

A GLANCE AT RURAL ICT EXPERIENCE IN IRAN STUDY OF THE IMPACTS OF COMPUTER SKILLS ON ECONOMIC POWER OF EDUCATED GIRLS IN GHARNABAD VILLAGE

Maryam Nooraie Nezhad

University of Tehran, Tehran, Iran.

Corresponding author: nooraiezhad@gmail.com

Available at <http://www.ssrn.com/link/OIDA-Intl-Journal-Sustainable-Dev.html>

ISSN 1923-6654 (print) ISSN 1923-6662 (online).

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Abstract: The importance of connection of villages to Information and Communication Technologies (ICTs) and expansion of collective points for access of villagers to ICTs is to such an extent that this issue has been accepted by heads of all countries in the world as one of the Millennium Development Goals. Iran, after signing the Declaration of Principles, has also begun the project of connecting ten thousand villages to ICT offices since 2003.

The issue that how the existence of one rural ICT office has affected the lives of girls in one village and even neighboring villages, and in fact what new chances it has provided for rural girls is the main subject of this research and its subordinate forms have been questioned in four fields of individual, family, vocational and socio-cultural impacts on rural girls from their own points of view. Since the Gharnabad is well-known as a successful model of internet village in Iran, the girls of this village and three other neighboring villages, including Shahkooh, Ahangar Mahalle and Chaharbagh, are the study population in this research. Answer to the question that to what extent has this office been able to financially empower the rural girls has been analyzed and investigated by qualitative method and with in-depth interview technique. The results of this research illustrate that rural ICT office in Gharnabad and the rendered trainings have provided various opportunities, including new vocational opportunities, for girls of these villages.

Keywords: Rural ICT office, rural girls, new opportunities, economic empowerment, suggestions based on successful experience of Gharnabad village.

Problem statement

As the report of Human Development of (UNDP, 2001) has defined, ICT includes a collection of microelectronics, computer hardware and software, telecommunication, microprocessors and fiber-optic which have made possible the process of saving and analysis of a high volume of information fast and for long-term goals. With such a definition ICT encompasses telecommunication technologies such as telephone, radio, satellite and digital technologies like computer and information networks and hardware. In brief, ICT deals with the collection of gathering, saving and transferring technologies which the sudden growth of them in 1970s based the foundation of technological revolution (Prasad & Sreedevi, 2007). Internet and other aspects of ICT in the term of last three decades have made undeniable changes in the world and are considered as powerful tools for reducing poverty, better and clearer rendering of governmental services and facilitating sustainable development.

This situation has also caused considerable changes for women and has made ICT as a valuable resource for making individual and social positive changes, especially in developing countries where women have more limitations for accessing education. The issue of gender and communication technologies has attracted to itself the attention of many activists, researchers, stakeholders and policy makers in the realm of ICT (Robins, 2002). Research on this field includes a vast range of impacts of these technologies on political, social and economic development (Shade, 2002) and encompasses critique from global criticism against access and benefit from these technologies.

In all these study fields, two aspects of “digital divide” and “gender divide” have been concern of most women activists. The term digital divide refers to those who can benefit from ICTs and those who don't. Also gender-based inequalities limit how women can benefit from the opportunities offered by ICTs and how they influence the developing global knowledge economy, creating a gender divide (Gurumurthy, 2003)

Though the outstanding share of these technologies in development has been studied from various view points, development always is equal to access to information and communication (Muturi, 2004). For example using internet as a standard indicator for enjoying from ICTs has been considered by many experts of development issues, and in development of women abilities has also allotted the third goal of Global Millennium Development Declaration to itself. In Iran, as one of the developing countries wherein women get hurt by digital and gender divides in the ruling cultural views in the society, using ICT services especially in urban areas is developing day by day. The government also in pursue of reaching to the objectives of Millennium Development Goals, by launching the village ICT project, is after reduction of existing digital divide between rural and urban areas. In the meantime there has been no special look towards women in Iran rural ICT project and in comparison with similar projects in the world, no specific point has been defined for it.

Nevertheless, in Gharnabad as a successful Iranian village in enjoying from benefits and services of ICTs, girls have experienced different circumstances and by enjoying from the benefits of rural ICT, without especial attention being paid to them, made changes to their individual and social lives. By studying the lives of educated girls in Gharnabad, this study tries to describe and explain the impacts of ICT on their individual and social lives in general and on their economic abilities in specific.

ICT and women

Maybe many of the women, who nowadays have benefitted from ICT in villages all around the world, including Iran, do not know that the changes in their life conditions are affected by ICT. The importance of this issue is to such an extent that the heads of global society have verified that these technologies provide women with numerous opportunities and make them key role players in information society and have reassured that the information society is capable of empowering women for cooperation in all aspects of life on the basis of equality and should be used as a means for making the gender equality operational (Declaration of Principles, 2003). Giving such importance to the issue of women and ICT does not have long precedence but since 1990s the attention toward inclusion of women in discussions related to development through ICTs has begun by organizations pioneer in development. In 1995 the United Nations Commission on Science and Technology for Development (UNCSTD) by organizing a gender workgroup became pioneer in global gender focus from the issue of access, to enjoying from ICT for women (World Bank, 2009). After that all the international organizations, like UN, International Telecommunication Union (ITU), regional organizations, women organizations, NGOs, universities, etc. implemented many of their executive and study plans with gender considerations. Such attention, in fact, illustrates the endeavor for achieving the Millennium Development Goals and specifically the third goal of this declaration which is optimistic to eliminate all forms of gender discrimination by 2015.

But besides such international attentions, some scientific studies demonstrate the weak state of women in developing countries, in benefiting from ICTs. These studies lay on this aspect that factors such as lesser access of girls and women to education and technology cause their hindrance from benefits of an information society (Huyer & Westholm, 2005). The existing statistics from developing countries illustrate lesser use of women from ICTs in comparison with men, and to the same extent delay in enjoying from its benefits (World Internet Project, 2009). Such circumstances illustrate that the existing gender divide is a threat against women and has put them in severe strait (Hafkin & Huryer, 2007). These experts of social sciences believe that in societies which are peripheral and away from centers and wherein the level literacy of girls and women is lower and women, as a social group, have less chance to experience equal educational facilities as men, ICT cannot be a beneficial means for women. In other words, in circumstances that women do not enjoy from primary education facilities, because of various kinds of cultural, social and economic pressures, and mostly are in challenge with their primary needs for life such as health, security and individual independence, we cannot be optimistic about the impact of ICTs on them. Many case studies have made experts to believe that encounter of women in developing countries with two undeniable problems of lack of access and education on one hand and lack of appropriate response on the other hand has caused alienation of women with benefits of ICTs (Hilbert, 2011). In other words, the low state of women in enjoying from educational facilities and benefits has made them a marginalized group from information which makes the researchers in social sciences to doubt in benefits of ICTs for them.

But in contrast with viewpoints that consider ICT and its facilities a threat for women in developing countries and even mention that the essence of information and communication technologies can make the existing gender divide in developing countries greater, some believe that ICTs have the potential for redefining traditional gender roles, especially for women who are facing limitation in achieving higher educational levels (Kelkar&Nathan, 2002). Since they act as interactional, cooperative and limitless media, they can be beneficial for marginal groups like

women (Shrum, Benson, Bijker & Brunnstein, 2007). It should not be overlooked that the importance of ICT is not limited only to its technological aspects, but the user enables herself to increase her access to information and communication in more extensive aspects, receives governmental services easier, receives new chances in designing, production and distribution of her products through internet networks, reaches to a better life through new skill trainings in a science-based economy and sees the outlook of opportunity to produce local information (Subba Rao, 2009).

From this point of view, there are many successful samples in the world that many scientific studies also verify their success, among which could mention the project of Women Digital Baskets in Rwanda, with the goal of economic empowerment of rural women who build handicrafts (Wamala, 2012), the project of laptops special to women in rural regions of Egypt (ICT4IE) which made it possible to have independent use for four user (UNGEI, 2012), the project to expand IT centers in India; each with a different and some local idea, project for PRODEMU institute as one of the NGOs in Argentina for women away from the capital, the "I LIKE AFRICA" project, with the goal of connecting one million women in each African country to ICTs (CTA, 2012) and various other samples can be mentioned; each by considering the local and cultural realities, provide a group of women with benefits of ICTs. In fact there is a vast literature for development impacts of ICTs in villages which verify that appropriate access and benefiting from ICTs lead to social and economic development of rural women and have made considerable changes to their lives. In such circumstances this study endeavors to clarify whether the ICT project in Gharnabad village in Iran can be added to successful projects in economic enabling of women in the world, and could beneficial information be shared with other similar projects in the globe.

ICTs and women empowerment

There are various points of view in defining the concept of empowerment inasmuch as the global consensus cannot be found on it. Since mid 1980s the concepts of empowerment was considered by many feminist theoreticians in the third world (Sedn & Grown, 1987) and the role of poor women in development projects was considered as a way to increase the self confidence and their capability for challenging unequal opportunities in the society and family and having the control of life (Erman, Kalaycioglu & Rittersberger - Tilic, 2002).

The popularity of the concept and the tendency to use it at face values has led to criticisms as to what the concept refers to, and has made it necessary to clarify its meaning. Amongst which could mention the efforts of Rowlands (1998) according to the gender and development viewpoint. After warning against the potential hazard of defining empowerment on a ground that its overruling culture is western capitalism and has emphasis on individualism and consumerism, she believes that these emphases can disregard the local characteristics of empowerment.

Some other theoreticians including Scheyvens (1998) in defining empowerment use the expression "Subtle Strategies" which refers to endeavor for achieving profound and positive changes in women's lives without considering argument, separation, discussion.

But in addition to women theoreticians, also international organizations each have their separate definition of this concept. Empowerment is a multi-aspect social concept which means a current which helps people to hold the control of their life issues in their own hands. Empowerment of women also in general is a process during which each woman takes the control of her own life in hand, by increasing the decision making power and forming life, including access to resources, cooperation in decision makings and control of distribution of benefits. Empowerment of women has five factors of women's image of their values, the right to select and elect, the right to access the opportunities and resources, the right to have power to control personal life inside and outside home and the ability of being influential in order to make a fair social and economic order in national and international fields (UNPOPIN, 2010).

The United Nations Development Program report (UNDP-ICT4D, 2004) defines empowerment as a process during which a citizen can grow by making positive changes in their lives and make stable situation for themselves. In other words, empowerment means the positive use of available means with the goal of making opportunity in present and future.

In a wider view, in social science, three kinds of empowerment of women are emphasized: economic, social and political that from these three the indicators of economic empowerment of women of Gharnabad and subordinate villages with the help of education and use of ICT skills has been emphasized by this study.

There are numerous global evidences on ICT's help to women in access to economic ability. ICTs, by sharing information amongst people and organizations and encouraging electronic information mechanisms for groups like religion minorities and women and youths, can provide the power for decision making and forming various sections of individual and social life (UNDP-ICT4D, 2004). An extended spectrum of various models with the goal of women empowerment support access of women to information, have made new careers for them, have included various levels of women cooperation and have increased their access to governmental services. (Sulaiman, Kalaivani & Mittal, 2012). Such models usually are planned for women who live away from city centers and have lower level of literacy. Rural women as a group which may have lowest level of enjoying from information and telecommunication in comparison with other women are presented with less economic and social opportunities.

On the other hand, when we talk about digital divide, various divides show themselves, including divide in access, in enjoyment, in related and beneficial context, in IT work market, in power distribution of IT technology, and in access to ICT education in all levels, from elementary school to high school (Melhem & Tandon, 2009). Though it cannot be claimed that ICT is an answer to all social and economic needs of women, the gender aspects of it in areas of access and use, increase of opportunities, career potentials, and empowerment of women show themselves to such an extent that can change that to a powerful instrument in empowerment of women to make ground for gender equality (UNDAW, 2005).

ICT can be a powerful means for women to overcome discriminations, achieve equalities and better life with cooperation in planning and decision makings for the future of social life and open a window to outside world in an open manner (Scott, 2001).

Economic collaboration is the key factor in the process of empowerment (Erman, et al, 2002) and women work increases their bargaining power in the family and the financial independence of women from men can give women more decision making power, change their image from themselves and lead to their social awareness of their situation in the family, workplace and society. While some believe that the way out for women from poor family and social circumstances is in three aspects of economic, educational and political empowerment (Sywulka, 2002), the focus of this article is on first aspect which is economic empowerment by finding a job and this is by no means equal to less importance of two other aspects, but it means that economic power can make the ground for the next two. This study, by accepting the definition of Human Development report on the positive use of available tools with the goal of creating opportunity in present and future by rural girls, seeks the fact that what conditions have the positive potentials of ICT application produced in Iran and amongst women of Gharnabad and neighboring villages, as a means of economic empowerment of women in developing countries, that as result of which they can live better.

The history of rural ICT in Iran

Linking villages to ICTs and establishment of collective access points by the year 2015 has appeared in the first goal of Millennium Development Declaration, while Iran due to its geographical wideness has a suitable ground for launching the project of linking villages to ICT offices. Iran as one of the signatories of the final Geneva Document in the year 2003 has agreed to equip 10,000 villages to ICTs. The last official statistics from executive activities of this project shows that at least 9,992 villages are linked to ICT offices and by this way at least ten million villagers receive services. With this statistics more than 75 percent of the total number of Iranian villagers is covered by ICT offices. But the remarkable point in documents of this project is that none of the programs has had special look towards Iranian rural women and their needs; for girls and women no special education has been considered and in one word, the projects have been planned and became operational without any gender attention. This is while most of the successful development projects in the world in the field of ICT have allocated a section to women and girls and with the help of facts of women ecology, have opened the way of women in enjoying from all benefits of ICT.

Amongst villages equipped with ICT offices in Iran, Gharnabad is the exemplar and model for other villages and is located 20 kilometers from Gorgan, the center of Golestan Province. The population of this village is 2,500 people and the percentage of literacy is also 75 percent. Most of the residents of Gharnabad are farmers and cultivate products such as cotton, rice and soya.

The building of ICT village office in Gharnabad was built by villagers in the year 2004 in two floors with ground of 280 cubic meters and donated to Telecommunication Company. The trainings began the very same year with close collaboration of Golestan province TC and Iran University of Science and Technology. Since benefiting from ICT for receiving better services in fields of health and education for experiencing a better life and expanding new career opportunities requires infrastructures which have to be located in one place (Osterwalder, 2003), this office is

established in a place where there is possibility of commuting for three other villages, namely Shahkooh, Chaharbagh and Ahangar Mahalle.

The equipments of this center include a communication line with 2M band-width, 20 telephone lines and 50 online computers. Though simultaneous with commencement of activities of Gharnabad rural ICT office, some other villages in Iran were equipped with these facilities, Gharnabad has been much more successful and has become globally famous, among which could mention receiving the international award of E-Asia 2007 on bridging the digital divide.

Among the reasons of success of this village ICT center in Iran has been the preparedness of cultural and social infrastructures in this village. Contribution of Gharnabad villagers in building this communication center and providing its costs shows the high level of cooperative culture amongst them. In addition to this presence of one of the Iran University of Science and Technology professors in this center as custodian has helped the users of this center understand the seriousness of its works.

As said by the manager of this center, as yet 400 of villagers have used trainings of this center and most of them have been able to achieve training certificates for various courses. Amongst this number, 30 people of holders of Bachelor's degree in this village and neighboring villages have also achieved the capabilities for Teleworking and by establishing the "Golestan Teleworking" company, the research projects of various companies have been done by a group of these trained people. From these graduated people of vocational trainings, 10 of the girls who have university education and for this reason are employed, are under emphasis of this study.

Amongst the other obvious characteristics of this center is attention to cultural and social activities. The website for Gharnabad village¹ accepts articles of villagers on ICT. Right now 50 articles and 25 reports are to access on this site. The trained people of this center in group trips have had visits from other active ICT centers in Iran and take part in related festivals. With visits of Iranian and international groups from this office, Gharnabad has become a busy village and people of this village with cooperation of Gorgan University accept visitors and also arrange for their accommodation.

In addition to establishment of the "Golestan Teleworking" company, existence of appropriate cultural infrastructures, focused university management and attention to cultural issues have made ICT in Gharnabad more practical than other villages.

Rural Teleworking in Gharnabad

After concluding of the first training courses of computer skills in Gharnabad rural ICT, the success of this center in attracting villagers to training went on press and this center, from a mere village ICT, became a notable center in people's minds. Successful holding of teleworking training courses for educated villagers lead to establishment of "Golestan teleworking" company.

"Golestan Teleworking" company in the first year managed to obtain big projects from well-known governmental and private companies. These companies, including Iran Khodro, Sapko, Iranian Petrochemical, State Welfare Organization, Golestan Telecom and Islamic Sciences Center, contracted some of their projects to "Golestan Teleworking" company. Implementation of each of these projects in its kind needed skills in working with special software and all these needed trainings were rendered to graduate students of Gharnabad by help of professors and sometimes students of Iran University of Science and Technology. As stated by interviewees, 20 teleworking members of this company managed to implement the projects given to "Golestan Teleworking" company in a successful manner. As will be mentioned in the rest of the article, all the interviewed girls mention this teleworking as a successful experience.

Methodology

In qualitative methodology the possibility of non-numerical study of a fact is provided, therefore this research has selected qualitative methodology in study of impacts of village ICT office on lives of Gharnabad rural girls. In qualitative method the facts of an individual and social life have been defined in form of a quality or an experience

¹ www.gharnabad.com

and instead of changing them to numbers, there will be an opportunity to let the researcher study and analyze the characteristics, organizational and logical complications of each cultural activity (Rose, 2007).

The researcher has considered the qualitative method as a suitable method for discovering the world of experiences of Gharnabad rural girls and analysis of the present situation which is not achievable with quantitative methods. The sample population in this study are 12 persons who have passed the trainings of the rural ICT office and have also taken part in teleworking especial trainings of the center. In the end, the researcher has managed to interview ten of these people. From the two remained girls one did not agree to be interviewed and one was not working, due to lack of interest. All the interviewees are in the age range of 29 to 35. From 10 studied girls, 5 are married and 2 have children.

Gorgan city, as the center to province, is working place for 8 persons and two persons from other cities faraway from center, i.e. Agh ghala and Bandare Torkaman. Three of these girls are not resident of the city where they work and commute on daily basis to their work place from their home. The information of these people briefly comes in the following table:

Table 01. The personal information of interviewees

Row	Name	Age	Material status
1	Zahra	34	Single
2	Narges A	34	Single
3	Narges B	34	Single
4	Tayyebah	33	Single
5	Gohar	33	Single
6	Shahrbanoo	29	Married
7	Fatemeh	29	Married
8	Ensieh A	32	Married
9	Ensieh B	30	Single
10	Azam	33	Married

In qualitative studies, in contrast with quantitative studies, the questions of the research do not get clearly and exactly defined in the first stages of planning of the research plan. The key questions in this kind of research get purified in the term of research and in fact it is rarely possible that qualitative researchers follow exactly their primary questions (Hariri, 2006). In this research also all the questions are not formed in the beginning and some of them have been altered after passing the pilot stages, field visits and further studies about characteristics of the studied village.

In-depth study is the best information collecting technique for studying the impacts of rural ICT offices on individual and social life of rural girls of Gharnabad, which allows these girls to define their personal experiences in using ICT and internet and its role in their lives. The questions of this research, after making sure about the individual being experienced and obtaining personal information of interviewees, have been divided into four sections of individual, vocational, family and socio-cultural.

A look at findings of the research

Although the emphasis of this study is on economic empowerment of rural girls by acquiring a job through computer skills, the findings of the research are classified in four categories of individual, vocational, family and socio-cultural impacts. The emphasized issues of interviewees and their characteristics have briefly come in the table below:

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Table 02. The classification of issues

	Issues	Characteristics
Individual	Self confidence and self belief	Indicating increase of self confidence and self belief in daily life
	Self esteem and dignity	Feeling consent in life and having courage in expressing ideas
	Awareness	Changing the look towards life, self and society
	Individual independence	Acquiring social appearance through computer skills and work
	Changing the atmosphere of individual relations	Making weblog and having communication with various people in and outside country through weblog and email
Vocational	Access to opportunities in finding job	Getting a job
	Having income and helping others	Financial independence
	Ability in solving problems and answering computer questions of other colleagues	Being reference and problem solving for other colleagues
	Indicating organizational self confidence in comparison with colleagues	Evaluation from professional self
Family	Knowing computer education mandatory for children just like going to school, and spending money for teaching computer to children	Emphasis on children's computer education
	Following the growth and education trend of children through internet with experts in this field	Differences in life skills with last generation
	Getting counseling from existing information resources in the internet including in medical, legal and psychological issues	Family effectiveness
	Accelerating the wife and mother role with help of internet and overcoming time and place restrictions	Establishing equilibrium in gender and vocational roles
Socio-cultural	Encouraging other women and on top housewives to benefit from internet facilities	Helping other women to become familiar with computer
	Visualization of opening a wider world than what has been experienced	Believe in the importance of learning computer skills in changing women situation

Individual issues

All the 10 interviewees in this study believed that the trainings of rural ICT office had a severe impact on their lives. Their direct indications to self confidence and esteem on one hand and changing their attitude towards the surrounding world and realities of life on the other hand are witness to this issue. Fatemeh, as one of the interviewees who knows these trainings as a new beginning for herself and says:

“Trainings of Gharnabad rural ICT office were like a starter for me in life. After I received these trainings and entered this group I felt like being totally changed, because I believed more in myself. When I became familiar with internet the awareness from issues found another form {....}.”

Shahrbanoo by indicating increase in her self confidence in rural ICT office says that:

“When I became familiar with internet in village ICT office and I understood that I can refer to it for my questions, step by step I increased my knowledge and this helped me to speak better and easier. When I was in a group and could talk easier than before, I had more self confidence. When I was able to express my ideas, I had a better feeling towards myself {....}.”

Tayyebeh also by approving this situation says that:

“Since I received operational trainings I have more self confidence. My look towards myself and the whole life has changed after these trainings and later on due to my work. My general understanding from myself has changed and my perception towards life has changed to the extent that several times I have told myself that I can be better even than a man {....}.”

Gohar in discussion on individual impacts of trainings of rural ICT office goes to such extent that states she recognizes this office as the reason for independence and social value. She says that:

“I learnt whatever theory I could by university studies but I had no work experience. The trainings of this office were practical. I became independence and this independence has provided me with a good social appearance. I owe my independence to Gharnabad rural ICT. I feel the direct impact of this independence {....}.”

All interviewees have indicated their new communication world resulted from knowing email, chat room and making weblog, and have mentioned internet communication capacities as means to expand their communication. For instance we could mention Shahrbanoo's words:

“In this office I became familiar with specialized chat rooms. Being in chat rooms and expressing my ideas and defending them had good impacts on me. Before that I was not so communicative but through internet I found new friends and expended the world of my relations {....}.”

The bodies of statements of trained girls show that their commute to village ICT office in addition to technical training had positive personal experimental impacts on them. All interviewees mentioned increase in their self confidence due to being in an educational environment and group, and consequently experiencing other kinds of communication. Cultural activities of this office, including group travels with the aim of participating in conferences related to ICT, rendering articles and practical works related to ICT, in addition to computer trainings, have provided them with more chances for changing and increasing their individual communications.

Vocational issues

Having a career as one of the obvious evidences of economic capability was emphasized by all interviewees. The trained girls all had university education and through the acquired trainings were occupied in rural ICT office. In other words, having computer skills provided these girls with newer work opportunities.

All these girls directly indicated the defining impacts of computer skills in their work interview sessions and mentioned that as a point in getting job. Amongst evidences of this issue could mention Narges's statements:

“Familiarity with internet in rural ICT office helped me in searching for work on the internet. I did all my application process for work through internet. In job interview I was asked on what I had done since graduation, and I told them that I had not been unoccupied, have attended computer training, I am poet and have made a weblog and published my poems there. When they asked on my skills, I showed them the ICDL certificates and told them that I had also worked with other software. Interviewers liked this greatly and in total gave me more marks than others {....}.”

In addition to new work opportunities that rural girls have received as a result of proficiency in computer, the possibility of practical teleworking activity in Golestan Teleworking company has also been another factor in vocational empowerment of them. When these girls, after learning computer skills, obtained the possibility of practical experiencing serious works from large companies in Golestan Teleworking company; they have been able

to be placed in real working environment and with this experience, also increase their courage for finding and having a career. Azam, by indicating this practical experience, says that:

“The Golestan Teleworking Company made our trainings practical. Establishment of this company made teleworking prevalent in village. Before that we had no idea of teleworking. Like other people we thought that work means going to office. Doing a project for Petrochemical company and Irankhodro helped us to find our capabilities more than before {....}.”

Teyyebbeh also in line with this issue believes that:

“The Golestan Teleworking company which was established by the custodian of Gharnabad rural ICT office, Dr. Jalali, helped all the trainees to learn working with special software practically. It is not exaggeration if I say that for me it was better than university {....}.”

But the practical ability of Garnabad girls and neighboring villages is not limited merely to their encounter with new career opportunities. Although they have been able to become employed because of their skills, these skills have also helped them a lot in working environments. The pride that these girls have in talking about their present working circumstances is remarkable. All the interviewees are proud of the fact that their colleagues refer to them in workplace and are happy of it, and they consider having computer proficiency, knowing software and in one word, digital literacy as their advantage from other colleagues. Narges says:

“Teachers and students all have confidence in my computer knowledge and they ask their questions from me. In Education Office that most of the personnel are men, they think I am engineer and I have studied engineering. Even in the city they have confidence in my knowledge of computer. For example for digital media festival, they selected me as representative of our city, as if I am better than others. Now they have given the schools in our cities smart boards. In comparison with other teachers I can work more easily with this board and others ask their questions from me {....}.”

Zahra also by indicating the advantages of proficiency in her work place states that:

“Now that I work in Telecommunication Company, the deputy to our section asks many of his questions from me. This is while he should know much more than me, since he has a higher official rank than me. Many people ask their questions from me. In comparison with my colleagues I work easier with office automation {....}.”

The ability to answer questions has even given some of these girls the opportunity to share their knowledge in form of training with other colleagues. Amongst them, could mention Shahrbanoo. She mentions that:

“In our institute all the computers are linked together with an internal network and my comparatively deeper knowledge of computer application and networking than my colleagues has caused other colleagues telling me that we cannot believe that you know this much computer! I have tried to organize a small class for colleagues who have less acquaintance with computer {....}.”

With these statements by interviewees that firstly had all found a work through having computer skills and secondly in their workplace were answering their colleagues questions and for this very reason had a better feeling towards their work place and are happy that others rely on them, maybe it could be stated that vocational ability has happened for these girls in two aspects of before and after finding a job.

Financial independence is also from the subjects indicated by these women. Although these girls are educated, six of them have indicated directly finding work through their computer skills and believe that university education alone could not have helped them who are away from cities and work bureaus to find a work.

Family issues

Although family questions were emphasized less by interviewees while most of the interviewees were single and had not yet participated in wife and mother roles, the emphasis of married interviewees are also interesting. Narges, married and without child, in answer to question that to what extent her role as mother is different from other mothers, knows herself the representative of modern mothers in the village by stating that:

“As the computer and internet have helped me in area of work and education, they also have helped me in maternal role. The issues related to raising and education of children can be found on the internet. Internet is a counseling resource; a resource for knowledge. All the issues of children can be found in various sites. If I have digital literacy, I can raise my child better and easier {....}.”

Fatemeh, another married woman who also has a child indicates the impacts of internet on her child like this:

"I have one child and I work a lot on his education and illnesses on the internet. For his nutrition and education quickly I go online. By referring to specialized weblogs I can ask my questions from specialized people. I try to get information on software for various age groups on the internet to be able to raise my child literate. I think internet in maternity is beneficial for me as in other aspects of life and helps me, but this is not only about me. My sister is also a housewife and has obtained these skills in this office. She also has computer in her home in the village and is connected to the internet and gets help through internet. My sister and I have more information resources in hand by the help of internet and maybe they make us aware mothers. Of course this should be said by others, not us! {...}."

Regarding wife and mother roles on one hand and her vocational roles on the other hand she continues:

"Sometimes everything becomes complicated; vocational duties, home tasks, child and husband issues, etc. and all things become so complicated as if there is no way for me but leaving one aside. But at these situations I have been able to make my work lighter by the help of internet and reduce the paradox which exists between these fields. Using the banking software, doing office works electronically, etc. are amongst issues which have helped me a lot {...}."

Such points of view can indicate the endeavors of these women for establishing equilibrium between vocational and gender roles with the help of computer and internet equipments. Acceleration of wife and mother roles tasks with the help of internet and overcoming time and location limitation which due to severalty of these roles, demands much energy from these women, can indicate influential applications of internet in the lives of these women.

Social and cultural issues

The different and new communication atmosphere of ICT instruments and on top of it internet and its distance from existing power definitions in the real world, that gender is one of its main factors, can be a reason for distancing from existing cultural and social rules for women. The girls of these villages, due to becoming aware of communication potentials of internet, have enjoyed the opportunity to use internet for development of their personal communication. The trained girls mention new aspects of communication which show the potential of internet in becoming the main ground for friendly communications, free from social restrictions in village for them.

Shahrbanoo by indicating the wide world of internet connections says that:

"I found new friends by internet and extended my relations. In the trainings of the office, we used to travel in groups for conferences in other cities. Before these travels, I never had these experiences. I was a rural girl that the circle of my experiences was limited to village. But these travels and group activities helped me to have new experiences and learn more. In the past, it had not happened that rural girls travel without their family members, but the confidence that this office had established in the village caused this happen for the first time in our village {...}."

But interviewed rural girls believed that the socio-cultural impacts of village ICT office and its trainings is not limited only to the extent of their communications with other people and it can also affect other macro issues such as ruling socio-cultural views. Amongst these expressions could mention Fatemeh's words. She clearly indicates condemning the gender discrimination and says:

"In my opinion there is no difference between girl and boy. These skills helped me to get to this view that there is no difference between man and woman and who knows more can be more successful. I do condemn whoever discriminates between girls and boys. This issue should be condemned. In current world these things are no more accepted. I think the essence of ICT is in line with equality {...}."

As the bodies of ideas indicate, these girls, based on their personal experiences, believe that learning computer skills can change the situation of women and bring a better life to them. Tayyebah also indicates the power of computer skills in making gender imbalances with cultural and social roots faint and says:

"From my point of view, computer communications crosses off cultural inequalities. About myself, I saw that computer skills had impact on my growth. This is not only about women with higher education. I know women in the village who have primary school or high school education, but have computer and internet access at home and with use of that increase the level of their knowledge and awareness {...}."

Azam believes that:

"Whoever becomes familiar with the internet, exits from closed atmospheres. Village atmospheres face challenge with internet. In my opinion, a girl like me who distances from village closed atmosphere with the help of internet can decide better and easier. Rural girls with internet step in the world of new experiences and this can lead to good experiences in their lives. As happened to me {...}."

But Gohar, in regards with socio-cultural activities of village ICT, goes one step further and believes that this office and its trainings have even affected the thought of women in village. She says:

“The way women thought in the village has changed in comparison with themselves. The ones who are literate have tried to buy computer for their homes and youngsters also try to equip housewives with this effective tools by teaching computer and internet to them {....}.”

As the words of these girls indicate and as all women can feel the effects of it on their communicational lives, the written and unwritten rules of each society define the relation of people with each other. In traditional societies, this is affected by patriarchal power which defines relations of women in a more limited way than men. The foundational power of social traditions in area of women communications are founded by men who have ignored the real communicational needs of women.

Internet as a communication tool has the capacity of becoming the new ground in rendering human relations and with having distance from what is going on in the society, is a good reason for distancing this space from traditions that one of their impacts is limiting the human relations of women. Rural girls, by stepping in the area of computer skills and afterwards benefitting from internet, to a large extent have distanced from traditions limiting human relations and have established new relations for themselves, free from village atmosphere and its socio-cultural pressures.

Conclusion

From ten girls under this study 8 indicated directly the change of their lives by the impact of computer skill trainings and have stated that such projects should be seriously followed up in all marginal regions away from centers in the country for girls and women. Such reality indicates that traditional discriminations in employment, income and education can change in cooperation of women with ICTs in a positive way. As also it has been reminded in theoretical framework of this research, ICTs have the potential of supporting the access and benefiting from work, education and income for women. The computer opportunities by ICTs help women to distant themselves from undesired circumstances. The increase of level of self confidence of rural girls, due to use of computer and internet, has even been able to lead to increase of the feeling of social and economic value of these girls. If women get support from ICTs, digital tools provide them with good opportunities to fight the rooted inequalities with their help.

As all the interviewees have mentioned that ICT trainings have changed the image these girls have had from themselves and by increasing individual capacities have given them more self confidence in establishing new relations and have brought them out of the isolated world of closed communications in the village. The increase of communication opportunities of these women with others through internet can increase the social capital of these women. The interactional environment of internet with applications like email, chat room, and weblog has caused village girls open another window towards their relations and by access to resources of modern knowledge show their feminine interests by launching weblogs and by this means distance from unequal social and cultural definitions.

The knowledge acquired from internet has changed the view of these girls from themselves, life, surrounding world and social affairs to such an extent that they managed to consider social appearance for them. Acquiring social appearance through computer skills and work, as said by these girls, has changed the destiny of their individual and social life.

Computer skills of Gharnabad rural ICT office has helped educated girls of this village to find jobs. The possibility of experiencing real works for big private and governmental companies in Golestan Teleworking company is a notable point that all girls by mentioning it as a positive experience stated that as a reason for increasing their vocational self confidence. Their ability in their work place by answering the computer related questions from colleagues has brought them organizational self confidence and these girls by having work can figure a more powerful life.

All these girls indicate the necessity of computer training for children as important as going to school, and recognize it necessary to allocate budget for children, which can be a witness of believing in the importance of computer skills. These girls are mothers who have followed the procedure of nutrition, growth and education of their children on the internet and they benefit from the internet by having a look towards it as counseling resource in medical, legal and psychological issues of family. They know internet as accelerator of their everyday tasks and by benefiting from its facilities, get the company of other housewives.

Rural family atmosphere and their look towards computer has also become to such an extent positive that can be indicator of increasing public capacities for understanding and use of ICTs.

When the girls in this village believe that by the help of internet they see in front of them a wider world than what prior to that had been experienced in the village, we could reach to this result that learning computer skills can play an outstanding role in changing the situation of rural girls.

Suggestions

If on the basis of opinion of Kwake & Ocholla (2006) we consider education, literacy, cost and time as determining factors in enjoyment of women from ICTs and simultaneously have a look at our findings from this study, the following facts can be mentioned as a paradigm for similar projects in Iran and other rural areas in the world:

- The obstacle of high cost for using ICTs for women and girls can be removed by following this project and by establishing public and costless transport to rural ICT, also by not being obliged to pay tuition fee for registration of computer training courses. Gharnabad rural girls and neighboring villages because of public transport to village ICT office managed overcome the obstacle of cost and distance.
- Since rural women and girls generally enjoy from lower levels of literacy and to the same extent enjoy from less English knowledge, it is necessary that their trainings be accompanied by special gender attentions including benefiting from women trainers and continuance till achieving insurance of complete implementation of the course.
- In presenting ICT trainings, if the focus would be on training of girls in central villages, it will lead to regional generalization on amount of importance of ICT and for this very reason can attract more attention from villagers to importance of this issue. As a matter of fact, the results of this study illustrate that focusing on few numbers limited to one village in center of several other villages can lead to more practical results in quality of works.
- As the study has shown, launching the Teleworking company simultaneous with rendering trainings, by making education and application together, is the key to success of such projects. When the trained girls find the possibility to test their learnt issues in similar environments, the amount of their success increases. Establishing a company which simultaneously wants the trained tasks from trainees is a good experience ground for village girls.

Close cooperation of educational organization and telecommunication companies for preparing infrastructure on one hand, and higher education training centers in sending professional forces on the other hand, can guarantee the success of ICT trainings for rural girls.

Group travels, article writing contests and cultural activities can help the self belief of rural girls and through modern communications for this side activities, in addition to expansion of the individual relations world, injects the feeling of more self belief in girls.

Acknowledgements

I would like to express my highest gratitude to Ms. Zahra Malek for her unsparing endeavours in establishing relation with other interviewees.

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