ICT Adoption and newly arrived Refugees in Falun, Sweden
ABSTRACT

Sociologists are concerned with the social implications of technology; new social networks, virtual communities and ways of interaction that have arisen lately. The Internet which is the newest in a series of major information breakthroughs is of interest to sociologists in various ways for example: as a tool for research, for example, in using online questionnaires instead of paper ones, as a discussion platform, a communication tool and as a research topic.

The sociology of the Internet in a formal sense is the study about the analysis of virtual worlds and social changes catalyzed through new media like the Internet. According to DiMaggio et al. (2001), research in sociology of the internet tends to focus on the Internet's implications in the issues of inequality of accessibility of Internet or the issues concerning the digital divide, (the have and the have not) the adopters versus the non adopters among other issues.

Author and sociologist like Manuel Castells (Castells, 1999, p27) have identified Refugees or new immigrants as a disadvantaged group in the digital society and also various researches including the Swedish Justice department (2002) had identified refugees as a risk group in terms of digital access in Sweden. This means there is a need to bridge the digital divide and promote the use and knowledge of ICT's among the marginalised or segregated groups of people that are found to be at risk, specifically refugees. And one way to bridge the digital divide among these groups will be to Identify the factors that influence their adoption and non adoption of ICT's, because identifying these factors and knowing the problems through the experience of the people affected will generate an opportunity to understand what is required to promote ICT's adoption among these groups.

The results from this study have however shown that although majority of the respondents in this study lack concrete or advance IT skills, both adopter and non adopter have shown huge
interest in Internet and share positive experience and perceptions about the Internet. Friends, families and in general the social environment respondents found themselves have played major role in influencing their decision to adopt ICT. The results have also shown that the functions of the internet was a big influence in adopting Internet and this functions displayed by the Internet had contributed to both Integration and facilitation of refugee resettlement in the host nation. Functions such as the use of the internet to communicate and maintain links with home country, use of the internet to access local information concerning host nation where shared by respondents as very valuable function that influence their adoption and continuous usage of the internet. The non adopters attributed largely their lack of IT skills, illiteracy and language as the main obstacles to their adoption of Internet, none of the non adopters perceived the Internet to be negative despite the setbacks in their adoption.
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1.1 Chapter 1

1.2 Introduction

This initial section presents the area of investigation which underlies this thesis and explains the choice of the overriding purpose as well as the research questions.

According to data from the International Telecommunication Union (ITU) in Geneva 2003 more than 80% of the Swedish population has access to the Internet. The same report also revealed that Sweden was ranked number one for having the highest digital access in the world. This means the greater majorities of the Swedish population has access to the Internet and are computer literate. Living in Sweden today is to live actively in the Internet galaxy where the Internet penetrates into businesses and the society on multi – levels (Castells 2001) or the network society, the information age (Castells 1996) that cut across economy, society and culture. Never in the history of mankind have there been a technical revolution that has brought information and knowledge increasingly available at our fingertips as witnessed in present day Internet revolution. This is the Information age (Castells 2000). According to S. Woolgar (2002) ICT’s are responsible for the radical changes we continue to witness in so many counties and Sweden is not an exception. Thanks to ICTs billions of people can log on, surf the net, post and exchange information with each other, have video conference, chat and speak with each other irrespective of geographical location or time. This is what Castells (2000) refer to as timeless time. All aspects of social, cultural, economic and political life thus stand to be affected by the continued massive growth of the Internet.

Despite the tremendous potential the Internet offers in Sweden certain group of people might stand to be at risk or rather marginalized in the digital society of Sweden. According to the International Telecommunication Union (ITU) in Geneva (2003), most developing countries and poor countries fall into the category of nations with low digital access. A similar comparison can be found in the UN report (2006 p3). According to this report half of the populations in developed countries have access to the internet in comparison to just 7% in developing countries and less than 1% in the fifty less developed countries of the world.
Most of the refugees relocating to Sweden unfortunately come from some of these nations that have low digital access. This means they have little or no knowledge in the usage and potential of Information Communication Technologies and might fall in the category of the have – not (Castells 2001 p 248). Their lack of literacy and technical skills in ICT might limit their access to quality and useful digital content. Such lack can be translated to the borderline between the privileged and humiliated, powerful and powerless, free and fettered. This also means that those with access to quality and useful digital content will have more, much more information and knowledge, and those who have little will get less or nothing.

Immigrants already meet peculiar challenging situations in their early settlement years (Austin TX; Hogg foundation for mental health, 1990 pg 4), living in Sweden were computer is a buzz word will only add an addition challenge to the life of immigrants hoping to live and work in Sweden since most of these immigrants comes from countries where ICT's are not ubiquitous. Although Cullen (Cullen, 2001) believes those individuals on low incomes, sole parents, older people, illiterates or those with low qualification, unemployed, as well as disabled or handicapped persons are all at risk of been marginalized from the digital society, Manuel Castells (Castells, 1999, p27) however believe that the new immigrants still constitutes the majority of the disadvantaged groups.

**The Aim of this study**

The use of ICT’s has had tremendous outcomes in improving the life of marginalized communities, the poorest poor and the rich and multi – national organizations have all benefited from the use of ICT’s in one way or the other. Certainly refugees should not be left out in this tremendous communication opportunity; therefore this research is carried out to examine the factors that influence refugee’s adoption and non adoption of Information communication technology in Sweden. The result from this research will hopefully boost the need for refugees to become information literate in order to participate intelligently and actively not only in the areas affecting their own communities, but in the larger communities in which they live, thereby building empowerment upon effective information access and exchange through ICT.

**Objectives of the study**
In order to bridge the digital divide and promote the use and knowledge of ICT's among the marginalised or segregated groups of people that are found to be at risk, specifically refugees, identifying the factors that influence their adoption and non adoption of ICT's is of utmost importance. It is the old saying: knowing the problem is half the solution. Therefore identifying these factors and knowing the problems through the experience of the people affected will generate an opportunity to understand what is required to promote ICT's adoption among these groups.

**Research Questions**

This project will research or examine the factors that influence the use and non usage of ICT among refugees. The project question therefore is “What are the factors that influence the usage and non usage of ICT among newly arrived refugees in Sweden? To best answer this question, I formulated some ancillary issues or questions as stated below:

- What are refugee’s perceptions of ICT?
- What are the ways refugees make use of ICT’s?
- And how do newly arrived immigrants acquire knowledge of ICT’s?

**Limitations**

There are many ICT’s existing today for example radio, television, Digital video disc, mobile phone etc, but for this project work I use the word ICT to mean the Internet and other technologies associated to it (computer mediated technologies). It is equally important to note that the refugees that were interviewed for this study, does not represent the total number of refugees living in Sweden. They were only used as samples to represent refugees in Falun, which also is small fraction of the refugee population size in Falun. The refugees interviewed also represent newly arrived immigrants that have lived less than five years in Falun municipality. It is also important to point out that there has not been so much research done in the field of ICT and Immigrants especially in studying the relationship between the internet and refugees. This development has contributed in some ways to the limited resources available to carryout this study. The use of document, reports and projects with varied dates is a reflection of this.
2.1 Chapter 2

2.2 Background and literature review

2.3 ICT in Sweden

E – Democracy in Sweden

The word e-democracy has become very popular of late and it’s mostly in relation to how new information technology affects different part of our society. Within the context of e-democracy ICTs are used to protect and promote democracy for example through the use of ICTs citizens can engage in dialogue with each other and also build self confidence in their choice of e-democracy. The justice department of Sweden is responsible for the overall questions concerning how the Swedish democracy shall be protected and promoted. The term E – democracy is usually connected with such democratic process that is coupled with information technology. This for example can mean the opportunities for citizens to give suggestions or receive some suggestions, take part in deliberations or communicate with politicians via the net.

Gold –Link Award and IT Strategy group in Sweden

This is an initiative in Sweden to stimulate E –Democracy imitative through the award of Gold – Link price (www.guldlanken.se). The price is given to an organisation in public sector for its role as an example and also for its innovativeness in using the Internet for dialogue with citizens. Such award promotes democracy and better service. The organizations responsible for the awards are The IT Commission, Promise and landstingsförbundet and Svenska Kommunförbundet. This price was awarded the first time in 1999. The government decided in 2003 to put in place a working group within its government, IT political strategy group with the main duty of promoting and developing Sweden as an information society, and also providing citizens with sustainable opportunities of ICT usage.

Web sites for Citizens

It is very important for all citizens to have access to information concerning his or her country and below is some Swedish web – sites where citizens can access to receive such information SverigeDirect (Sverigedirek.riksdagen.se) is the collective web place for public sectors. In this web place you can find link to the parliament, government, municipalities (Kommuner),
federal institutions (myndigheter), academics, private institutions and organisations. Sverigedirekt web-site started in 1997 as a joint Project between Riksdagen, Regeringskansliet, Svenska Kommunförbundet and Landstingsförbundet.

Sweden.se is also another web site started in 2002 for the purpose of providing both citizens and non citizen’s information’s about Sweden in overseas. It comprises of more than hundred web-sites. Among these sites are the sites with information about Sweden’s general consulates and embassies.

Lagrummet ([www.lagrummet.se](http://www.lagrummet.se)) is a collective public administrative web site for the Swedish legal information. Here you can find links to the legal information concerning the government, parliament, Supreme Court, and state authorities.

Svenska statistiknätet goal is to help citizens in finding official statistics that is available on the Internet ([www.svenskastatistik.net](http://www.svenskastatistik.net))

Other public websites are:
www.försäkringskassan.se (National Insurance Office), [www.csn.se](http://www.csn.se), [www.skatteverket.se](http://www.skatteverket.se) (Swedish tax office), www.amv.se, (Arbetsförmedlingen Nation Employment Office), vhs.se (Verket för Högskoleservice, University Commission)

### Access for all

The former National Audit Office (RRV) investigated in 2003 the performance of 1990’s governmental authorities to see if they meet the government's targets for electronic government. The goal was that authority’s electronic services should be designed to ensure that no group of citizens is excluded. The assessment shows above all that disabled, elderly and immigrants would benefit greatly from electronic services if they were adapted to their needs. The review also shows that several government web sites do not satisfy citizens' demands, so that they cannot use the electronic services fully. National Audit Office main clause is that the use and accessibility perspective have not received sufficient attention to the development of the Electronic Administration. RRV believe that action is needed along the entire chain, from governments to individual authorities to deal with user and accessibility problems by people in Sweden (RRV 2003:11).
2.4 ICT Adoption and Digital divide in Sweden.

Research conducted by the state institute for communication analysis in the year 2000 shows that among those who had access to the Internet in the year 2000, there were as many men as among women, migrants and also among Swedes. However, age seems to play a larger role. Education seems to have had the greatest significance for computer access. In 2003, access and usage of the Internet was more related to usage at home. The differences were still greater and education was still the main cause of the largest gap. Age distinctions are also important, while income is of less importance and of the same size as in 2000. There were no gender distinctions in access to computers or Internet; however the Swedes have a certain advantage compared to immigrants (ITPS, 2003)

If there exist unequal access and usage of the Internet among people in a community, there is bound to be the risk that certain people or group of people might be left outside and might also generate digital-divide (FIKS 2004:135). The term digital divide refers in this context, as the differences between various groups of citizens with regards to the possibility of access and assimilation of information over the Internet. The segments which some researchers have drawn attention to in recent studies have been the following: Barriers related to disability, age, gender, social economic status, geographical location and ethnical background (FIKS 2004:135).

Disability

The Internet has helped people with disabilities to have access to more opportunities in life. Increase and easy contacts with other people, more opportunities to look for jobs and education are all some of the advantages made possible by the use of Internet (Yu, 2002). However there are also disadvantages: the disable have less access and therefore use the Internet less than non-disabled. One of the reasons that contribute to disables having limited access and usage of the Internet include the lack of web design. The information contained on web pages is not accessible by people with disabilities because the web design is not directed towards them or people in this group (Andersson m fl, 2001).

Age

An individual age affects the amount of access and the amount of Information Technology he or she uses. People 65yrs and above have been termed the least user of ICT. Statistic Sweden
showed that access and Internet usage within this group is relatively smaller in comparison to other younger age groups. Approximately 50% in this age group use the Internet while the younger age groups rose to 90% and 85%. According to the IT Commission (2002a), this may depend on two factors: The first is that the elderly have had time to leave work before computers became popular and also the Internet became a greater part of the contemporary society and thus they have not been well introduced to ICTs.

The second factor is that children with parents in this group, who frequently makes use of technologies, have long ago left their parents home and as such could not influence their parent’s patterns of access and usage of ICTs (IT Commission, 2002a). In this case future retirees or pensioners will be acquainted with ICT usage, if nothing else, they would have had in one way or another been introduced to computer or Internet in their place of work (ibid).

**Sex**

The old trend in relation to sex and computer usage (WII, 2003) was that men spend more time on the computer than women do. WII (2003) argues that this gap between men and women has decreased and continues to decline. WII (2003) compared women’s access to the Internet in the age group 18 –74yrs, 2000 – 2003 and the study showed that the differences have diminished and also none existed. A trend that was recognised by WII study (2003) is that there still exist difference in between male female usage among the youth (18-24yrs), more young men are gaining access to the Internet while women in this age group remains at the same level. It should be noted that these surveys measures access to computer and Internet. If one measure instead the times spend on the computer, one will find a clear gender difference, especially at home (WII, 2003). This may largely depend on the fact that women take care of the home in much larger extent than men do and thus have less time to sit at the computer (Ministry of Justice, 2002:12). Another theory, according to the IT Commission (2002b), is that men use the Internet more than the women to play computer games. This effect can be confirmed by the Central Statistic Office (2005) study, which shows that it is the reverse role for school and home use or access to the internet: in the school more women use the Internet than men.

**Social economic**

The usage and access to Internet is affected by the social economic background you have as a person. One of the reasons for the abandonment of broadband is that one does not have the financial capabilities for it (Ministry of Justice, 2002). High income often goes hand in hand with high education, which is also a factor to consider if one uses the computer or not. WII
(2003) showed that 90% of highly educated and high earners had Internet access at home while the corresponding figure for unskilled and low income was 25-30%.

**Ethnic Background**

Ministry of Justice, (2002:18) point out an obstacle to the use of IT services for people of foreign origin are inadequate language skills, lack of understanding of information’s collected and its management. Study or research group society – and information studies, FSI, noted that immigrants seldom access information on the Internet and this is mainly due to language problem. This is also due to the fact that most of the Swedish websites are written in Swedish language (Forskningsgruppen FSI, IT – Klyftor och Invandrare, 1999).

Another important aspect in this context is the importance of written language for the purpose of Internet usage. Media in itself demand a return to a writing culture, which we are increasingly leaving. This is even more important in immigrant education for example SFI, where there is risk of adding obstacles to an already vulnerable group. According to Köster –Bergman, the so-called Swedish II – education for immigrants has been halved since 1980’s. Study shows that Swedes read and writes well in comparison to other countries, but the question is if it’s enough for the increase requirement on reading and writing skills that is required for the use of Internet. Especially that work assignments, public and private authorities interactions are increasingly changing as more and more of these interactions or exchanges takes place over the Net (Köster – Bergman, Sverige läser bäst i Världen – Men....)

**Geography**

Access or no access to Internet is very much affected by where you live, in urban or rural area. Past studies have shown that availability of the Internet is less in remote and rural areas in comparison to large cities. Bergström (2007) refers to a Swedish study, called SOM study, which includes measuring access to the Internet in large cities and rural areas. The survey was conducted in 2005 and shows distinct differences between rural and urban cities, 27% of rural population had access to the Internet while the corresponding figure for population in urban areas amounted to 55% (Bergström, 2007).

**2.5 ICT adoption and digital divide analysis models**

In order to identify the factors that influence the adoption or non-adoption of ICT among newly arrived immigrants in Sweden, first there should be a structure to support this argument. This structure has been identified as the digital divide in Sweden. The Swedish
Justice department (2002) had made it clear that there exist digital divide among different groups in Sweden.

Secondly and equally important is the question of how can this divide be measured or analysed? Thirdly, adopting these models into this study will serve as a framework for analysis in answering the research question.

In order to analyse the factors and obstacles, which may explain the difference in access and assimilation of information through the Internet, several tools have been developed by different organisations around the world to analyse or measure access and the use of ICT. One of such organisation is Bridges.org, an organisation that aims to support the use and access of ICT in developing countries. This organisation (Bridges.org, 2005) came up with its own framework for analysing ICT adoption and digital divide which includes the following;

(Model one)

**Bridges framework for ICT Adoption**

- Concrete element such as physical access,
- Technological skills or ability,
- Cost and Capacity,
- More abstract element such as Trust,
- Local and Macro-economic environment
- And lastly, political will

The Swedish Justice Department also came up with an analytical model in form of an IT staircase or steps. With the help of this model, a clear picture of where different citizens face barriers when using a new form of technology can be identified. The IT steps can also be used to assess Individual IT competence, adoption and non-adoption of a new form of technology.

(Model 2)

The IT steps are as follows -

- **Internet access**: This means to have access to a computer with Internet connections. Access can be obtained from different types of network with different transmission speed and can be related to School, workplace, and library and at home. Access is also one factor that affects the digital divide because people have different access to computer and Internet connections and this is sometimes associated to different economic conditions. The Swedish ministry of Justice (2002) explained the economic conditions to means costs associated to both acquiring of computers and also to access
the Internet. The Swedish Ministry of justice also explained that there is also limited access at home due to the unequal role played by both sexes at home. Women take care of home more than men and as a result spend less time in front of the computer, thereby rating men and children as the group with greater access to computer at home.

- **Basic knowledge of how to use ICT:** This means to have knowledge of how to use the Internet. How to connect to and how to navigate and use search engines to search, find, organize, review and re-use information. An individual level of education, thus play some role in this case. This means those individuals who through some examples such as work or education come in contact with Internet. In this case the higher the education an individual has the higher the probability that the individual uses the Internet. However education seems to have had less importance for the group of younger people the Justice department of Sweden (2002) studied.

- **Possibility to connect to the Internet with fast and reliable connection at a reasonable cost:** This means to have fast and stable Internet access for an acceptable cost and there are those who for some reason or another do not have such access. There are distinct difference in Internet usage between those who have solid connections and those with modems. The Swedish Ministry of Justice made reference to WII (2002) who argued that constant Internet connections leads to more relaxed, spontaneous and frequent surfing. It has also proved that those who have broadband use e-services more than those with modem. The Justice department of Sweden (2002) also noted that male and female have different view on fast and reliable connections: women belief more than men that the Internet is too cumbersome to use, with slowness and technical error as the main clause, and preferred thus, to contact the organisation or authority by telephone. The cost of the Internet usage is another aspect to consider. Economics and lack of interest is said to be the main reason why many do not get broadband (Ministry of Justice 2002). However today there are many cheaper and reliable options that are also cost efficient.

- **Access to comprehensive and accessible information on the Internet:** Information on the Internet is not accessible and understandable to all. This may be due to the complexity of the designs of websites interfaces or users may be forced to absorb large text contents of information. These are two examples of information related difficulties that are sometimes hindrances to Internet users according to Swedish Ministry of Justice (2002). Again there are differences between male and female: more often than men, female believe that there is too much, junk on the Internet (Ministry of
Ministry of Justice (2002) refers to a study conducted by National Audit Office, in which 92 government sites were viewed with respect to the accessibility. The results showed that none of the sites investigated meet the recommendations set out or adhere to international standards.

- **Ability to interpret, analyse and evaluate information from the Internet:** There is an incredible amount of wealth of information on the Internet, and it is relatively cheap to produce and disseminate information on the Internet. However there are some users that are more frivolous or malicious, and strive to mislead, and therefore information retrieved from the Internet are not always reliable. It is therefore very important to critic very well information from web sites and also be aware of the limitations and risks associated with the Internet (Swedish Justice Department 2002)

- **And lastly, knowledge and ability to use the Internet in democratic context:** ICT can make it easier to participate in and influence the democratic processes in society and therefore suppress lack of interest in and knowledge of the democratic society. Ministry of Justice (2002) argues that political parties in the municipalities can and should send its council meeting via the Internet and thus to offer the individual to take advantage of meetings. This has, according to Ministry of Justice (2002), proved to be successful by the increased interest in democracy in the performance of the municipalities that have executed this.

(Model three)

Studies carried out by KPN and Utrecht school of governance (13th Nov 2000) produced a framework for the study of adoption of new technologies. The study noted that although the adoption of technology can be studied from different perspectives and levels of aggregation, but what should be important is that the study of new technology is centred on three main aspects, as stated below:

- **Use and User:** This is the decision of the individual to make use of a certain functionality or ICT services for a certain action at a certain moment. In this aspect the specific user context and the choice between alternative ways to reach the goal is the central focal point.

- **The process of adoption:** The decision of the individual to adopt and make use of a new technology or service, from the moment he or she perceives a need through the
decision to acquire the technology or service to the actual use whenever the occasion to use it is there.

- The process of diffusion: The process by which a technological innovation moves within society from the first adopters to the last adopter groups.

The above study also made known that these three ways of looking at the adoption phenomenon are complementary and interact on different levels of aggregation as stated below:

1. The micro individual level, looking at use in a specific situation.
2. The personal level, in which use is integrated into a general arsenal of practices that form a part of the daily activities of the person through which needs are met and taken care of.
3. The level of the social unit of which the individual is a member, which provides patterns of behaviour, norms and obligations.
4. Society as a whole as the superstructure in which all individual life is embedded and which provides the context of general abilities and constraints.

The framework, important aspects

As we have seen, in the framework two dimensions and some important concepts are used to explain adoption.

First, there is the dimension of person versus technology: in order to adopt a new technology, there must be a fit, a match, between the person and the technology. In this the (perceived) characteristics of the technology itself play an important role. Only when there is a match between the two might the person start to think about adopting.

Second, on the personal level, there is the dimension of want (need) versus the possibility (capability) of the person to use the technology as well as the constraints on that use. If there is no need, people will not adopt; if the possibility to adopt is lacking because of psychological, social, economical or physical barriers, the technology will never be used in the daily life of the individual. Only when there is a fit, a match, between want and possibilities to adopt is a person willing and able to start to use the technology.

Variables that influence the match between person and technology and the fit between needs and possibilities are linked to the different levels of society in which the individual operates. On the need side we have everyday life, the social and cultural environments that influences
the perceived compatibility with lifestyle, the perception of relative advantage and the context in which one acquires social experience of the product. On the possibilities and constraint side we have the personal background of the person, which brings forth knowledge, skills, social position, and access to the technology and which influences the ease of adoption.

Person characteristics

<table>
<thead>
<tr>
<th>Personal preferences and lifestyle</th>
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<tbody>
<tr>
<td>$\text{Everyday life}$</td>
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<tr>
<td>$\text{Social cultural environment}$</td>
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<tr>
<td>$\text{Personal orientation}$</td>
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Fit between person and ICT

<table>
<thead>
<tr>
<th>Perceived need or necessity to adopt ICT</th>
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<tr>
<td>$\text{Relative advantage}$</td>
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<tr>
<td>$\text{Compatibility with lifestyle}$</td>
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<tr>
<td>$\text{Social experience with the product/service}$</td>
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ICT characteristics

<table>
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<tr>
<th>Functions of the ICT</th>
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<tbody>
<tr>
<td>$\text{Functionality}$</td>
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<tr>
<td>$\text{Design}$</td>
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Figure 1: Person wants to adopt the ICT

Person characteristics

<table>
<thead>
<tr>
<th>Personal abilities and constraints</th>
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<tr>
<td>$\text{Economic conditions}$</td>
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<tr>
<td>$\text{Knowledge and skills}$</td>
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<tr>
<td>$\text{Installed base}$</td>
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<tr>
<td>$\text{Socio demographic position}$</td>
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Fit between person and ICT

<table>
<thead>
<tr>
<th>Easiness to adopt an ICT</th>
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<tbody>
<tr>
<td>$\text{Awareness and understanding}$</td>
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<tr>
<td>$\text{Technical compatibility}$</td>
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<tr>
<td>$\text{Expensiveness}$</td>
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<tr>
<td>$\text{Availability}$</td>
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<td>$\text{Usability}$</td>
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ICT enablers and constraints

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<th>ICT enablers and constraints</th>
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<tr>
<td>$\text{Technical requirements}$</td>
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<tr>
<td>$\text{Complexity}$</td>
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<tr>
<td>$\text{Costs}$</td>
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<tr>
<td>$\text{Distribution}$</td>
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<td>$\text{Visibility}$</td>
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</tbody>
</table>

Figure 2: Person is able to adopt the ICT

Table 1 gives an overview of the variables that are important to take into account in order to be able to gain insight into the adoption and use of ICTs.

Table 1: Factors influencing adoption of BMI: theoretical insights
Factors influencing adoption and diffusion of new technology according to societal level

<table>
<thead>
<tr>
<th>Micro technological factors</th>
<th>Micro individual factors</th>
<th>Meso societal factors</th>
<th>Macro societal factors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Need</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Functionalities of technology</td>
<td>Occupation</td>
<td>Educational institutions</td>
<td>Awareness of possibilities</td>
</tr>
<tr>
<td>Type of services</td>
<td>Life stage</td>
<td>Cultural groupings</td>
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<tr>
<td>Suitability of technology</td>
<td>Household type</td>
<td>Communities and leisure organisations</td>
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<td></td>
<td>Activities</td>
<td>Marketing</td>
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<td></td>
<td>Social networks</td>
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<td></td>
<td>Lifestyle</td>
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<tr>
<td><strong>Barriers or enablers</strong></td>
<td></td>
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<tr>
<td>Technical Infrastructre</td>
<td>Age</td>
<td>Market infrastructure</td>
<td>Geography</td>
</tr>
<tr>
<td>Available substitutions</td>
<td>Gender</td>
<td>Collaboration busi-</td>
<td>Demography</td>
</tr>
<tr>
<td>Price</td>
<td>Education</td>
<td>nesses</td>
<td>Economy</td>
</tr>
<tr>
<td>Design of technology</td>
<td>Capabilities/skills</td>
<td></td>
<td>Business structure</td>
</tr>
<tr>
<td>Usability</td>
<td>Financial situation</td>
<td></td>
<td>Political system, rules and regulations</td>
</tr>
<tr>
<td>Availability of service</td>
<td>Attitudes</td>
<td></td>
<td>Educational system</td>
</tr>
<tr>
<td>Visibility</td>
<td>Infrastructure household</td>
<td></td>
<td>Culture</td>
</tr>
<tr>
<td>‘Triability’</td>
<td></td>
<td></td>
<td>Cultural diversity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Availability of infra-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>structure</td>
</tr>
</tbody>
</table>

Source: Studies carried out by KPN and Utrecht school of governance (13th Nov 2000)
3.1 Chapter 3

3.2 Method

Research method refers to the overall approach to the research process, from the theoretical underpinnings to the collection and analysis of the data (Hussey and Hussey, 1997:54). This chapter presents the methodology used in this research study. The discussion starts by looking at the philosophy of the study and then considers the following: rationale for choosing the phenomenological approach, research methods and techniques, data analysis and ethical considerations.

3.3 Research Approach

There exist, today various strategies in research approach. According to Yin (2003) each strategy can be used for exploratory, descriptive and explanatory research. According to Sanders, Lewis & Thornhill (2007) this means that there is no particular research strategy that is more important than the other but what should count is if a research strategy can be used to answer the research question(s).

As stated in the above, this project aims to examine the factors that influence the use and non usage of ICT among refugees, and in other to achieve the aim of this study, an approach with an understanding of human behavior was adopted since the study proposed to understand how humans interact with electronic media (ICT's) and how such relationship can affect their life and thus bring about changes. Therefore the approach taken in this research study is largely derived from the phenomenological paradigm, which is qualitative, humanistic and interpretive in nature.

3.4 Rationale for choosing the Phenomenological paradigm

This research is about understanding human behavior, and as such the phenomenological paradigm stresses the subjective aspects of human activity due its focus on meaning rather than measurement of social phenomena, and this is consistent with the hermeneutic approach. In hermeneutics, knowledge is obtained through interpretation of human behavior. It also describes an individual’s life world, which is the world perceived by the individual himself.
There is no absolute truth within hermeneutic theory, the truth is subjective as it is through experience and knowledge new understanding is created (Bryman, 2002, Patel & Davidson, 2003, Hertman, 2004). Hermeneutics believes that it is possible to understand other people through the interpretation of human existence expressed in speech, writing and documents (Patel & Davidson 2003). This implies that the researcher can enter in the social world in which s/he is interested and have an understanding of the participant’s experiences of the phenomenon under investigation. The fact that this paradigm facilitates the researcher’s commitment to the natural environment, this enables generation of an understanding grounded in the perspective of the research participants (Kvale 1996:52-55).

3.5 Data Collection tools

The approach for this study consisted of two data collection methods: Interviews and literature study. However the interview was seen as the most effective data collection tool; due to limited time in which the research had to be conducted and that it has an advantage over methods like the questionnaire in that it is better suited for gaining a deep insight into different perspectives of an occurrence (Saunders et al., 2000). This study was built on the findings from three focus group studies. The focus groups interviews were recorded in an audio format. The tapped were then analyzed and interpreted according to chosen theories. However, informants statements made in this study should not be seen as exact transcriptions, but may rather be regarded as summaries of their stated values

3.6 Sample

It is generally assumed that empirical support in scientific study are usually based on information, and it is often impossible, impractical, or extremely expensive to collect data from all the potential units of analysis covered by the research problem (Cargan 2007: 235). In order to draw a precise inference on all the units, a relatively small number of units as subset is used to represent the relevant attribute of the whole set. In this case the refugee community in Sweden plays the role of the whole set and the individual, families, groups and association within this community are defined as the sub groups. As described above this study cannot afford to draw inferences from all the units meaning the whole set therefore it proposed in using a stratified sampling to ensure that different groups of the refugee population are represented in the sample, so as to increase the level of accuracy when estimating the parameters. Furthermore, stratified sampling will considerably reduce the cost
incurred in the execution of the research (Cargan 2007: 237). The selection of the focus group used in this project was based on the nature of the study that was carried out. It would be good also if the member in the group have some variables linking each other together because such might facilitate communication easier when people feel a certain affinity if they have something in common. An example of this can be a demographic variable, which aims to factors such as age, sex, income, occupation, education, religion, and ethnic background etc (Wiebeck.V. 2000:27-28). The common variable for this study is the fact that all respondents are refugees and living in Falun less than five years.

3.7 Focus groups

Focus group one consisted of three people, all from developing countries and has lived not more than 5yrs in Falun. They are two men and one woman all in the age group of 35-55. The respondents were invited especially because they have a background that has strong linkages with the subject of discussion, specifically non-ICT literate background, which could also provide interesting insights. The focus group discussion was held in a familiar place to all respondents, which is KOMVUX, the adult learning centre in Falun. Most of the respondents used for this study are all current students in KOMVUX and as such it was a familiar place to the respondents, except for group two which is made up of high school students, age 14 – 16. Interview conducted with group two was done in the high school library which they all are familiar with been students of the same school. The discussion with group 3 was very lively, fluent and quite interesting in comparison to the other groups. These might be due to fact that this is a very educated and enlightened group and also having high ICT skills. Based on the researcher experience, all respondents appear natural and relaxed; this might be due to the familiar environment, age groups, similar immigrant status or educational backgrounds. There can however, be some elements of risks associated with such small groups in that participant’s views could influence each other due to the fact that remaining anonymous can be difficult in a small group. Bigger groups are not an exception either; they also have some elements of risks. Respondents in bigger groups might not dare to speak the truth in a bigger group or in an intimidating atmosphere, whereas this could be the opposite in a small group, respondents may dare to speak freely because they have few spectators. They might feel more comfortable in small groups and thus dare to say what they feel like saying. In such small groups the researcher or the moderator should be careful not to take a very influential role that could influence the participants at the same time the results. The moderator therefore took the role of guiding, governing and partly in the background as neutral. The moderator who is the also
the researcher started the conversation with the so-called introductory issues, followed by questions directed towards the participants. Followed up questions were also asked in order to identify key issues for participants to discuss. The discussions flowed freely and everyone had a number of views and experiences that had come to the surface.

### Focus Group 1

<table>
<thead>
<tr>
<th>Age</th>
<th>Educational Background</th>
<th>ICT Skills/knowledge</th>
<th>Profession/Occupation</th>
<th>Length of residency in Sweden</th>
<th>Country of origin</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>42yrs</td>
<td>High School</td>
<td>Very little</td>
<td>Trader/Seller</td>
<td>4yrs</td>
<td>Somalia</td>
<td>Female</td>
</tr>
<tr>
<td>47yrs</td>
<td>None</td>
<td>Very little</td>
<td>Plumber</td>
<td>5yrs</td>
<td>Iraq</td>
<td>Male</td>
</tr>
<tr>
<td>50yrs</td>
<td>Primary School</td>
<td>None</td>
<td>Welder</td>
<td>4yrs</td>
<td>Afghanistan</td>
<td>Male</td>
</tr>
</tbody>
</table>

### Focus Group 2

<table>
<thead>
<tr>
<th>Age</th>
<th>Educational Background</th>
<th>ICT Skills/knowledge</th>
<th>Profession/Occupation</th>
<th>Length of residency in Sweden</th>
<th>Country of origin</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>15yrs</td>
<td>High School</td>
<td>Good</td>
<td>Student</td>
<td>4yrs</td>
<td>Syria</td>
<td>Female</td>
</tr>
<tr>
<td>15yrs</td>
<td>None</td>
<td>Good</td>
<td>Student</td>
<td>2yrs</td>
<td>Iraq</td>
<td>Male</td>
</tr>
<tr>
<td>16yrs</td>
<td>Primary School</td>
<td>Good</td>
<td>Student</td>
<td>3yrs</td>
<td>Burundi</td>
<td>Male</td>
</tr>
</tbody>
</table>

### Focus Group 3

<table>
<thead>
<tr>
<th>Age</th>
<th>Educational Background</th>
<th>ICT Skills/knowledge</th>
<th>Profession/Occupation</th>
<th>Length of residency in Sweden</th>
<th>Country of origin</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>29yrs</td>
<td>University</td>
<td>good</td>
<td>Teacher</td>
<td>4yrs</td>
<td>Somalia</td>
<td>Female</td>
</tr>
<tr>
<td>30yrs</td>
<td>University</td>
<td>good</td>
<td>Medical Doctor</td>
<td>2yrs</td>
<td>Iraq</td>
<td>Male</td>
</tr>
<tr>
<td>32yrs</td>
<td>University</td>
<td>good</td>
<td>Journalist</td>
<td>3yrs</td>
<td>Iran</td>
<td>Male</td>
</tr>
</tbody>
</table>
3.8 Focus group method

The methodology for this study is grounded in the usage of a focus group. Focus group method is a qualitative research method, which through interviewing a group of participant’s one can access their views and attitudes about a particular phenomenon (Wiebeck.V. 2000:10). Furthermore it is also an appropriate approach when gathering data concerning people’s behavior and the motives behind it. In addition such a method avail participants the opportunity to air their opinion on the investigated subject from the beginning to the conclusion of the discussion mainly through sharing of experiences and thoughts (Wiebeck.V. 2000:40). The idea behind this approach is for participants to discuss pre-determined topic, in this case: the reason behind the adoption and non-adoption of ICT by newly arrived refugees. A focus group should not be too large, about five to eight people is desirable according to Victoria Wibeck (Wiebeck.V. 2000:49-50). The more the people in the focus group the smaller the space and chance to be accorded to each person in the group. However it is easier to be anonymous in a larger group, while the feedback and discussion will be more personal in a group of fewer participants. But most important, participants should be able to relate to the subject that is discussed (Wiebeck.V. 2000:43).

This study is based on three focus groups, with each of them consisting of three participants each and a total of nine participants. In all the groups, respondent could relate to the subject of discussion, but the discussion was more fluent and lively in the group number 3. The type of data collected from the respondent of the focus groups usually depends on the willingness of the respondents in sharing personal thoughts and opinions. Several factors may be involved to influence this willingness, which are usually divided into three categories. The categories are: Intrapersonal factors, interpersonal factors and environmental factors. With intrapersonal factors, reference is made to the individual and personal characteristics that may affect the group, and this is mainly in two ways: Either by the reaction of the individuals personal characteristics and/or that his external characteristics such as clothing, hair and other stylistic expressions, provoke reactions and affect the responses between participants. Interpersonal factor is about the interactions between the participants and mainly the expectations they have for each other, which is a result of intrapersonal factors. These expectations are based on the participants desire to belong to a group, to be identified and have a sense of belonging (Wiebeck.V. 2000:28-29). This can be problematic if this sense of belonging becomes too
strong and affects the participant’s own view. With environmental factor, physical nature of the room for the interview play a big role, this means whichever environment the focus group is been interviewed in, it might contribute to how the focus groups are going to react and it also speaks of the way the researcher sees the environment. However it is important that everyone feels comfortable in the environment. In the design of the focus group all these factors were taken into consideration that they can affect the results. It was however noted that, there were no noticeable tension in the group, perhaps this might be due to the heterogeneousness of both groups. The focus group was governed and led by an interviewer, or a moderator who is also known. And also had the responsibility of steering the conversation in a way that the group stays on the main topic by presenting new topic and angels of the discussion. (Wiebeck.V. 2000:19). In this project the research was the one that took the role of governing and leading the interview discussion and also had the responsibility of steering the conversation in a way that the group stays on the main topic by presenting new topic and angels of the discussion.

3.9 Semi-structured interviews

Since an interview is a purposeful discussion between two or more people (Kvale 1996:131), the interview conducted in this study could be described as semi – structured interview because it encouraged two-way conversations. The use of semi – structured interview has been helpful in gathering valid and reliable data that are relevant to the aim and objective of this study. However, it is preferable to provide an element of structure to interview in order to ensure that the main topics of debate are covered. Semi-structured interviews provided that opportunity by probing answers, in situations where interviewees are expected to explain, or build on, their responses. Interviewee or participants may use words or ideas in a particular way, and the opportunity to probe these meanings had added significance and depth to the data obtain. Adopting this approach has lead to the collection of a detail and rich data.

4.1 Benefits and Limitations of the method

The interview is extremely a flexible research tool (Brewerton and Millward, 2001). Below is the benefit and limitation of this tool:

Benefits
According to Brewerton and Millward (2001) semi-structured interviews are generally easy to analyze, quantify and compare and most of all they provide a chance of having an in-depth understanding of the situation as they allow for clarification through the use of probes and open ended questions. Secondly, interviews are a flexible research tool; they can be used at any stage of the research process. Thirdly, information is collected immediately, it does not require waiting and where possible it is easy to seek for clarification. The benefit also of the group interview is that it gives a broader picture of the discussed topic because the participants can present their own views while listening to the arguments of others and then fill in with their own views and experiences. In this way, a variety of personal perspectives on the topic is presented.

Limitations
As with any research tool, this approach had its own limitations. Not all the selected sample of interviewees where accessible due to other commitments, for instance one of the respondent contacted was not able to meet for the interview because she was attending to her frail mother. The study could also have been more comprehensive if more participants were to be interviewed, but due to this small size of the study only few participants could be interviewed. The researcher also took a more active role since this method calls for the collection of an in-depth data rather than the breath of the data. The researcher’s ability to lead the focus group in this desired method could pose a challenge as this can affect the research results. Also due to the nature of this method, which is, it is built on interaction; the most disadvantage will be based on group dynamics, composition of participants and so on.

4.2 Ethical Considerations
To ensure confidentiality, interviewee was interviewed separately in groups and was assured at the beginning and at the end of the interview of anonymity and confidentiality. Interviewees were also notified that the research was for academic purposes.

4.3 Reliability and Validity
In order to ensure that the results are reliable, the same set of questions were asked to members of different sub group of the sample, for instance, the same interview schedule was used for all the participants and as such, subject bias was controlled. Finally, objectivity in collection and analysis, was observed by bringing out all the important themes and not being selective (Kvale 1996:109-123)
4.4 Data Analysis

Using the hermeneutic interpretation in the analysis is very appropriate because the oral discussion obtained from the interview is transformed into texts to be interpreted. This follows a process whereby the dialogue producing the interview text is elucidated, followed by clarifying the subsequent process of interpreting the interview text produced, which may be conceived in form of a dialogue or a conversation text (Kvale 1996:46)
5.1 Chapter 4

5.2 Theoretical framework

This aspect describes the theoretical work. It is divided in two parts. First it gives a short but detailed description of both refugees and ICT, and secondly it clearly shows the relationship between ICTs and Immigrants.

5.3 Definition of Refugee

According to the UNHCR (United Nations High Commission for Refugees) and as established in the 1951 UN Convention relating to the status of refugees, the word refugee refers to a person who, owing to a well founded fear of being persecuted for reasons of race, religion, nationality, or membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country (UN Article 1, 1957). Most People been referred to as Refugees are mostly persecuted by the governments or other members of their society and even when they manage to find a refuge, they never know when it will be possible for them to return back to their home town or native country. This sometimes causes insecurity and uncertainty in their lives. It is due to the very peculiar nature and challenges faced by refugees that have drawn attention to the Theorizing of Diaspora (Jana Evans & A. Manuur 2003:22). Diaspora in its simple terms is used to describe practically any population which is considered deterritorialised or transnational, that is, which has originated in a land other than which it currently resides, and whose social, economic and political networks cross the borders of nation – states or, indeed, span the globe(Jana Evans & A. Manuur 2003:22).

5.4 Information Communication Technologies (ICTs)

ICTs is an abbreviation used for information communication technologies which are also defined for the purpose of the study as different numbers of technological tools and resources
used for the purpose of communication, dissemination, storage, creation and the management of information (Blurton C, 2002). ICTs are the maintenance and processing of communication, wired and wireless technologies, and the use of computer to transform information. ICT covers all media which are used in transmitting video, audio, satellite, multimedia or data such as cables, fibre optics; Networks such as Personal Area Network (PAN), Local Area Network (LAN), Campus Area Network (CAN), Metropolitan Area Network (MAN), and Wide Area Network (WAN); computer technologies (flash memories, optical discs, video books, electronic boards, multi-media projectors etc) Mobile Technologies (Mobile phones, PDA, PAGER, Pocket PC, Cordless Phones) All these technologies are the main source of spreading of knowledge and information sharing.

The growth of information related products especially the Internet has led to the advance research of ICT since the 1990’s, and billion of dollars have been invested by ICT companies to increase the awareness and importance of ICT to private and public organisations and also to individuals (Haddon, C. 2004). In the 1990’s ICT entered in homes and became a social part of life when the use of the Internet grew up to become an integral part of private life for individuals rather than only for businessmen, military purposes or for academicians (Haddon, C. 2004). This emergency can be attributed partly to the huge investment by telecom companies in expanding their markets to extreme levels and also partly due to people’s interest in adopting new technologies (Haddon, C. 2004).

The internet serves as the main connecting point for many other networks. It has come to be a backbone by which networks link up with each other (Steven Jones 1995). There are many purposes the internet serve, but the ones with which its users most frequently engage are text based, even in the case of the World Wide Web the internet is still regarded as the latest expression of print capitalism. Much as newspapers, magazines and pamphlets are influential in spreading words around the globe, the internet spreads word of the electronic environments. The internet came into existence as a US military communications system, with the main purpose of providing a secure means by which secret information could be circulated, a kind of internal electronic postal system (Castells 2001 pg 9-22), that was later introduced into the academia world, where ‘gopher’ software was developed to assists students in their search for information. It then propelled rapidly through scientific researchers at CERN, the nuclear research centre in Switzerland, who developed the technology of the ‘hyper text link’ that allows an indefinite number of computer databases to be interconnected.
electronically and thus the information collected on each to be exchanged between all. Due to the hyperlink, whatever is on your computer network is very much accessibly to mine. Boosted by its value and its salability both big and small organizations and companies are involved in its operations which has lead to the establishment of a true World Wide Web and by means of it, uncountable number of people and organizations are now enabled to communicate and share digitally stored information. Despite using it formerly as a military communication system for security, the extension of this technology to civilian use has introduced the freest communication system, with little or no regulation and also the most international communication system in the history of mankind.

It remains a common notion today to note that the immediate useful aspect of the Internet is the electronic mail system known as e mail, which combines the features of post, fax and telephone. Its ease, immediacy and features has attractive a huge numbers of users very rapidly. An inestimable amount of information is available on it, ranging from millions of images, advertisements, moving pictures, person journals and book length typescripts can be accessed by means of it. It is increasingly becoming the primary vehicle for large numbers of inter-communicating and interactive interest groups (Castells 2001:64,125,130). Today almost all type of interest and activity from the most advanced scientific research to the most trivial of hobbies, from the greatest religions to the least savoury of human perversions can now be found to have an Internet group. These also means it is possible to operate bank accounts, purchase goods, make friends and meet potential spouses, engage in academic exchanges or make travel plans, including booking tickets and even viewing prospective hotel rooms through the Internet. Such it seems, is the dramatic power of the personal computer, which, not so long ago, was only a military communication system (Castells 2001:64,125,130,155). The Internet is indeed a radically new technology. What ever may be true about its status, the Internet naturally offers itself for comparison with other major distinguished inventions such as the electricity, automobile and telephone, for instance. Manuel Castells (2001 pg 1) called the internet the fabric of our life, and likened it to electric grid and the electric engine because of its ability to distribute the power of information throughout the entire realm of human activity. This means living in the world today without the Internet would be a bit like the long gone world without the motor car.
5.5 Immigrants and ICTs

We are continuing to witness the steady growth of ICTs and also an ever-increasing mobility of people all over the world. Thanks to ICTs, accessing and sharing of information has played a huge role in facilitating migration. IOM (IOM 2005) believes that although not only does ICTs facilitate migration it has become an international tool for migration. Castells described it even simpler and clearer by stating that the development in cultural change and transportation coupled with new communication technologies are making it normal for people to think beyond their borders (Castells 2007:2). Pries (Pries, 2005:167) refers to this consciousness of the relative closeness shared between regions and countries through media images and people personal experiences as the ability of ICT’s to bring the world closer together. Wood and King (2001) believes that different media such as news, entertainment, advertisement and films plays significant roles as valuable sources of information for people aiming to migrate as against word of mouth, personal experiences and local information’s (See also Hargreaves and Mhdjoub, 2006). UK, USA, Canada, New Zealand, Australia, Sweden and many other countries all have national websites for Migration purposes. Statistics Canada (2008) for example reported that immigrants make use of the Internet as their main source of information when deciding to choose Canada as their travel destination and even in choosing further locations or cities within Canada for settlement purposes. In this case ICT plays the role of an information catalogue. Rose, (Rose et al 2006) thinks that not only does ICTs help to access information concerning destinations or provide information’s concerning conditions of migration; they also help in maintaining contact with families and friends. Scopski (2004) also explains that not only can ICTs help in bridging the distance between families and friends living far away from each other, they also help in much more areas such as: giving access and opportunities for immigrants to read in their local languages, participate in their national and local cultural events, access information concerning their host nation that could be of great help in their settlement years and also use ICTs to promote their local culture and at the same time challenge stereotypes. The use of Internet by refugees can change the reality of their refugees residency abroad through the help of enhance and effective linkages, which can avail them the opportunity to maintain their traditions while living abroad for example; celebrating religious ceremony or cultural festival, finding a
spouse of shared cultural origins or religious background or making friends or simply finding products that are dear to them and originated from their home countries (Karim 2003). According to Hanafi (2006), online communities of Palestine are example of this phenomenon since the geographical link between members in these networks have been interrupted by political turmoil to the extent that virtual meeting become the only point of convergence for people who are prohibited from travelling to their country of origin. ICT according to Tsagarousianou (2006) help immigrants to construct a feeling of home away from home. In a sense bringing the immigrant home and bringing home to the immigrant. The Internet, emails, webcams, instant chat applications, blogs and personal websites have diversified the possibilities for interactions across distances. Particularly the email has allowed many migrants to stay in regular communication with their family members and as well increased the quality of messages exchanged with family member residing abroad (Wilding, 2006). Uploading and sharing photos are allowing immigrants to document their lives abroad and give a glimpse of their daily life abroad to family members. According to Horst (2006), the ability to hear a person’s voice and to exchange communications in real time, without delays of international postal services, is considered by immigrants and their families as important aspects of maintaining relations at a distance. Many new application developed online are furthering communication processes and expanding peoples networks of relationships. Websites such as MySpace and Facebook, Skype, Msn are all allowing people to locate and rebuild relationships with friends and share information with a wide network of online relationships as never seen before. This is what Tsagarousianou (2006) referred to as a sense of being at home away from home
6.1 CHAPTER 5

6.2 Result and discussion

The results of this study showed that among the 9 participants interviewed, only two stated that they were non adopters and the rest identified themselves as adopters. The majority of the non adopters constituted of people with low educational qualification, IT skills and older immigrants. In line with the aim of this study, major themes for discussion are presented under the following headings: refugee’s perception towards ICT, how refugee’s acquire ICT skills and Knowledge, factors influencing refugee’s adoption of ICT and barriers to refugee’s adoption of ICT.

6.3 Refugees perception towards ICT

The interview started by gaining an in-depth understanding of participant’s perception of Internet. All the refugees interviewed expressed very positive attitude towards the Internet. Both adopters and non adopters expressed positive desire towards the usage of the Internet. However adopters expressed stronger desire towards the use of the Internet than non adopters. Questions like can you explain shortly what you know about the Internet? And do you see the Internet as been very useful or positive and why?” were asked to understand what participants feel about the Internet if they see it as positive or negative. According to Kim and Rhee’s study (2004) a positive attitude expressed towards the usage of Internet is very important in influencing the adoption of ICT.

15yrs, Female student group2: The Internet is very popular in my school, everybody uses it and sometimes the computer is all taken. I like being on the computer because I have, you know allot of friends there. I go there everyday when I am free from classes and sometimes even when the teacher is in the classroom. I think it is very interesting, I and my friends like to chat, you know MSN, Skype, face book I love it......................

16yrs Male student group 2: I go to my site everyday to see who has written me and also check others pictures, its nice you contact friends and share pictures. You meet beautiful girls on the site, and you chat about different things you like, there are many sites for this for example www.bilddagboken.se or www.lunastorm.se or www.facebook.se. ......................

While all the high school students interviewed sees the internet as interesting and a tool for social networking among their friends, participants in other groups share similar yet different attitude towards the internet especially participants in group 3
**Journalist Group 3:** The internet does not only connect people from different locations, you can do a lot with it. I read news from my home country and send e-mail to my family in my home country since I cannot travel back to my country, I am a refugee you know ..........

**Doctor Group 3:** There is various advantage and disadvantage to the Internet. My friends have said about the positive but the internet can be dangerous for children and also to other people. There are armful materials on the internet for example pornographic material and other dangerous websites. I just like to do some few things with the Internet mainly keeping in touch with events both in Sweden and overseas and keep in touch with relatives. This is very cheap to do with the internet.

All the participants in group three and one all sees the internet as a medium to communicate mainly with their families back home and also to source for information mainly from their home countries. However there is a contrast between the younger adopters (high school students) and the older adopters. Even though the young adopters are migrants themselves, none of them mentioned using the internet to communicate with relatives back home as was the case with the older adopters in group one and three. The non adopters in group one however express very little about the usage of Internet when asked.

**Male 50, group 1:** I do not make use of the Internet always; I use to ask my son to help me send e-mail. I think it is good, I can keep in touch with my relatives but that’s all, it is hard to use, I like to learn how to use it ..........

Despite the fact that these group shows little knowledge and skills in using Internet they still express a positive attitude towards the potential of ICT and ICT in general. However base on the interview, participants views and knowledge in ICT is still limited. Mostly participants talked about Internet only in relation to social networking and in regards to their homeland.

### 6.4 How refugees acquire IT skills and knowledge

Understanding how refugees acquire IT skills is vital to understanding the factors that influence their adoption of ICT. IT skills is the key to operating a computer or gaining access to an Internet without which it will be impossible to make use of an internet or use the internet to carry out some basic functions. Result from the interview produced three results: participants acquire IT skills through close acquaintance for example family and friends, also through education and employment. The results show that out of three students interviewed going to high school two actually attended a course in IT at school and when asked the third
student why he didn’t take an IT course at school, he said he was not doing well with his studies and as such he couldn’t take an IT course. He however learnt how to use the internet though his friends at school.

**Male student group 2:** My friends helped me to learn computer. They showed me and now I also chat with them. I think I am getting better always when I use the internet. I can send pictures and write to friends. I will take the computer course soon when my Swedish is better in school.................................

**Female student group 2:** When I came to this school at first I can’t use the internet and almost everyone can use it. I saw my friend’s pictures on the internet and how they chat and I want to do the same. They showed me how to register on the site but then I could not chat so much because my Swedish is not as good as now. But I learned Swedish and also computer in school, now I can say I am good on both. Although my friends still help me when I have some problems you know..........................

**Female teacher group 3:** I came in contact with computer few years ago when some computers were donated to the school I used to teach in my home country. No one can use it until we went to some training, a two week course on IT application. I can’t remember some of the things I learnt but after the course I learn how to use the internet and also to type, print and send messages. Although I feel I should increase my knowledge because I think it is not enough. I am always asking friends to help me when something goes wrong.............

**Journalist group 3:** There are many books you can borrow in the library here in Sweden to learn how to use the Internet. I have read some although it is hard to follow but I learned a bit. I still teach myself but I learned how to use the computer though my brother. He is good with computer and also do allot of new things with it. People call him for help when they have problems with the Internet. I still ask him when I do not understand something’s but he is studying in Umeå university now and its hard when he explains something on the phone, it’s easier when he can show me, point it to me..............................

Although all respondents that are adopters acquired IT skills through different means, what remains constant is the fact that they all rely on their close contacts such as family and friends for help associated to problems with the Internet. In most cases friends and families was their first contact when learning to use the Internet. The result also shows that training at jobs and also taking IT course in schools is as import a source for learning IT skills as learning through friends and families.
6.5 Factors influencing refugees adoption of ICT

- **Social environment**

Base on the interview conducted, a very important factor that influence the adoption of ICT among the participants is the social experience with ICT acquired by participants through contacts with close friends and families, schools, work place and meetings with others in society with longer residence. For most of the participants friends and families was a greater influence in their adoption of ICT. Many of the adopters were shown and explained to how the internet works and its usefulness by friends and relatives. One immediate function they all are quite familiar to is the e-mail, which they all used in keeping touch with their families and friends.

**29yrs old female teacher:** Although, I had my first physical contact with the Internet through work in my home country, I first hear about it through friends and was too scared to try and use it because it seem too complicated them to use, this was 2002. They explained to me about its functions but then I had no immediate intention of using it. Since I came to Sweden all my friends use it to contact their homeland and I too.

Despite some of the participants have had some form of contact with the Internet before, they had no immediate use for it as compared to now living in a foreign country. Some participants actually stated that they bought their personal computer because almost everyone has computer at home in Sweden.

**15yrs old female student:** All my friends both the ones from Sweden and immigrants like me have computer at home. When I visit them they show me their room and they all have computer in their room. Hahaha (laughs)....Some have better computer than others but you see, they all work it’s no big deal you know. I have a used computer myself and it works.

When probed a bit further to know if any of the participants own a personal computer at home prior to leaving their home land, they all said they had none, but they all now own a personal computer except two of the non adopters. One of the Non adopter who owns a computer at home actually attributed his owning a computer at home to the fact that his older son uses the computer most of the time.

**50yrs old male group 1:** I bought a computer for my son, he uses it more than I, I don’t use the computer but sometimes my son help me to send e mail. I want to learn to do it myself but I forget the information all the time, I will try to learn because there are so
many things I can do with it. My son plays Afghanistan music from the internet and it’s nice.

The larger community in which these participants interact with such as other locals in Falun (Swedes and long term residence) majority of which have computer at home have influence on the adoption of ICT by the participants. Visiting such friends and sharing common experiences about ICT attributes to another reason respondent became adopters. Most of the participants see’s ICT such as the Internet as part of the society in Sweden. They think most people use it and it’s a necessity to own one at home even though one can get free access to the Internet at the Library in Falun and also in schools.

**30yrs doctor group 3:** Every family I visit in Sweden have computer at home. I mean either Iraqi family or Swedish family. They use it to contact family and friends and also to access local authorities or organisations such as Arbetsförmedling, försäkringskassan, CSN, Skatteverket, Kommun web site and so forth..........................

Such visits and meeting with a wider network of the society give them the chance to learn more about the usage of the Internet and also to learn about the function of the internet in accessing most government agencies.

- **Internet helps to promote integration and facilitates resettlement.**

TilBury and Colic (2003:62) refers to refugee resettlement as the process of slowly re-establishing the feeling of control over one’s life. Certain indicators have been itemised by Mestheneos and Loannidi (2002) as important in facilitating resettlement which are: access to job, housing and education. The use of Internet to facilitate resettlement and integration into a new society has greatly influence the adoption of ICT among the respondents of this study.

### Use of Internet to Communicate and maintain links with Home country

The Internet opens a big window of opportunities for the respondent to get information, news, cultural products and lots more from their home town. Since most of these respondents have fear of returning to their home town the internet becomes an arena for cultural exchange between them and the local community they left back home or with their country men in Diaspora without fear of being persecuted.

**32yrs Journalist:** Even though I live in Falun, sometimes I feel like I am in Iran. I use Skype to chat with people in Iran and speak Persian, I even chat with Iranians, and there are many Iranian sites to do this for example [www.easypersian.com.iran](http://www.easypersian.com.iran) news from [www.fasinet.com](http://www.fasinet.com) and many more......................
29yrs Teacher: I used to Internet to find out what is going in Somalia. I cannot go to my country and in Sweden there is not so much news from Somalia. I always go to the Internet to get news about what is going on in Somalia. One of my favourite sites for this is www.hirraan.com.

The respondents, mostly the adopters were all very chatty and find the internet very promising in maintaining links and giving information about their home country. They also find the internet quite useful in gathering local information about their host nation.

Use of Internet to access local Information concerning host nation

Although all the adopters that were respondents for this study all claim to have used or visited number of Swedish sites to gather information, contact local agencies, seek for housing, seek for job and lots more, they still have some reservations. Even though they all find these sites very helpful, they all still express the need to speak, read and write better Swedish as a setback in fully participating in these web sites. Although couple of them claims they are proficient in the Swedish language they still felt that there are instances they result to dictionaries to check meanings of words written in Swedish or English languages.

29 yrs old teacher: I always go to CSN and Forsakringskassan web sites to apply for some money and sometimes it’s hard to understand everything they say on the sites, they use very complicated grammar not meant for someone like myself, sometimes I understand because I am studying Svenska A, but other times I must use my dictionary. It makes it very slow for me to use the Internet.

Despite the setback the respondents sometimes meet when they visit Swedish websites, due to lack of adequate language ability, they also acknowledged that there are many instances the Internet have been very useful and proven successful in providing them with Jobs or housing.

All the adopters except for the high school students say they visit the local employment sites regularly to look for job and this is one of the vital reasons for their adoption of the internet.

29yr old Teacher: I got a job last year through arbetsförmedlingen web-site; it was a summer job in a restaurant in Borlänge. I saw the advert for this job on arbetsförmedlingen. I later called the employer and also sent my CV. I got a date for an interview and got the job after been interviewed. The job was only for two months. This summer I have started looking for job also through arbetsförmedlingen.

30yrs doctor: I have also used the Internet to get my family an apartment. I usually visit www.copperstadens.se. It’s a good site to use when looking for housing in Falun. I and almost all of us refugees use this site to look for housing.
In view of resettlement and integration, all respondents that are adopters were encouraged to use the internet quite often because the internet has helped them in so many ways in facilitating their resettlement in their host nations and also foster integration. Based on the fact that respondent uses internet for activities such as looking for job, contacting local authorities, looking for day-care, schools, housing or apartments, this made it easier for them to accomplish allot of tasks and more importantly access useful information that makes it easy for them to integrate into their host nation.

6.6 Barriers to refugee’s adoption of ICT

- **Literacy and IT skills**

Results from the study showed that among all the barriers affecting adoption of Internet, skills in IT were a forefront contributing factor affecting non adopters and in some cases the adopters. All three non adopters share a similar background; they were illiterates and express difficulties in reading and writing. They showed very little interest in IT and when asked *what they feel is the reason they cannot use Internet and why?* They all felt that their inability to read and write is a hindrance to their learning how to use the Internet. Even though they showed interest in learning how to use the internet, they still feel that learning to use the internet is very complicated for them and as such they have no intention to become adopters.

*50yrs male group 1: I have been shown by my son sometimes how to use the Internet but it’s hard for me to remember the instructions. I do not understand it; it’s not easy for me to remember these things, it’s better for younger people like my son. He had better education than me, maybe I could in the future learn a bit in Komvux........................*

- **Language**

While IT skills and literacy plays a major role whether one becomes an adopter or non adopter, language is also a major part of the mix. Most of the website respondent visits are either written in Swedish, English and few other times in their local language. So being literate in the usage of these languages plays a vital role in adopting ICT. When the non adopters were asked *if they use any of the mentioned web sites other respondents claimed to have visited and if not why?* They complained that their Swedish is not as good to access and read from most of the government web sites and other web sites the other respondent’s uses. Even some of the adopters also expressed concern about difficulties with language when using some websites. Either their language is not enough or some words need more clarification. Most of the adopters feel English web sited are however easier to read and understand than most Swedish web sites. This is due to the fact that most of the adopters are
more familiar with the English language even though they also sometimes find it difficult in certain cases.

29yrs female teacher: I do speak fluent English but my Swedish is not as good as my English. I do not use my English all the time and sometimes when I read from an English site I still use dictionaries to interpret some words. It’s not so bad, my English is still fluent. But the Swedish websites, I need to use my dictionaries allot to interpret the words.

7.1 Conclusion
The reason for carrying out this qualitative study was in the first place to identify those factors that influence refugees decision to adapt ICT specifically the Internet and also to understand based on the qualitative interview why some of the non adopter participants in the study choose not to adopt ICT despite the tremendous function that can be carried out using the Internet. The results however showed that of those that were adopter, literacy and IT skills was a major determinant or influence in their decision to adapt the Internet. This notion supports Bridges framework for ICT adoption (2005) and Swedish Justice Department (2002) IT steps analyses. Both studies mentioned Technological skills or ability as a perquisite in the adoption process of IT. All the participants that were adopter were found to have both some formal education and IT skills. However their skills in IT were found to be very limited. Respondent knowledge in IT was basically browsing for information on the net or sending e-mails and attachment of documents. None of the participants showed advance skills in IT like installation of programs, building or maintain websites for example. Those with formal education were easily trainable to use the internet due to the fact that they have acquired the skills in learning, although, family and friends plays a very influential role in their adoption of ICT. The majority of the participants that were adopters first learned of the usage of the Internet through word of mouth, observation through family and friends making use if the Internet and also in their various social networks (School and work places). Age was of some significance in the adoption process but not a concrete reason for adoption as most studies had shown. Although statistic Sweden (2005) showed that older people uses the internet less than the younger ones. This study showed that the younger ones in high school that were interviewed are likely to be adopters than any other group. For this group of teenagers the Internet represent a social identity and a social network were young people create and participate in various activities. It’s a vogue and trend that almost everyone in this age group
identifies with. There is a clear difference in the usage of Internet between the various groups, depending on age and IT skills. Sex was also found not to be of any importance as both male and female were as enthusiastic about using the Internet both at home and also in schools.

The power of the Internet to connect many networks according to Steven Jones (1995) and also its ability according to Castells (2001) as a primary vehicle for large number of inter-communication and interactive interest groups was another significant influence in the adoption of Internet among the adopter respondent in this study. The respondents see the internet as a vehicle to promote integration and facilitate their resettlement in their host countries. This is the ability of the internet to construct a feeling of home away from home which in a sense according to Tsagarousianou (2006) is bringing the immigrant home and bringing home to the Immigrant. The respondents interviewed all agreed that e mails, webcams, instant chat applications, blogs and other personal websites have all diversified possibilities for their integration both in Sweden and also across distance. The study also found out that not only has the Internet help in bridging the distance between families and friends, using the internet to look for jobs and also to carryout other activities in their host nation was also a huge significance in their decision to adapt the Internet. According to Scope (2004) the Internet can help in many other areas than just helping to connect family and friends.

Studies done by WII (2003), bridges org (2005), And Swedish Ministry of Justice (2002) all showed that social economic factor such as cost associated with acquiring of computers and access to the internet is a main factor affecting adoption of the Internet. The results in this study however showed that respondents that were adopter found internet to be cheap both in acquiring a personal computer or accessing a computer. Respondents interviewed attributed their owning a computer to the many used and good cheap computers that can be purchased virtually anywhere in Falun. Most respondents own used computers and found them to be efficient and reliable. They also feel that broadband and internet connections are very cheap as there exists, today very healthy competitions among Internet providers. Some respondents say they do not pay for their internet service because the Internet providers which they use had an offer; if you get a TV and Phone contract from them you get a free Internet connection. They mentioned COMHEM as one of such operators and also that there are quite a number of such operators and offers that make it very cheap to access the Internet. They also mentioned that there are free internet connections in KOMVUX, high schools and also in the State library. The results from the study showed that while cost, age and access were not a
significant problem facing adoption, illiteracy and IT skills and Language were major problems found to influence the respondents that were non adopter. Respondents that were found to be non adopter found the internet very complicated to learn and this is largely due to the fact that these respondents lack the adequate skills to learn and as such sees learning basic skills in IT as very challenging and in some case impossible. The general characteristic shared among these respondents is the lack of formal education. These respondents all have no secondary education and in some case no primary education. They also are a bit older in age but age on its own had been shown in this study not to be of any major problems associated with the adoption of IT. However language plays a huge role in influencing the adoption of Internet among the respondents interviewed. This supports the study done by the Research Group Society and Information Studies, FSI. This study showed that immigrants seldom access information on the internet due to language problem. Although most of the adopters interviewed in this study shown some knowledge of both Swedish and English, these are two languages that are very dominant in the Web sites these respondents’ visits quite often. However fluent or good they use these languages they sometimes according to them, turn to the dictionary for interpretations of certain words and this causes a bit of frustration since it increases the time spent on the internet just looking up words, and it affects their full understanding of the web content. The none-adopter also complained about their non ability to read and write in both Swedish and English as a problem influencing their non adoption of the Internet. They express concern on limited knowledge in the host nation language as a setback in accessing information in host nations web sites and one of the respondents showed interest in studying further so as to one day be able to learn how to use the Internet.

On the Whole, the results have shown that although majority of the respondents lack concrete or advance IT skills, both adopter and non adopter have shown huge interest in Internet and share positive experience and perceptions about the Internet. Friends, families and in general the social environment respondents found themselves have played major role in influencing their decision to adopt ICT. The results have also shown that the functions of the internet was a big influence in adopting Internet and this functions displayed by the Internet had contributed to both Integration and facilitation of their resettlement in the host nation. Functions such as the use of the internet to communicate and maintain links with home country, use of the internet to access local information concerning host nation where shared by respondents as very valuable function that influence their adoption and continuous usage of the internet. The non adopters attributed largely their lack of IT skills, illiteracy and
language as the main obstacles to their adoption of Internet, none of the non adopters perceived the Internet to be negative despite the setbacks in their adoption.

7.2 Recommendations

Due to the size and time allocated to this study, it is of the researcher’s opinion that this study could have been more comprehensive given more time and resources. The sample population is not so big and as a result fewer participants were used to represent a large population of the refugee group living in Falun. It is recommended in the future to increase the sample size so as to get more inputs from respondent both in Falun and other regions of Sweden. Although Qualitative method was best suited for this study, further study could benefit from both qualitative and quantitative methods. According to Sanders, Lewis & Thornhill (2007) there is no particular research strategy that is more important than the other but what should count is if a research strategy can be used to answer the research question(s). Quantitative method could be adopted along side with qualitative method in a future study due its ability to collect information from a larger sample size of respondents in a short period of time.

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