certain geographical areas instead of global language markets though its Web localization. However, the strategy varies between languages since it is clear that if a service is targeted to a Finnish-speaking audience the service is targeted to Finland but when targeting English-speaking audiences the case is totally different. In conclusion, the findings support my hypothesis that language plays an important part in localization of digital services and it should be studied as an independent factor also in further studies.

4.4. Quantitative findings

In this chapter the findings of the quantitative analyses are presented. The purpose of the survey was to answer to the second and third research questions: *How important do consumers perceive the native language use in a digital cloud service* and *Do users differ in terms of perceptions and preferences.* In addition, the survey allowed testing how well F-Secure has succeeded in localization of the cloud service.

First, the data collection procedure and descriptive statistics are presented. Second, the selection of the survey language between respondents will be investigated. Third, it will be tested if there are differences in terms of user experience between those who use the service in their native language and those who use it in a foreign language. This will be investigated with the method of t-test. Third, factor analysis is conducted in order to validate the survey instrument for further analysis. Finally, the differences between respondents, in terms of their English competence, general language skills, technological knowledge, Internet usage, gender, and native language are investigated with the analysis of variance (ANOVA).

4.4.1. Description of the data

The survey instrument was managed as a web fill-out form that was posted on the Facebook page and on the Twitter account of the *younited* cloud service from June 8th to June 15th, 2014. After two weeks a total of 315 responses were collected. During the first two days, the survey was answered by 134 respondents and after the first week it was answered by 148 respondents. A reminder message was posted on Facebook and Twitter in the beginning of the second week of the survey period. Based on the survey process, it seems that the critical moments in terms of online surveys are immediately after the survey is posted and a few hours after. The survey link was opened in total by 1943 people of which 315 filled out the form, the response rate being 16.2 %. In this type of a survey it is impossible to know how many people actually saw the survey; therefore the response rate has been calculated based on the potential respondents who opened the survey link.

The survey instrument included three different types of five-point measurement scales: Most of the variables were measured on a five-point Likert scale (fully disagree - fully agree). User experience and user perception of *younited* were measured on a five-point semantic

differential scale (negative - positive, unreliable – reliable, difficult to use – easy to use). The importance of using *younited* or other cloud service versus banking services in one's native language was measured on a five-point continuous scale (not at all important – very important). Since it would not be meaningful to combine different measurement scales in the analysis, different scales are analyzed separately.

The number of cases used in the analysis was 297. Native English speakers (N=18) were excluded from the main analysis since English is usually the standard language of digital services and the source language for localization. In addition, the survey questions were mainly targeted to non-native English speakers. Including English natives in the analysis would have provided biased results. In the analysis, a pairwise deletion of incomplete cases was used. This means that a respondent were dropped only from the analysis involving variables that include missing values (Malhotra, Birks & Wills 2012).

As the Table 8 illustrates, the majority of the respondents were men (91.6 %) and over 80 % of the respondents fell in the age range from 21 to 45. In addition, the respondents seem to have competitive language skills, spend a lot of time on the Internet and tend to try new IT services and software among the first ones: Nearly 80 % of the respondents speak two or more foreign languages in addition to English, and nearly 60 % of the respondents can communicate in English like a native speaker or at least fluently. Furthermore, half of the respondents state that they usually try new IT and software among the first ones. Thus, the target group can be classified as early adopters. Additionally, almost 60 % of the respondents spend over 3 hours of their free time on the Internet daily. Based on the demographic features of the respondents, the group of current users is exceptional which sets limitations to the generalization of the results. However, it can be assumed that the demographics describe quite well the users of a recently launched digital service, which is still at an early state of its life-cycle.

Most respondents were Finnish, therefore when different language groups are compared, the results should be dealt with caution. The reason why the survey was answered by so many Finnish respondents can be partly explained by the fact that the cloud service is provided by a Finnish company, and the service was launched only a few months before the survey was conducted. Even though this type of a service can be classified as a "born global" service, it is expected that the first users come from the country of origin where the service gets more

media exposure and publicity. Another potential explanation is that Finnish people are just more eager to participate in surveys than other language groups, as other language versions were opened close to the same number of times but received much less answers. At this early stage of service life-cycle, the user base is most likely concentrated on early adopters and innovators who tend to try new IT-services among the first ones, and are comfortable using services in English. Thus, repeating this study later would be useful and give broader understanding of the digital service users including the early and late majority.

Table 8: Demographic characteristics of the respondents

Demographic Characteristics	Number of respondents N=297	%
Gender		
Female	25	8.4
Male	272	91.6
Age		
Under 20 years	10	3.4
21-35 years	138	46.5
36-45 years	102	34.3
46-55 years	41	13.8
Over 55 years	6	2.0
Native language		
Finnish	230	77.4
Swedish	20	6.7
German	17	5.7
French	2	0.7
Russian	1	0.3
Spanish	1	0.3
Portuguese	4	1.3
Chinese	1	0.3
Arabic	1	0.3
Other	20	6.7
English competence		
Like a native speaker	42	14.1
I can communicate fluently in all situations	136	45.8
I can communicate quite well in all situations	100	33.7
I can manage in easy situations	18	6.1
I know a few words	1	0.3
Foreign languages spoken in addition to English		
1 language or none	60	20.2
2 languages	151	50.8
3 languages or more	86	29.0
Are you usually among the first ones to try new IT and software?		
Yes, often	152	51.2
Yes, sometimes	138	46.5
No	7	2.4
Internet usage (hours)		
Over 3 hours daily	172	57.9
Under 3 hours daily	117	39.4
A few hours per week	7	2.4
Less	1	0.3

4.4.2. Survey language

The survey instrument was created first in Finnish and translated afterwards into English, Swedish and German. Thus, respondents had a possibility to choose in which language they answered the questionnaire. Table 9 illustrates the survey language chosen by each language group. Only those who had a possibility to choose their native language as a survey language have been included in the analysis. 85.2 % of the respondents whose mother tongue was Finnish answered the questionnaire in Finnish, 13.9 % of those answered the questionnaire in English and 0.9 % in German. This indicates that people are likely to choose their mother tongue as a survey language if possible. The respective numbers for other language groups indicate similar results: 60 % of Swedish natives answered the survey in Swedish and 76.5 % of German natives answered the survey in German. Due to the lack of responses in the two latter groups, the results should be dealt with caution. Even though, English natives are mainly excluded from the analysis, it is notable that all English natives answered the survey in English.

Table 9: Survey language chosen

			Survey language				Number of native speakers
			Finnish	Swedish	German	English	
Native language	Finnish	N					230
		%	85.2 %	0.0 %	0.9 %	13.9 %	100.0 %
	Swedish	N					20
		%	20.0 %	60.0 %	0.0 %	20.0 %	100.0 %
	German	N					17
		%	0.0 %	5.9 %	76.5 %	17.6 %	100.0 %
	English	N					18
		%	0.0 %	0.0 %	0.0 %	100.0 %	100.0 %
Total		N	200	13	15	57	285
		%	70.2 %	4.6 %	5.3 %	20.0 %	100.0 %

Even though the results indicate that the majority of respondents choose their native language as a survey language, Table 10 and 11, show that many respondents still prefer to use the actual cloud service and the *younited* website in English. For instance, 43.5 % of the respondents whose native language is Finnish use the *younited* cloud service in English, and 46 % of those use the *younited* website in English. Without further analysis it is impossible to identify specific reasons for the language selection. However, this could be partly explained by the fact that *younited* was first launched only in English, and users are used to navigate the service in English and have not switched the language later. Another reason could be the

context. A user might be more comfortable using a digital service in English but might still prefer his or her native language in a survey context.

When using a digital service, it is relatively easy to learn menus and other functions of the service quite fast, no matter in which language using the service. A survey, however, is a new context for a user and might require more understanding and better language skills. In the survey, respondents were asked to rate how important it is for them to be able to use *younited* or other cloud service in their native language versus online banking. There was a significant difference in means of these two variables: *Younited* or other cloud service (M=2.55, SD 1.24) and online banking (M=4.19, 1.23). This indicates that if a service involves risk and requires profound understanding, the importance of the language factor increases. However, this factor needs to be studied further in order to draw more trustworthy conclusions. In this study, these two aspects formed only two variables as a part of the whole survey instrument.

Table 10: Younited language

			Younited language					
			Finnish	Swedish	German	English	NA	Total
Native language	Finnish	N						230
		%	53.0 %	0.0 %	0.4 %	43.5 %	3,0 %	100.0 %
	Swedish	N						20
		%	10.0 %	35.0 %	0.0 %	45.0 %	10.0 %	100.0 %
	German	N						17
		%	0.0 %	0.0 %	70.6 %	29.4 %	0.0 %	100.0 %
Total		N	124	7	13	114	9	267
		%	46.4 %	2.6 %	4.9 %	42.7 %	3.4 %	100.0 %

Table 11: Website language

			Website language				
			Finnish	Swedish	German	English	Total
Native language	Finnish	N					230
		%	53.0 %	0.4 %	0.4 %	46.1 %	100.0 %
	Swedish	N					20
		%	10.0 %	35.0 %	0.0 %	55.0 %	100.0 %
	German	N					17
		%	0.0 %	0.0 %	47.1 %	52.9 %	100.0 %
Total		N	124	8	9	126	267
		%	46.4 %	3.0 %	3.4 %	47.2 %	100.0 %

4.4.3. User experience - t-test

In this section, the aim is to test if there are differences in user experience and perceptions between those who use the service in their native language and those who use the service in a foreign language. Both of these scales were measured with a five-point semantic differential scale. The three-item scale was modified from Davis (1993) and Berendt and Kralisch (2009) (Cronbach's Alpha = 0.725 & 0.721). The dimensions were negative-positive, unsatisfied – satisfied and hard to use – easy to use.

In order to conduct the analysis, we need to first apply Levine's test for equality of variances to see whether the variances are the same or different between groups. If related p-value is small (e.g. $p < .05$) the variances are not equal and "equal variances not assumed" has to be applied in t-test. In our case Levene's test indicates that in user experience one (negative-positive) and two (unsatisfied-satisfied) variances are equal but in the user experience three (difficult to use-easy to use) variances are not equal.

In t-analysis, null hypothesis always suggests that the means are same across groups at the significance level .05. Table 12 shows the results of the two-tailed test reported by the software. Here the high p-values suggest that there are no significant differences in means between those who use the service in their native language versus those who use the service in a foreign language.

The results are very similar in terms of perceptions where users were asked to evaluate their perception of the *younited* cloud service based on the younited.com website. Levene's test indicates that the variances are equal in perception one (negative-positive) and three (difficult to use-easy to use) but not equal in perception two (unsatisfied-satisfied). Also in terms of perceptions, Table 12 shows that all p-values are insignificant which means that there are no differences in terms of perceptions between those who use the website in their native language versus those who use the website in a foreign language. Overall, the means of the user experience and the perception of the *younited* cloud service are very high. This indicates that the respondents are dedicated and satisfied with the service.

Table 12: Language-related differences in user experience – t-test

	Native language users N=141		Non-native language users N=156		Sig.
	Mean	Std. Deviation	Mean	Std. Deviation	
User Experience 1	4.255	.062	4.150	.071	.264
User Experience 2	4.373	.777	4.364	.850	.931
User Experience 3	3.856	.913	3.700	1.051	.177

	Native language users N=137		Non-native language users N=160		Sig.
	Mean	Std. Deviation	Mean	Std. Deviation	
Perception 1	4.336	.647	4.263	.659	.322
Perception 2	4.510	.638	4.431	.749	.318
Perception 3	3.923	.887	3.994	.858	.470

4.4.4. Validating the scale - factor analysis

Before conducting factor analysis the suitability of data has to be tested. The suitability is tested with two common methods: Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin Measure of Sampling Adequacy. The data is suitable when Barlett's test is significant at the significance level of .05 and KMO value is greater than 0.50 (Malhotra, Birks & Wills 2012). Table 13 illustrates that both of these requirements are met and factor analysis can be conducted. KMO value is .855 and Barlett's test is significant at .000.

Table 13: Suitability of data for factor analysis

KMO and Barlett's test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.855
Barlett's Test of Sphericity	Approx. Chi-Square	3087.068
	df	253
	Sig.	.000

The number of factors is determined based on eigenvalues. Thus, only factors with eigenvalue greater than 1.0 are accepted. The factors are rotated with one of the most common methods, the varimax procedure. Varimax is an orthogonal method of rotation and it minimizes the number of variables with high loadings on a factor. Thereby, it makes the interpretation of the factors easier (Malhotra, Birks and Wills 2012). To simplify the results, only varimax rotated loadings of .40 or greater are reported. Each variable was rated on a five point scale with 1 = fully disagree and 5 = fully agree. In order to find a suitable set of factors and variables, the factor analysis was tested with a different set of variables. Due to unsuitability of a few variables the following variables were left out from the analysis:

- The relaxed language style is well-suited for a cloud service such as *younited* (M=4.12, SD= .93).
- Formal language would be best suited for a cloud service such as *younited* (M=2.95, SD=1.02).
- In terms of language, *younited* is different than other cloud services (the language is more relaxed) (M=3.73, SD .84).

These variables focused mainly on the language style of *younited*. In addition to means and standard deviation, ANOVA analysis was conducted. It indicated that there were no significant differences in means of these three variables between different language groups. Also the factor analysis supported my decision to leave these variables out, since when all the variables were included in the factor matrix, the analysis gave seven inconsistent factors instead of the five more consistent factors given by the final analysis.

Table 14 displays the five factors provided by the final analysis including the key statistics associated with the factor analysis. The key figures are factor loadings, communality (h^2), eigenvalue and Cronbach's alpha. Factor loadings demonstrate the single correlations between the variables and the factors. Communality, on the other hand, is the amount of variance a variable shares with all the other variables within the factor considered. Eigenvalue illustrates the total variance explained by each factor and it is often used for determining the number of factors. Only factors that have an eigenvalue greater than one are retained. Cronbach's alpha is used for measuring the reliability of the scale. In order to have some explanatory power Cronbach's alpha should be greater than .60 (Malhotra, Birks, Wills 2012).

Table 14: Factor loadings and interpretation of the factors

Factor 1: Importance of localization	Loading	h^2	Eigenvalue	Cronbach's alpha
I will use a wider range of features in a cloud service, if the service is available in my native language	.878	.771	6.588	.872
My user experience improves, if I can use younited or other cloud services in my native language	.823	.779		
I am more likely to try a new service, if it is marketed in my native language	.822	.691		
On multilingual websites, I prefer to select my native language	.777	.703		
Finding information about younited also in my native language is an important factor for me to start using the service	.759	.598		
I prefer to use younited or other cloud services in my native language	.748	.701		
It is easier to find information on websites in my native language than in English	.715	.532		
The selection of languages offered by a cloud service affects my decision to start using that service	.712	.517		
A website that has been translated into my native language inspires trust in me	.623	.470		
The quality of translation is not that important, as long as I can use the service in my native language and the text is understandable (reversed score)	-.596	.437		
Factor 2: Quality of current communication	**Loading**	**h^2**	**Eigenvalue**	**Cronbach's alpha**
The language used in communication about younited gives an image of a high-quality product	.873	.642	3.740	.847
The language used in communication about younited gives an image of a safe product	.835	.774		
The younited.com website provides a clear image of the service	.770	.724		
The language used in communication about younited is consistent with the language in the actual service	.769	.642		
Factor 3: Quality of current translation	**Loading**	**h^2**	**Eigenvalue**	**Cronbach's alpha**
The language in younited seems natural and fits well in my own language	.772	.779	2.057	.772
I am happy with the quality of language and translation in younited	.764	.780		
There is enough information about younited in my native language in the Internet	.752	.605		
Factor 4: Importance of language quality	**Loading**	**h^2**	**Eigenvalue**	**Cronbach's alpha**
The quality of language affects how positive my attitude towards an application or a service is.	.827	.697	1.287	.647
The quality of language affects which language I use in an application/service	.719	.549		
Linguistic errors undermine the credibility of a website or an application	.693	.566		
Factor 5: English orientation	**Loading**	**h^2**	**Eigenvalue**	**Cronbach's alpha**
English suits a cloud service such as younited better than other languages	.757	.682	1.102	.639
On multilingual websites, I select the language that gives me the most information about the subject	.539	.503		
Cumulative variance			**64.24 %**	

All factors provided by the analysis have some explanatory power (alpha > .60). However, two adjustments were done after the factor analysis: The variable "There is enough information about *younited* in my native language in the Internet" is left out from the factor three since it does not seem to measure the right thing in this context. The change enhances the alpha of the factor three to .90 which is an exceptional value. However, because the scale has now only two variables left the factor should be interpreted carefully. This is also the case with factor five. Thus, these two factors should be dealt with caution.

In addition, the variable "I usually select an English website, even if other language options were available" is left out from the factor matrix due to a similarly high cross-loading with the factor five. The original factor matrix can be found in Appendix 1. Cronbach's alpha of the factor one is also better after the adjustment increasing from .846 to .872. These five factors provided by the factor analysis will be utilized in further analysis.

4.4.5. Mean and standard deviation of the variables

In order to get an overview of the survey results, mean and standard deviation of the variables included in each factor are reported in Table 15. All components were rated again from 1 (fully disagree) to 5 (fully agree). The number of cases (number of respondents) may slightly vary between factors because only some of the questions were compulsory. For instance, the translation quality could be only answered by those who had a possibility to use the service in their native language.

Table 15: Mean and standard deviation of variables

Factor 1: Importance of localization (N=296)	Mean	Std. Deviation
I will use a wider range of features in a cloud service, if the service is available in my native language	2.432	1.308
My user experience improves, if I can use younited or other cloud services in my native language	2.957	1.446
I am more likely to try a new service, if it is marketed in my native language	2.842	1.297
On multilingual websites, I prefer to select my native language	3.104	1.307
Finding information about younited also in my native language is an important factor for me to start using the service	2.936	1.438
I prefer to use younited or other cloud services in my native language	2.841	1.335
It is easier to find information on websites in my native language than in English	2.583	1.183
The selection of languages offered by a cloud service affects my decision to start using that service	2.409	1.232
A website that has been translated into my native language inspires trust in me	3.350	1.102
The quality of translation is not that important, as long as I can use the service in my native language and the text is understandable	2.064	.989
Factor 2: Quality of current communication (N=297)	**Mean**	**Std. Deviation**
The language used in communication about younited gives an image of a high-quality product	4.014	.830
The language used in communication about younited gives an image of a safe product	4.040	.804
The younited.com website provides a clear image of the service	3.849	.966
The language used in communication about younited is consistent with the language in the actual service	4.030	.773
Factor 3: Quality of current translation (N=257)	**Mean**	**Std. Deviation**
The language in younited seems natural and fits well in my own language	4.058	.863
I am happy with the quality of language and translation in younited	4.146	.806
Factor 4: Importance of language quality (N=297)	**Mean**	**Std. Deviation**
The quality of language affects how positive my attitude towards an application or a service is	4.145	.879
The quality of language affects which language I use in an application/service	3.879	1.019
Linguistic errors undermine the credibility of a website or an application	4.495	.731
Factor 5: English orientation (N=296)	**Mean**	**Std. Deviation**
English suits a cloud service such as younited better than other languages	3.608	1.096
On multilingual websites, I select the language that gives me the most information about the subject	3.835	1.116

Importance of localization:

Table 15 indicates that the variables in factor one, the importance of localization, are rated relatively low by the respondents. This factor includes questions about the language impact on online customer experience, ease of use, language preferences, and trust. The results illustrate that the current users of the cloud service do not perceive the localization of the service important. The only variables that have been rated over three are "A website that has been translated into my native language inspires trust in me" and "On multilingual websites, I prefer to select my native language". The final question in this section "The quality of translation is not that important, as long as I can use the service in my native language and the text is understandable" illustrates that the quality of language is more important than the possibility to use the service in one's native language.

Current quality of communication and translation:

Quality of communication and quality of translation, on the other hand, have been rated very high. All variables are close to four, which indicates that the respondents are satisfied with the current quality of communication and current quality of translation. Therefore, the company has successfully localized the service.

Importance of language quality:

Quality of language seems to be an important factor for most users. It also seems that the quality of language has an impact on user experience. It affects how positive attitude a user has towards an application or a service, and which language a person decides to use in an application/service. Also respondents seem to widely agree that linguistic errors undermine the credibility of a website and an application.

English orientation:

Finally, the users of *younited* seem to be quite English-oriented since the means of the two last variables "English suits a cloud service such as *younited* better than other languages" and "On multilingual websites, I select the language that gives me the most information about the subject" are rated relatively high. Thus, it seems that English might suit better for a cloud service like *younited* than other languages. In addition, users tend to select the language that gives them most information instead of a native language.

4.4.6. Differences between groups – One-way ANOVA

With ANOVA analysis we are able to investigate if there are differences between respondents based on their English competence, native language, technological knowledge, Internet usage, and the number of languages spoken in addition to English. The dependent variables used in the analysis are the five factors: importance of localization, importance of language quality, current quality of communication, current quality of translation and English orientation. Before conducting ANOVA analysis, a sum variable of each factor was created. Thus, the analysis only investigates the mean of each factor and not separate variables. The analysis investigates if there are significant differences between groups at a significance level of .05. A star has been added beside the value when the p-value is significant.

4.4.6.1. English competence

This part investigates if there are differences in user attitudes based on the users' English-language skills. Table 16 demonstrates that there are differences in terms of localization preferences, translation quality and English orientation at the significance level .05. In terms of localization, language skills seem to impact the importance of localization: Those who speak English like a native speaker or fluently value localization less than those who can only manage the language in easy situations.

In terms of translation quality ANOVA indicates that those who are more competent in English rate the translation quality slightly lower than those who have weaker language skills. This result supports the study by Berendt and Kralisch (2009). According to their study, those who are very competent in English and comfortable using English in the Web are more critical towards translated content than those who really need the translated content. Consequently, this indicates that the users who need translated Web content, appreciate translation more than those who do not care if the service is in their native language or in English. Also English orientation seems to be understandably stronger within those who have better English skills.

Table 16: Differences based on English competence – One-way ANOVA

		N	Mean	F value	Sig.
IMPORTANCE OF LOCALIZATION (LOC_MEAN)				10.239	.000**
	Like a native speaker	42	2.531		
	I can communicate fluently in all situations	136	2.813		
	I can communicate quite well in all situations	100	3.110		
	I can manage in easy situations	18	3.861		
	I know a few words	1	3.000		
	Total	297	2,937		
IMPORTANCE OF LANGUAGE QUALITY (QUAL_MEAN)				1.145	.335
	Like a native speaker	42	4,183		
	I can communicate fluently in all situations	136	4,208		
	I can communicate quite well in all situations	100	4,163		
	I can manage in easy situations	18	4,000		
	I know a few words	1	3.000		
	Total	297	4.177		
CURRENT COMMUNICATION QUALITY (COM_MEAN)				1.303	.269
	Like a native speaker	42	4.018		
	I can communicate fluently in all situations	136	3.921		
	I can communicate quite well in all situations	100	4.078		
	I can manage in easy situations	18	3.903		
	I know a few words	1	3.000		
	Total	297	3.987		
CURRENT TRANSLATION QUALITY (TRAN_MEAN)				3.076	.017**
	Like a native speaker	38	3.763		
	I can communicate fluently in all situations	118	4.089		
	I can communicate quite well in all situations	88	4.233		
	I can manage in easy situations	17	4.265		
	I know a few words	1	3.000		
	Total	262	4.102		
ENGLISH ORIENTATION (ENG_MEAN)				5.027	.001**
	Like a native speaker	42	3.929		
	I can communicate fluently in all situations	136	3.868		
	I can communicate quite well in all situations	100	3.585		
	I can manage in easy situations	18	2.972		
	I know a few words	1	3.000		
	Total	297	3.726		

All dimensions were measured on a five-point Likert scale, ranging from 1 (fully disagree) to 5 (fully agree).
* Significant at 5% level

4.4.6.2. General language skills

General languages skills were measured through how many foreign languages the users speak in addition to English. Table 17 illustrates that there are no significant differences between groups in terms of general language skills. Even though ANOVA table indicates that there is a statistical difference between those who speak two languages in addition to English and those who speak three languages, I decided to ignore the difference since the difference is so small and not significant in terms of this this study. In conclusion, general language skills do not seem to affect the user attitudes.

Table 17: Differences based on general language skills – One-way ANOVA

		N	Mean	F value	Sig.
LOC_MEAN				1.236	.292
	1 language or none	60	3.063		
	2 languages	151	2.866		
	3 languages or more	86	2.976		
	Total	297	2.937		
QUAL_MEAN				3.496	.032**
	1 language or none	60	4.228		
	2 languages	151	4.075		
	3 languages or more	86	4.306		
	Total	297	4.173		
COM_MEAN				.163	.849
	1 language or none	60	4.021		
	2 languages	151	3.985		
	3 languages or more	86	3.954		
	Total	297	3.983		
TRAN_MEAN				.714	.490
	1 language or none	52	3.990		
	2 languages	132	4.102		
	3 languages or more	78	4.160		
	Total	262	4.097		
ENG_MEAN				.924	.398
	1 language or none	60	3.575		
	2 languages	151	3.762		
	3 languages or more	86	3.762		
	Total	297	3.724		

All dimensions were measured on a five-point Likert scale, ranging from 1 (fully disagree) to 5 (fully agree).
* Significant at 5% level

4.4.6.3. Age

The survey asked respondents to categorize themselves to one of the following age groups: under 20, 21-35 years, 36-45 years, 46-55 years and over 55 years. Table 18 indicates that that there is a significant difference between age groups in terms of their localization preferences. It seems that the younger the user, the less important localization is. The mean within less than 20 years old respondents is 2.7 while the mean within over 55 years old respondents is 3.2. Thus, the older the user the more important it is to offer different language tools and translated content. It has to be noted that the age groups were divided quite unevenly in this study, thus the results have to be dealt with caution and further research is needed.

Table 18: Differences based on age – One-way ANOVA

		N	Mean	F value	Sig.
LOC_MEAN				3.521	.008**
	under 20 years	10	2.730		
	21-35 years	138	2.805		
	36-45 years	102	2.955		
	46-55 years	41	3.344		
	over 55 years	6	3.250		
	Total	297	2.937		
QUAL_MEAN				1.411	.230
	under 20 years	10	3.833		
	21-35 years	138	4.164		
	36-45 years	102	4.265		
	46-55 years	41	4.057		
	over 55 years	6	4.167		
	Total	297	4.173		
COM_MEAN				.542	.705
	under 20 years	10	3.875		
	21-35 years	138	3.951		
	36-45 years	102	3.978		
	46-55 years	41	4.122		
	over 55 years	6	4.042		
	Total	297	3.983		
TRAN_MEAN				.605	.660
	under 20 years	8	4.063		
	21-35 years	127	4.075		
	36-45 years	86	4.128		
	46-55 years	35	4.186		
	over 55 years	6	3.667		
	Total	262	4.097		
ENG_MEAN				1.137	.339
	under 20 years	10	3.750		
	21-35 years	138	3.841		
	36-45 years	102	3.637		
	46-55 years	41	3.537		
	over 55 years	6	3.750		
	Total	297	3.724		

All dimensions were measured on a five-point Likert scale, ranging from 1 (fully disagree) to 5 (fully agree).
* Significant at 5% level

4.4.6.4. Gender

Table 19 shows that there are no gender-related differences in terms of preferences. However, again the gender distribution was very uneven, men accounting for more than 80 % of the respondents. Therefore, the gender-related differences might occur when the issue is studied in a different setting. The gender distribution might illustrate the fact that very few women try new IT services among the first ones.

Table 19: Differences based on gender – One-way ANOVA

		N	Mean	F value	Sig.
LOC_MEAN				2.217	.138
	Female	25	3.184		
	Male	272	2.915		
	Total	297	2.937		
QUAL_MEAN				.864	.354
	Female	25	4.293		
	Male	272	4.162		
	Total	297	4.173		
COM_MEAN				.157	.693
	Female	25	3.930		
	Male	272	3.988		
	Total	297	3.983		
TRAN_MEAN				.528	.468
	Female	21	3.976		
	Male	241	4.108		
	Total	262	4.097		
ENG_MEAN				.058	.810
	Female	25	3.680		
	Male	272	3.728		
	Total	297	3.724		

All dimensions were measured on a five-point Likert scale, ranging from 1 (fully disagree) to 5 (fully agree).
* Significant at 5% level

4.4.6.5. Technological adaptation

The level of technological adaptation was tested by asking if the users try new IT services and software among the first ones. Table 20 indicates that those who tend to try new IT services among the first ones seem to value localization less than those who never try new IT services among the first ones. However, due to the lack of responses in the latter category, the results have to be dealt with caution.

Table 20: Differences based on technological adaptation – One-way ANOVA

		N	Mean	F value	Sig.
LOC_MEAN				3.771	.024**
	Yes, often	152	2.839		
	Yes, sometimes	138	3.011		
	No	7	3.629		
	Total	297	2.937		
QUAL_MEAN				1.400	.248
	Yes, often	152	4.116		
	Yes, sometimes	138	4.222		
	No	7	4.429		
	Total	297	4.173		
COM_MEAN				1.371	.255
	Yes, often	152	4.013		
	Yes, sometimes	138	3.971		
	No	7	3.571		
	Total	297	3.983		
TRAN_MEAN				1.206	.301
	Yes, often	132	4.159		
	Yes, sometimes	124	4.048		
	No	6	3.750		
	Total	262	4.097		
ENG_MEAN				.536	.586
	Yes, often	152	3.737		
	Yes, sometimes	138	3.728		
	No	7	3.357		
	Total	297	3.724		

All dimensions were measured on a five-point Likert scale, ranging from 1 (fully disagree) to 5 (fully agree).
* Significant at 5% level

4.4.6.6. Internet usage

Internet usage was measured in hours during the respondents' leisure time. Table 21 shows that there are no significant differences in user attitudes based on the Internet usage. The fact that the majority of the respondents spend over three hours on the Internet daily makes this measurement hard to interpret. Consequently, Internet usage is not the best way to categorize people, as most people spend several hours online nowadays. It might be also difficult to define what means time off – for many people the distinction between work and time off time is vague.

Table 21: Differences based on Internet usage – One-way ANOVA

		N	Mean	F value	Sig.
LOC_MEAN				.636	.592
	Over 3 hours daily	172	2.884		
	Under 3 hours daily	117	3.000		
	A few hours per week	7	3.200		
	Less	1	3.000		
	Total	297	2.937		
QUAL_MEAN				1.380	.249
	Over 3 hours daily	172	4.155		
	Under 3 hours daily	117	4.219		
	A few hours per week	7	4.000		
	Less	1	3.000		
	Total	297	4.173		
COM_MEAN				.824	.482
	Over 3 hours daily	172	4.006		
	Under 3 hours daily	117	3.953		
	A few hours per week	7	4.071		
	Less	1	3.000		
	Total	297	3.983		
TRAN_MEAN				1.519	.210
	Over 3 hours daily	151	4.169		
	Under 3 hours daily	104	4.005		
	A few hours per week	6	4.083		
	Less	1	3.000		
	Total	262	4.097		
ENG_MEAN				1.603	.189
	Over 3 hours daily	172	3.744		
	Under 3 hours daily	117	3.744		
	A few hours per week	7	3.000		
	Less	1	3.000		
	Total	297	3.724		

All dimensions were measured on a five-point Likert scale, ranging from 1 (fully disagree) to 5 (fully agree).
* Significant at 5% level

4.4.6.7. Native language

Table 22 reports the differences between language groups. Also in this case the problem is that the distribution of different language groups is very uneven. All language groups are still included in the table in order to see the total mean distribution. The key finding is that there are no significant differences between language groups in terms of their language preferences and attitudes towards native-language use. The language groups including only one case have been reported in the table even though they were excluded from the statistical analysis. The statistical analysis automatically ignores the groups with only one case. Therefore, there are no significant differences reported despite some differences between the mean of different language groups can be found.

Table 22: Differences between language groups – One-way ANOVA

		N	Mean	F value	Sig.
LOC_MEAN				1.809	.066
	Finnish	230	3.007		
	Swedish	20	2.730		
	German	17	3.006		
	French	2	3.650		
	Russian	1	2.700		
	Spanish	1	1.700		
	Portuguese	4	2.000		
	Chinese	1	2.500		
	Arabic	1	2.600		
	Other	20	2.520		
	Total	297	2.937		
QUAL_MEAN				1.807	.067
	Finnish	230	4.228		
	Swedish	20	3.983		
	German	17	4.118		
	French	2	4.000		
	Russian	1	2.667		
	Spanish	1	5.000		
	Portuguese	4	3.917		
	Chinese	1	3.000		
	Arabic	1	4.333		
	Other	20	3.933		
	Total	297	4.173		
COM_MEAN				1.222	.281
	Finnish	230	3.969		
	Swedish	20	4.000		
	German	17	3.956		
	French	2	4.375		
	Russian	1	2.250		
	Spanish	1	3.750		
	Portuguese	4	3.938		
	Chinese	1	3.750		
	Arabic	1	5.000		
	Other	20	4.188		
	Total	297	3.983		
TRAN_MEAN				1.718	.105
	Finnish	221	4.118		
	Swedish	17	4.059		
	German	14	4.143		
	French	1	5.000		
	Russian	1	2.000		
	Spanish	0	.		
	Portuguese	2	3.500		
	Chinese	1	3.000		
	Arabic	0	.		
	Other	5	3.900		
	Total	262	4.097		
ENG_MEAN				1.380	.197
	Finnish	230	3.744		
	Swedish	20	3.650		
	German	17	3.382		
	French	2	2.250		
	Russian	1	2.500		
	Spanish	1	4.000		
	Portuguese	4	4.125		
	Chinese	1	4.000		
	Arabic	1	5.000		
	Other	20	3.900		
	Total	297	3.724		

All dimensions were measured on a five-point Likert scale, ranging from 1 (fully disagree) to 5 (fully agree).
* Significant at 5% level

In conclusion, English competence, age, technological adaptation, and English orientation seem to have an impact on users' language preferences and attitudes. According to this study, general language skills, Internet usage in hours, gender, and native language do not have significant impact on user preferences. However, due to low number of responses in certain groups, the results have to be dealt with caution.

5. DISCUSSION AND CONCLUSIONS

This chapter aims to discuss the research findings and answer the research questions in the light of previous research. Also the managerial implications of the findings are presented, as well as, the limitations of the study and suggestions for further research.

This thesis was motivated by the lack of research on language and translation related issues caused by the multilingual nature of the Internet. The focus of the study was on a technical cloud service and on its localization. The objective of the study was to provide recommendations for digital service providers on how to improve their localization processes, as well as, to increase understanding of the user preferences in terms of language. The research questions were the following:

Research question 1: What is the role of language in Web localization? The objective of this research question was to identify the constructs of localization in the context of digital services. In addition, the objective was to understand the current challenges and opportunities that the multilingual Internet environment creates for service providers, as well as, the ways to overcome these challenges.

Research question 2: How important do users perceive the native language in using a digital service? The objective of this research question was to increase understanding of digital service users in order to help digital service providers to optimize their localization practices. Understanding the language preferences of digital service users will help service providers in decision-making whether to localize a service or not.

Research question 3: How do users differ in terms of language preferences? This question aimed to recognize the underlying factors affecting the localization preferences of the users. The objective was to find out how different demographic characteristics of the users impact their language preferences. Hence, this research question gives concrete answers on what types of consumers desire localized web content.

This study contributed to services marketing and language research by combining online customer experience, localization and translation research in one study. Since the concept of localization was approached from a totally new angle, the scale for measuring the importance

of localization and language quality had to be created and validated for this study. In addition, this study contributed to cross-lingual research as the survey instrument was provided in four languages and the translation process played an important role throughout the research process. The key results from the qualitative and quantitative analysis will be discussed in the next section in the light of previous literature in order to answer the three research questions.

5.1. Key findings of the study

The key findings show that even though a digital service can be successfully launched in English, reaching the majority of users requires localization. These findings are supported by theory, as it was expected that early adopters with strong English-language skills are comfortable with navigating online in English, while regular users were expected to prefer more localized content.

Following the theory and hypothesis, the results indicate that there are differences between user groups in terms of language preferences. It was found that English-language competence, the level of technological adaptation, age, and the level of English orientation impact the perceived importance of native language use. Language competence and age have been recognized to affect consumer choices already in earlier sociolinguistic research (Gopinath & Glassman 2008; Holmqvist & Gronroos 2012; Gandal 2006).

On the contrary, technological adaptation and English orientation were studied in this context for the first time. It was found that innovators and early adopters appreciate less localized content than late adopters. This finding is in line with academic research and supported by the theory of diffusion of innovation by Rogers (2003). Innovators and early adopters are open to new technology, and competent English-language skills are necessary for them, as the majority of new IT innovations are in English.

Following the studies by Sargent (2012) and Sargent and Ray (2013), I strongly argue that to reach the full market potential, localization of digital services should be targeted to language markets instead of geographical areas. However, the findings demonstrate that this is not as simple as expected. It is not always easy to make a clear distinction between a language market and a geographical area, as in some cases the language group practically equals the geographical area. For example, when targeting Finnish-speaking audience you mainly target

Finland, but the case is totally different when targeting English- or Spanish-speaking audiences who are spread around the world.

Due to the nature of the main language groups involved in this study - Finnish, Swedish and German - the results do not give a real picture of the case company's localization strategy. These language groups are relatively limited to certain geographical areas. Consequently, it seems that the company is targeting geographical areas through localization, even though it is fully aware of the importance and benefits of targeting language groups. Accordingly, the findings indicate that the company strategy is also dependent on the nature of the language market.

The majority of previous localization studies indicate that localization has a positive impact on customers. However, in this study, localization of the service did not seem to play an important role for the users. This findings follows the hypothesis by Luna, Peracchio & de Juan (2002), as they have pointed out that standardized, English-only strategy may work better for some brands. Examples of these types of contexts are international pop music bands and technology-oriented sites. Even though the current users are comfortable with using the service in English, it cannot be generalized that English-only strategy would work better for digital services throughout the service lifecycle.

The current users can be classified as innovators and early adopters, and this group of users is likely to need less localized content than other users. The majority of current users are men, competent in languages, try new IT software and services among the first ones and spend a lot of time online. These demographic findings are in line with the service provider's perception of the current users. These findings also support the current strategy of the service provider: a digital service can be launched in English but reaching a significant market share requires localization. It is important to note that the language preferences of the users could be different if the service had been launched in several languages already in the beginning.

The survey responses revealed that there is no difference in online customer experience between those who used the service in their native language and those who used it in a foreign language. In terms of online customer experience, native language use does not seem to affect the ease of use or user preferences but it does moderately increase trust among the respondents. Based on theory, it was expected that language would have a significant impact

on ease of use and user preferences. Thus, the findings contradict the hypothesis. It was also expected that native language use would decrease cognitive effort and therefore increase satisfaction based on the Revised-Hierarchy Model by Dufour and Kroll (1995). The opposed results can be again partly explained by the demographics of the current users.

Berendt & Kralisch (2009) have divided Internet users into two groups: "linguistic upper class" and "linguistic lower class". These two groups could be found in this study as well. The first group is those who are competent in English, prefer using Internet in English and are very critical towards translated content. The second group consists of those who are not as competent in English, and therefore appreciate more translated content. Consequently, the group of users that lacks language skills needs more translated content and language tools than those with competent English-language skills. This is in line with theory, as previous studies suggest that the weaker the English skills, the more important it is to offer localized services (Berendt & Kralisch 2009).

Even though the current users of the cloud service did not require localized content, they highly appreciate the quality of the language. The quality of language seems to have a great impact on online customer experience and linguistic errors clearly undermine the credibility of the service. In addition, the quality of language seems to affect the selection of which service the customer decides to use. These findings contradict earlier findings by White, Matteson and Abels (2008), who argued that in the Web context, the quality requirements of a translated text or document are lower than in many other contexts, and imperfect translations are acceptable to some extent. As stated in the literature review, the quality requirements and the need for translated content are likely to depend on the context.

Van Vaerenbergh & Holmqvist (2013) and McDougal & Levesques (2000) have studied that consumers usually prefer using their native language particularly in high-involvement services that involve little control and comfort but high levels of risk. Also in the current study, the context was found to have an effect on the importance of native language use: Most people chose native language as a survey language but still used English in the digital service and on the website. Answering a survey is likely to require more understanding and better language skills than using a digital service. Also Holmqvist (2009) has studied that in some situations the tolerance of using a foreign language might be higher than in other situations.

Following the theory, the findings indicate that the concept of localization should be seen in a new way in the context of digital services, as the development cycle of digital services is too fast for traditional, profound localization systems to function effectively. Traditionally successful web localization has been understood as a process of adapting all features of a website to the target audience, including language, culture, content, technical, legal, marketing and infrastructural requirements (Singh & Boughton 2005). It was found that language, translation quality and technical requirements are the key drivers of successful localization in the context of digital services.

The findings are also in line with theory and supported by Singh, Toy & Wright (2009) and O'Hagan & Ashworth (2002). Singh, Toy & Wright (2009) point out that translation quality is the most important component to be considered when localizing Web content. However, the concept of quality is very subjective, therefore difficult to evaluate. Amongst others, the service provider has stopped to evaluate the quality of translation, as there are always as many opinions as there are evaluators. Based on the interviews, the service provider did not expect the quality of translation to be as important factor for the service users as it actually was. Despite the disparity between the service provider and the service users, the current users of the cloud service rated the current quality of translation and communication very high. This indicates that the current localization practices of the service provider are effective.

O'Hagan & Ashworth (2002) have pointed out that in addition to translation a big part of software localization is engineering. This supports the findings of this study, as the localization manager of the case company stated that a perfect translation is useless if it does not fit into the technical space of the service platform. Furthermore, the importance of technical requirements has changed the nature of translation work. It is not enough for translators to translate the text but they also have to understand the context where the translation is used. Consequently, service providers are constantly developing systems where translators can translate the text in the actual context. This will speed up the process of localization as well as improve the quality of translation.

In conclusion, I argue that a digital service can be successfully launched in English but the sooner other language versions are created, the faster the service is adopted by early and late majority of the users. It is important to note that the demographic features of the users affect the importance of native language use. Therefore, demographic features of the target audience

should be the key elements guiding a localization strategy. Since the quality of the language and translation are extremely important factors for all users, regardless of demographic features, service providers should always keep the quality of the language as a priority when planning and executing localization. As the number of languages and Internet users increase, companies are forced to balance between the quality and quantity of translation. To gain economies of scale in translation and localization, companies should aim to target language markets instead of geographical areas - especially with large language groups that are spread out around the world.

5.2. Managerial implications

The previous section discussed the findings in the light of previous literature and research questions. Next, the discussion will be extended to the managerial implications of the study. The most important managerial implication of this study is the fact that the concept of localization should be seen in a new way in the context of digital services, and the service providers should move away from thinking geographical areas and target language groups instead of geographical areas through Web localization.

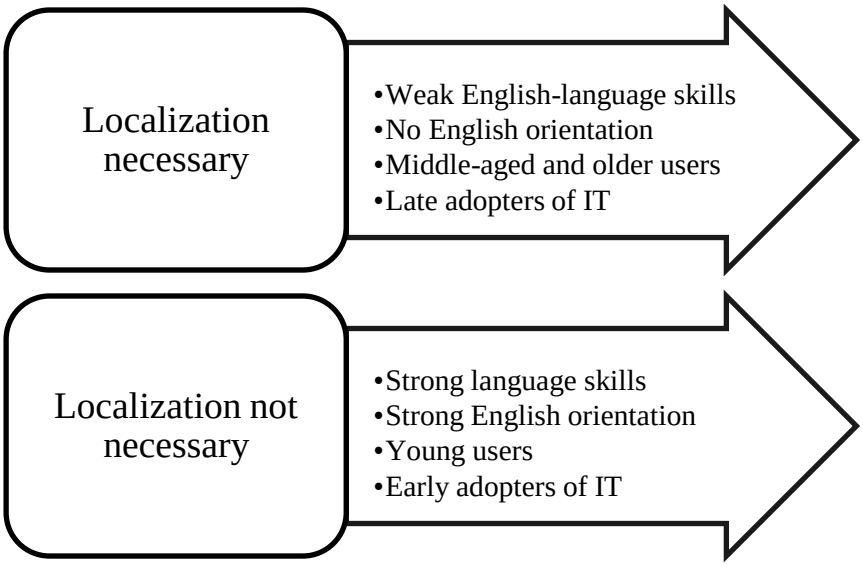
For localization managers the key drivers of high-quality translation are highly atomized and functioning processes, committed sub-contractors and cost-efficiency, including open communication, transparency, and trust between the company and translators. In addition, fair remuneration of translators, as well as, own budget for localization department seem to be critical elements. The quality of localization is important and the quality assurance should be done together with translators and the management. The case company is engaging the translators by allowing them to develop the language of the services already during the R&D stage of the process. Thus, localization of the services should be started already at an early stage of the service development, which leaves more time for quality assurance.

For marketing managers the key findings relate to the characteristics of the digital service users. By understanding the target audience and their preferences, it is easier to decide whether a service should be localized or not. According to the findings, in many cases, English-only strategy might work better. Furthermore, especially young Internet users and early adopters seem to prefer English-only strategy. Figure 7 presents the key managerial

implications of this study. The framework can be used for evaluating the need for localization of digital services.

As English competence, age and technological adaptation seem to impact the user preferences. Thus, the service provider must know the target audience and recognize the critical characteristics of the user group in order to optimize the localization. Users with weak English-language skills appreciate more translated content than those with strong language skills. Furthermore, the group with competent English skills is relatively more critical towards translated content and its quality than the group with weaker English-language skills. Finally, the older the users are the more important a factor the localization of a service is.

Figure 7: Key managerial implications



Innovators and early adopters do not desire localization of digital services. However, it is likely that reaching other groups of users requires localization. The quality of the language is an important factor for all users, including early adopters, but especially for those with competent language skills. In conclusion, quality requirements of the language are high also in the online environment and in digital services. It requires careful thinking from service providers whether to provide a service only in English or whether to invest in translation. If the target audience consists of young, innovative and English-oriented individuals, it might be safer to provide a service in English.

5.3. Limitations and suggestions for future research

Although presenting interesting and useful findings, as well as, being one of the first ones to study Web localization related issues from the language point of view, the shortcomings of the study must be recognized. First of all, language research is only in its infancy and this study was one of the first steps forward in better understanding the role of language in the Internet environment. This study concentrated on the localization of a digital cloud service. Thus, the findings are framed within a particular context limiting the generalizability of the results.

It is important to note that there are different types of digital services in which the language impact is likely to be totally different than in this study. Thus, the role of language should be studied in other Internet services as well. For instance, it should be studied how the importance of using native language varies between services, such as, online banking, trip booking, and retail shopping. This study already revealed that the importance of native language use is likely to vary depending on the service context and the nature of the service. Respondents perceived the use of native language significantly more important in online banking than in a digital service.

This study divided the respondents in two language groups – native language users and non-native language users. The bilingual users were studied as a part of these groups. In the future, I suggest that the bilingual users are studied as a separate group. Bilinguals are studied to associate the native language strongly to their identity, emotional belonging and behavior. Therefore, being able to use a service in one's native language might be more important for this group of users. The *younited* by F-Secure cloud service was launched in English and translated afterwards into Finnish, Swedish, and German. Studying a cloud service that has been launched in several languages at the same time would give a new perspective to the study. In this case the language distribution would most likely be more even since the users could make the language decision when starting to use the service. In the case of *younited* many users could have chosen their native language if it was available in the first place.

Since the area of study is new and the survey instrument had to be created solely for this study, the survey instrument should be validated in other studies as well. In addition, the research instrument has to be developed and tested in different services contexts as well as with

different digital services. A few components should be added to those factors that have only two variables left after adjustments. The factor of the importance of localization currently consists of several variables. Thus, the number of variables could be limited to the most important ones in order to balance the factor with other factors.

It also sets limitations to this study that most respondents were Finnish and the survey instrument was tested for the first time in this study. Furthermore, the study was conducted at an early stage of the digital service's life-cycle, hence, the user group was extremely homogeneous and exceptional. I suggest that the study is repeated later when the user base is more heterogeneous. At a later stage, the language impact is likely to be more important and the differences between users clearer. In addition, it would be interesting to study differences between genders as in this study the gender distribution was extremely uneven. Finally, the different age groups should be studied in more detail, as it is likely that if the average age was higher the results would be entirely different.

Lastly, language and translation were an important part of this study. Due to the methodological variety of this study, the translation issues and challenges could not be studied in more detail. The survey instrument was translated by professional translators, and it was assumed that the quality of translation was good and equal between different language versions. In the future, also the quality of the survey instrument could be studied and tested among the users before conducting the survey.

In conclusion, language related issues are an upcoming and important part of international business. Language can have a great impact on user perceptions. For many people language is much more than just a tool of communication – it can be an important part of identity and behavior. Hence, service providers have to find a balance between the benefits of translation, right lingual brand fit and translation costs, when facing the question of whether to localize a service or not. Translation issues are not disappearing due to the global nature of the Internet. More and more people can access the Internet, thus, the number of languages used online will increase. It is dangerous to think that all Internet users can be targeted in English, even though in some cases it might be the best strategy. Knowing the characteristics of the target audience and the nature of the service will be the key drivers of successful localization.

References

Ajzen, I., 1985. From intentions to actions: A theory of planned behavior. In J.Kuhl and J.Beckmann (Eds), *Action control: From cognition to behavior*, pp. 11–39. Springer Verlag, New York, New York.

Armbrust, M., Fox, O., Griffith, R., Joseph, A. D., Katz, Y., Konwinski, A. … & Zaharia, M., (2009). *Above the clouds: A Berkeley view of cloud computing.* University of California, Berkeley, Tech. Rep. UCB-EECS-2009-28.

Bartikowski, B. & Singh, N., 2014. Should all firms adapt websites to international audiences? *Journal of Business Research*, 67(3), pp.246–252.

Becker, S. & Mottay, F., 2001. A global perspective on web site usability. *IEEE Software*, 18(1), pp.54–61.

Belanche, D., Casaló, L. V. & Guinalíu, M., 2012. Website usability, consumer satisfaction and the intention to use a website: The moderating effect of perceived risk. *Journal of Retailing and Consumer Services*, 19(1), pp.124–132.

Berendt, B. & Kralisch, A., 2009. A user-centric approach to identifying best deployment strategies for language tools: The impact of content and access language on Web user behaviour and attitudes. *Information Retrieval*, 12(3), pp.380–399.

Bishop, M.M. & Peterson, M., 2010. The impact of medium context on bilingual consumers' responses to code-switched advertising. *Journal of Advertising*, 39(3), pp.55–67.

Bouwman, H. & Fielt, F., 2008. Service Innovation and Business Models, in H. Bouwman, H. de Vos & T. Haaker, *Mobile service innovation and business models:* pp. 9-28, Springer, Berlin.

Boyer, K.K., Hallowell, R. & Roth, A.V., 2002. E-services: operations strategy – a case study and a method for analyzing operational benefits, *Journal of Operations Management*, 20(2) pp. 175-88.

Bryman A., Quantitative and Qualitative Research: Further Reflection on their Integration. In Brannen J. (ed.), *Mixing Methods: Qualitative and Quantitative Research*, Aldershot: Avebury (1992) pp.57-78.

Buyya, R., Yeo, C.S., Venugopal, S., Broberg, J. & Bradic, I., 2009. Cloud computing and emerging IT platforms: Vision, hype, and reality for delivering computing as the 5th utility. *Future Generation Computer Systems*, 25(6), pp.599–616.

Cao, M., Zhang, Q. & Seydel, J., 2005. B2C e-commerce web site quality: An empirical examination. *Industrial Management & Data Systems*, 105(5), pp.645–661.

Cheng, S., 2000. Globalizing an E-commerce Web site. In R.C. Sprung (ed.) *Translating into success: cutting-edge strategies for going multilingual in a global age.* John Benjamins, Amsterdam, Philadelphia, pp. 29– 42.

Chidlow, A., Plakoyiannaki, E. & Welch, C., 2014. Translation in cross-language international business research: Beyond equivalence. *Journal of International Business Studies*, 45(5), pp.562–582.

Creswell, J. W., 2003. *Research Design: Qualitative, Quantitative, and Mixed Method Approaches* (3rd ed.).Thousand Oaks, CA: Sage.

Creswell, J. W., 2009. *Research Design: Qualitative, Quantitative, and Mixed Method Approaches* (2nd ed.).Thousand Oaks, CA: Sage

Cyr, D. et al., 2005. Beyond trust: Web site design preferences across cultures. *Journal of Global Information Management*, 13(4), pp.25–53.

Cyr, D., 2013. Website design, trust and culture: An eight country investigation. *Electronic Commerce Research and Applications*, 12(6), pp.373–385.

Dalton, M., 1959. Men who manage. New York: Wiley.

Davis, F.D., 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology, *MIS Quarterly* 13, pp. 319-340.

Dufour, R. & Kroll, J.F., 1995. Matching words to concepts in two languages: A test of the concept mediation model. *Memory and Cognition*, 23(2), pp.166–180.

Dyer, W. G., & Wilkins, A. L., 1991. Better stories, not better constructs, to generate better theory: A rejoinder to Eisenhardt. *Academy of Management Review*, 16(3), 613-619.

Eisenhardt, K. M., 1989. Building theories from case study research, *Academy of Management Review*, 14(4), 532- 550.

Ferreira, R., 2002. *Culture and e-commerce : Culture based preferences for interface information design*. Master Thesis, Virginia Polytechnic Institute and State University, Balcksburg, Virginia.

Fishbein, M. and Ajzen, I., 1975. *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research.* MA: Addison-Wesley, Reading.

Flavián, C., Guinalíu, M. & Gurrea, R., 2006. The role played by perceived usability, satisfaction and consumer trust on website loyalty. *Information & Management*, 43(1), pp.1–14.

Fletcher, R., 2006. The impact of culture on web site content, design, and structure: An international and a multicultural perspective. *Journal of Communication Management*, 10(3), pp.259–273.

F-Secure 2014. About F-Secure, viewed 2 March 2014 from www.f-secure.com.

F-Secure, Annual report 2013, viewed 2 March 2014 from www.f-secure.com.

Gandal, N., 2006. Native language and Internet usage. *International Journal of Sociology of Language*, 182(March 2003), pp.25–40.

Gaskell G., 2000, Individual and group interviewing. In Bauer M.W. & Gaskell G. (Eds.). *Qualitative researching with text, image and sound, pp. 38-56.* London: Sage Publications Ltd.

Ghauri, P., 2004. Designing and conducting case studies in international business research. In Marschan-Piekkari R, & Welch C. (Eds). *Handbook of Qualitative Research Methods for International Business*, pp. 109-124. UK: Edward Elgar Publishing Limited.

Ghauri, P., 2005. Research methods in business studies: a practical guide, 3rd ed.). Harlow: Financial Times Prentice Hall.

Ghosh, S., Surjadjaja, H. & Antony, J., 2004. Optimisation of the determinants of e-service operations. *Business Process Management Journal*, 10(6), pp.616–635.

Gopinath, M. & Glassman, M., 2008. The effect of multiple language product descriptions on product evaluations. *Psychology and Marketing*, 25(3), pp. 233–261.

Graddol, D., 2000. The future of English. London: The British Council. Available online at http://www.britishcouncil.org/learning-elt-future.pdf.

Gouadec, D., 2010. *Translation as a Profession.* 2nd ed. Amsterdam/Phildelphia: John Benjamins Publishing Company.

Hassenzahl M. & Tractinsky N., 2006. User experience – a research agenda. *Behaviour & Information Technology*, 25(2), pp. 91-97.

Hillier, M., 2003. The role of cultural context in multilingual website usability. *Electronic Commerce Research and Applications*, 2(1), pp.2–14.

Internet World Stats, 2011. *Usage and population statistics,* viewed 14 February 2014, http://www.internetworldstats.com.

Hofacker, C.F., Goldsmith, R.E., Bridges, E. & Swilley E., 2007. E-Services : A Synthesis and Research Agenda. *Journal of Supply Chain Management*, 1(1/2), pp.14–44.

Hofstede, G., 2005. Cultures and Organizations: Software of the Mind. 2nd ed. New York: McGraw-Hill.

Holmqvist, J., 2009. *Language influence in services*: *Perceived importance of native language use in service encounters.* Doctoral Dissertation No. 194, Hanken School of Economics, Helsinki, Finland.

Holmqvist, J. & Grönroos, C., 2012. How does language matter for services? Challenges and propositions for service research. *Journal of Service Research*, 15(4), pp.430–442.

Holmqvist, J. & Van Vaerenbergh, Y., 2013. Perceived importance of native language use in service encounters. *The Service Industries Journal,* 33(15-16), pp.1659–1671.

Hurmerinta-Peltomäki, L. & Nummela, N., 2006. Mixed methods in international business research: A value-added perspective. *Management International Review*, 46(4), pp.439–459.

Jarvenpaa, S.L., Tractinsky, N. & Saarinen, L., 1999. Consumer trust in an Internet store: A cross-Cultural validation. *Journal of Computer-Mediated Communication*, 5(2), pp.1–33.

Jick, T.D., 1979. Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly* 24, (4) Qualitative Methodology pp. 602-611.

Kim, J., Jin, B., Swinney, J.L., 2009. The role of e-tail quality, e-satisfaction and e-trust in online loyalty development process. *Journal of Retailing and Consumer Services* 16 (4), 239–247.

Kralisch, A., 2006. *The impact of culture and language on the use of the Internet: Empirical analyses of behaviour and attitudes.* Doctoral Dissertation, Humboldt-Universität, Berlin.

Kvale, S., 1996. *Interviews: an introduction to qualitative research interviewing.* Thousand Oaks (CA): Sage.

Levitt, T., 1983. The globalization of markets, *Harvard Business Review*, 61(3), 92-103.

Luna, D. & Peracchio, L. a., 2005. Sociolinguistic effects on code-switched ads targeting bilingual consumers. *Journal of Advertising*, 34(2), pp.43–56.

Luna, D., Peracchio, L.A. & de Juan, M.D., 2002. Cross-cultural and cognitive aspects of web site navigation. *Journal of the Academy of Marketing Science*, 30(4), pp.397–410.

Lynch, P.D. & Beck, J.C., 2001. Profiles of Internet buyers in 20 countries: Evidence for region-specific strategies. *Journal of International Business Studies* 32(4) pp.725–748.

McDougal, G. & Levesque, T., 2000. Customer satisfaction with services: Putting perceived value into the equation. *Journal of Services Marketing*, 14 (5) 392-410.

Malhotra, N.K., Birks, D.F. & Wills, P.W., 2012. *Marketing research: an applied approach*. 4th ed. London: Prestice Hall.

Meyer, C., & Schwager, A., 2007. Understanding customer experience. *Harvard Business Review*, 85(2), pp.116–126.

Nantel, J. & Glaser, E., 2008. The impact of language and culture on perceived website usability. *Journal of Engineering and Technology Management*, 25(1-2), pp.112–122.

Nardi, P.M., 2006. *Doing survey research: a guide to quantitative methods*, (2nd ed.) Pearson Education, Boston, Massachusetts.

Nord, C., 2005. *Text analysis in translation: theory, methodology, and didactic application of a model for translation-oriented text analysis*, 2nd ed. Amsterdam: Rodopi.

Novak, T.P., Hoffman, D.L. & Young, Y.F., 2000. Measuring the customer experience in online environments: a structural modeling Approach. *Marketing Science*, 19(1), pp.22–42.

Odom, W., Sellen, A., Harper, R. & Thereska, E., 2012. Lost in translation: Understanding the possession of digital things in the cloud. In Proc. CHI 2012, ACM, New York, pp. 781-790.

O'Hagan, M., & Ashworth, D., 2002. Translation-mediated communication in a digital world: Facing the challenges of globalization and localization. Cromwell Press Ltd., Great Britain.

Oliver, R., 1999. Whence consumer loyalty? *Journal of Marketing* 63, 33–44.

Oliver, R. & DeSarbo, W., 1988. Response determinants in satisfaction judgments. *Journal of Consumer Research* 14 (4), 495.

Piekkari, R., Welch, C. & Paavilainen, E., 2009. The case study as disciplinary convention: Evidence from international business journals. *Organizational Research Methods*, 12(3), pp.567–589.

Piekkari, R. & Welch, C., 2004. *Handbook of Qualitative Research Methods for International Business.* Cheltenham: Edward Elgar.

Pimienta, D., Prado, D. & Blanco, *A., 2009. Twelve years of measuring linguistic diversity in the Internet: balance and perspectives*. The United Nations Educational, Scientific and Cultural Organization, Paris, France

Ray, R., & Kelly, N., 2012 (March). *Translation at Fortune 500 companies*. Common Sense Advisory Inc., Cambridge, Massachusetts.

Reynolds, J., 2000. The complete e-commerce book: design, build and maintain a successful Web-based business, CMP Books, New York, NY.

Rogers, E.M., 2003. *Diffusion of innovations.* 5th ed. New York: Free Press.

Rose, S., Hair, N. & Clark, M., 2011. Online customer experience: a review of the business-to-consumer online purchase context. *International Journal of Management Reviews*, 13(1), pp.24–39.

Rowley, J., 2006. An analysis of the e-service literature: towards a research agenda. *Internet Research*, 16(3), pp.339–359.

Sandrini, P., 2005. Website localization and translation. In Gerzymisch-Arbogast, H. and Nauert, S. (eds.) *Challenges of multidimensional translation*. Proceedings of the MuTra Conference in Saarbrücken, Germany, 2–6 May 2005. Available online at www.euroconference.info/proceedings. pp. 131-138.

Sargent, B.B., 2012 (June). *ROI lifts the long tail of languages in 2012*. Common Sense Advisory Inc., Cambridge, Massachusetts.

Sargent, B., B. & Ray, R., 2013 (July). *Market entry decisions*. Common Sense Advisory Inc., Cambridge, Massachusetts.

Schmitt, B., 1999. Experiential marketing. *Journal of Marketing Management*, 15(1-3), pp.53–67.

Shneor, R., 2008. The Internet-enabled internationalization process: A focus on stages and sequences. *Journal of e-Business*, 9(1-2), pp.45–52.

Singh, N., Fassott, G., Chao, M. & Hoffmann, J., 2006. Understanding international web site usage: A cross-national study of German, Brazilian, and Taiwanese online consumers. *International Marketing Review*, 23(1), pp.83–97.

Singh, N., Baack, D.W. & Bott, J.P., 2010. Are multinationals localizing their web sites? The link between managerial attitudes and MNE web content. *International Journal of Commerce and Management*, 20(3), pp.258–267.

Singh, N. & Boughton, P.D., 2005. Measuring website globalization: A Cross-Sectional Country and Industry Level Analysis. *Journal of Website promotion*, 1(3), pp.3–21.

Singh, N., Furrer, O. & Ostinelli, M., 2004. To Localize or to standardize on the Web: Empirical evidence from Italy, India, Netherlands, Spain, and Switzerland. *Multinational Business Review*, 12(1), pp.68–87.

Singh, N., Kumar, V. & Baack, D., 2005. Adaptation of cultural content: evidence from B2C e-commerce firms. *European Journal of Marketing*, 39(1/2), pp.71–86.

Singh, N. & Kundu, S., 2002. Explaining the growth of e-commerce corporations (ECCs): an extension and application of the eclectic paradigm. *Journal of International Business Studies*, 33(4), pp. 679-697.

Singh, N., Toy, D.R. & Wright, L.K., 2009. A diagnostic framework for measuring Web-site localization. *Thunderbird International Business Review*, 51(3), pp.281–296.

Singh, N., Zhao, H. & Hu, X., 2005. Analyzing the cultural content of web sites: A cross-national comparison of China, India, Japan, and US. *International Marketing Review*, 22(2), pp.129–146.

Singh, N., Zhao, H. & Hu, X., 2003. Cultural adaptation on the Web: A study of American companies' domestic and Chinese websites. *Journal of Information Management*, 11(3), pp.63–80.

Stake, R., 1995. The art of case research. Sage Publications, Newbury Park, CA.

Stake, R. E., 2000. Case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), Handbook of qualitative research (2nd ed., pp. 435-454). Thousand Oaks, CA: Sage.

Stoecker, R., 1991. Evaluating and rethinking the case study. *The Sociological Review* 39(1), pp. 88–112.

Tellis, W., 1997. Introduction to case study. *The Qualitative Report* 3(2).

Tixier, M., 2005. Globalization and localization of contents: Evolution of major Internet sites across sectors of industry. *Thunderbird International Business Review*, 47(1), pp.15–48.

Suojanen, T., Koskinen, K. & Tuominen, T., 2012. *Käyttäjäkeskeinen kääntäminen*. Tampere Studies in Language, Translation and Literature. Series B1. Available online at http://tampub.uta.fi/bitstream/handle/10024/66333/kayttajakeskeinen_kaantaminen_2012.pdf?sequence=1

Twomey, P., 2007. Effect of multilingualism on the Internet: International issues that affect how governments and economies address issues relating to a global infrastructure. NSF/OECD Workshop January 31, 2007, Arlington, Virginia. Available online at http://www.oecd.org/internet/ieconomy/38014552.pdf.

Usunier, J.C., 2011. Language as a resource to assess cross-cultural equivalence in quantitative management research. *Journal of World Business*, 46(3), pp.314–319.

Van Vaerenbergh, Y. & Holmqvist, J., 2013. Examining the relationship between language divergence and word-of-mouth intentions. *Journal of Business Research*.

White, M.D., Matteson, M. & Abels, E.G., 2008. Beyond dictionaries: Understanding information behavior of professional translators. *Journal of Documentation*, 64(4), pp.576–601.

Williams, K., Chatterjee, S. & Rossi, M., 2008. Design of emerging digital services: a taxonomy. *European Journal of Information Systems*, 17(5), pp.505–517.

Yin, R. K., 2003. *Case study research: design and methods*, (3rd ed.) Thousand Oaks: Sage Publications (Calif.).

Yin, R.K., 2009. *Case study research: design and methods*, (4th ed.) Thousand Oaks: Sage Publications (Calif.).

Yonatany, M., 2011. *The Internationalization process of digital service providers*. Doctoral Dissertation, Copenhagen Business School, Denmark.

Zuckerman, E., 2013. *Rewire: Digital Cosmopolitan in the Age of Connection*. W. W. Norton & Company.

Appendices

Appendix 1: Rotated component matrix

	Component				
	1	2	3	4	5
I will use a wider range of features in a cloud service, if the service is available in my native language	.878				
My user experience improves, if I can use younited or other cloud services in my native language	.823				
I am more likely to try a new service, if it is marketed in my native language	.822				
On multilingual websites, I prefer to select my native language	.777				
Finding information about younited also in my native language is an important factor for me to start using the service	.759				
I prefer to use younited or other cloud services in my native language	.748				
It is easier to find information on websites in my native language than in English	.715				
The selection of languages offered by a cloud service affects my decision to start using that service	.712				
A website that has been translated into my native language inspires trust in me	.623				
The quality of translation is not that important, as long as I can use the service in my native language and the text is understandable	-.596				
I usually select an English website, even if other language options were available	-.561				.546
The language used in communication about younited gives an image of a high-quality product		.873			
The language used in communication about younited gives an image of a safe product		.835			
The younited.com website provides a clear image of the service		.770			
The language used in communication about younited is consistent with the language in the actual service		.769			
The language in younited seems natural and fits well in my own language		.406	.772		
I am happy with the quality of language and translation in younited		.420	.764		
There is enough information about younited in my native language in the Internet			.752		
The quality of language affects how positive my attitude towards an application or a service is				.827	
The quality of language affects which language I use in an application/service				.719	
Linguistic errors undermine the credibility of a website or an application				.693	
English suits a cloud service such as younited better than other languages					.757
On multilingual websites, I select the language that gives me the most information about the subject					.539

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Appendix 2: Survey Instrument

Participate in the survey for a chance to win a younited hoodie or more space in the younited service - the choice is yours! By taking part in the survey, you will help us provide even better user experiences for our customers. The survey takes about 5 minutes to complete, and once you have finished, you can also give us feedback and suggestions about younited. All responses will be treated anonymously. The results of this survey will be used for improving the younited service and in a pro gradu thesis for Aalto University.

1. Gender

◯ female ◯ male

2. Age

◯ under 20 years ◯ 20-35 years ◯ 36-45 years ◯ 46-55 years ◯ over 55 years

3. Native language

◯ Finnish
◯ Swedish
◯ German
◯ English
◯ French
◯ Russian
◯ Spanish
◯ Portuguese
◯ Chinese
◯ Japanese
◯ Arabic
◯ other

4. If you selected 'other' as your native language, please specify the language:

_____

5. How many languages do you speak in addition to your native language?

◯ 1 language or none ◯ 2 languages ◯ 3 languages or more

6. How well do you speak English?

◯ Like a native speaker

◯ I can communicate fluently in all situations

◯ I can communicate quite well in all situations

◯ I can manage in easy situations

◯ I know a few words

7. Are you usually among the first to try new IT services and software?

◯ Yes, often ◯ Yes, sometimes ◯ No

8. How much of your free time do you spend in the Internet?

◯ Over 3 hours daily ◯ Under 3 hours daily ◯ A few hours per week ◯ Less

9. Which language version of younited are you using at the moment?

◯ Finnish ◯ Swedish ◯ German ◯ English ◯ I do not use the service yet

10. Which language version of the younited.com website are you using at the moment?

◯ Finnish ◯ Swedish ◯ German ◯ English

11. Rate your perception of the younited cloud service, based on the younited.com website.

(Mark your rating on either the right- or left-hand side, depending on which adjective describes your opinion best. The middle option = neutral.)

	1	2	3	4	5	
Negative	◯	◯	◯	◯	◯	Positive
Unreliable	◯	◯	◯	◯	◯	Reliable
Difficult to use	◯	◯	◯	◯	◯	Easy to use

12. Rate your opinion of younited, based on your user experience. If you are not using the application yet, please move on to the next question.

	1	2	3	4	5	
Negative	◯	◯	◯	◯	◯	Positive
Unreliable	◯	◯	◯	◯	◯	Reliable
Difficult to use	◯	◯	◯	◯	◯	Easy to use

13. Rate the following statements about the language in younited cloud service on a scale of 1-5.

(1 = fully disagree, 3 = neither agree nor disagree, 5 = fully agree)

	1	2	3	4	5
The relaxed language style is well-suited for a cloud service such as younited	○	○	○	○	○
The language used in communication about younited gives an image of a safe product	○	○	○	○	○
The language used in communication about younited gives an image of a high-quality product	○	○	○	○	○
Formal language would be best suited for a cloud service such as younited	○	○	○	○	○
In terms of language, younited is different than other cloud services (the language is more relaxed)	○	○	○	○	○
The younited.com website provides a clear image of the service	○	○	○	○	○
The language used in communication about younited is consistent with the language in the actual service	○	○	○	○	○

14. Rate the following statements about the localization of younited on a scale of 1-5.

(1 = fully disagree, 3 = neither agree nor disagree, 5 = fully agree)

	1	2	3	4	5
Finding information about younited also in my native language is an important factor for me to start using the service	○	○	○	○	○
There is enough information about younited in my native language in the Internet	○	○	○	○	○
I prefer to use younited or other cloud services in my native language	○	○	○	○	○
My user experience improves, if I can use younited or other cloud services in my native language	○	○	○	○	○
The selection of languages offered by a cloud service affects my decision to start using that service	○	○	○	○	○
I will use a wider range of features in a cloud service, if the service is available in my native language	○	○	○	○	○
English suits a cloud service such as younited better than other languages	○	○	○	○	○

15. How well have the younited service and younited.com website been translated into your native language? Rate the following statements on a scale of 1-5.

(1 = fully disagree, 3 = neither agree nor disagree, 5 = fully agree)

	1	2	3	4	5	Not available
The language in younited seems natural and fits well in my own language	○	○	○	○	○	○
I am happy with the quality of language and translation in younited	○	○	○	○	○	○

16. How important is it for you to be able to use the following Internet services in your native language? Rate the importance on a scale of 1-5.

(1 = not at all important, 3 = somewhat important, 5 = very important)

	1	2	3	4	5
Younited or other cloud service	○	○	○	○	○
Online banking	○	○	○	○	○

17. Rate the following statements about language and the quality of translation on a scale of 1-5.

(1 = fully disagree, 3 = neither agree nor disagree, 5 = fully agree)

	1	2	3	4	5
The quality of language affects which language I use in an application/service	○	○	○	○	○
The quality of language affects how positive my attitude towards an application or a service is	○	○	○	○	○
Linguistic errors undermine the credibility of a website or an application	○	○	○	○	○
The quality of translation is not that important, as long as I can use the service in my native language and the text is understandable	○	○	○	○	○

18. Rate the following statements about language and using the Internet on a scale of 1 - 5.

(1 = fully disagree, 3 = neither agree nor disagree, 5 = fully agree)

	1	2	3	4	5
On multilingual websites, I prefer to select my native language	○	○	○	○	○
On multilingual websites, I select the language that gives me the most information about the subject	○	○	○	○	○
I usually select an English website, even if other language options were available	○	○	○	○	○
It is easier to find information on websites in my native language than in English	○	○	○	○	○
I am more likely to try a new service, if it is marketed in my native language	○	○	○	○	○
A website that has been translated into my native language inspires trust in me	○	○	○	○	○

19. If you want to participate in the draw, enter your email address. The contact information will be used only to award prizes, and it will not be connected to your survey data.

Email _____

21. Feedback or comments:

Younited and Aalto University thank you for your time!

Appendix 3: Interview guides

F-Secure 14.1.2014

1. Internet and language
2. The role of language in digital services
3. Challenges caused by the multilingual nature of the Internet
4. Current changes due to the increased number of languages and digital services
5. Current knowledge of customer's language preferences
6. Critical questions in terms of language and digital services
7. Localization from your point of view
8. Translation methods applied

F-Secure 31.1.2014 & 14.3.2014

1. Localization of younited by F-Secure
2. Current challenges in localization
3. The role of language in localization
4. Localization decision-making
5. Why to localize digital services?
6. How to localize digital services?
7. Most important things to be considered in the localization of digital services
8. How would you evaluate your current localization practices?

F-Secure 18.6.2014

1. Localization process – different stages
2. Translation process – phases
3. Quality control of localization
4. Ways to overcome the current challenges
5. What means successful translation / localization?