

Overcoming Generational Segregation in ICTs

Reflections on Digital Literacy Workshop as a Method

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Abstract

This article is based on the project “Technology in the Heritage of Memory” conducted by the Universitat Rovira i Virgili in Tarragona between July and October 2007. This initiative was part of the multi-regional European project “More Equal” (Igualdader), affiliated with the Equal Community Initiative, financed by the European Social Fund. It consisted of a series of workshops on basic computer skills, Internet navigation, and the use of photos and images aimed at women aged between 50 and 65 years, belonging to eight rural municipalities in the Region of Catalonia Montsià. This study established that the digital divide is not only linked to a difference in the technological equipment or access to broadband. Instead, the main barrier that separates potential users of the network is general knowledge, basic English, and familiarity with hardware. These workshops showed that learning to use technology through cultural components, rhythms, and motives, actually helped the learning process. Thus, women who participated not only achieved a

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social and educational purpose but another vital goal: empowerment, satisfaction, and liberation.

Keywords

ICT, women, lifelong learning, empowerment, life history

Introduction

This article reports on a study with a group of older women from the region of Montsia in the municipality of Tarragona, Spain. The Universitat Rovira i Virgili in Tarragona participated in the “Equality Network,” a Europe-wide initiative, which focused on the extent of the generational digital divide in rural and semi-rural areas. This study found that in the region of Montsia, such a divide still exists. For many older people, using a computer efficiently remains difficult. Access to information on the network is usually only achieved with the help of a younger relative. However, it was evident that the benefit of easy access to information, and the autonomy that the use of the equipment would bring would be enormous for many older people. Such ICT tools have both a practical utility (for example, online shopping, or making online banking transactions) as well as a social function (keeping in contact with people using e-mail, and instant messaging). These are powerful tools against the loneliness that elderly people face.

This article proposes that the empowerment of women should focus on giving women greater power over key decisions in their life, including those relating to access to resources and social participation in the distribution of wealth. It is more a process than a strategy, and thus it is women themselves that need to feel empowered. This concept emphasizes the idea of women as active agents, a process that would essentially achieve their empowerment.

Gender Aspects of the Intergenerational Divide

The emergence and advancement of technology in everyday life is changing social values and has instigated the acceleration and transformation

of knowledge. These factors have widened the generation gap. Macro structural processes are at the basis of the sociocultural segregation of the elderly in our society (Yuni, Urbano, & Arce, 2003). Older adults recognize the important contribution education makes to their social integration process. Education assumes a role in the process of their adaptation to the changing environments that characterize the contemporary world, giving older adults the confidence to interact with younger generations (Yuni, Urbano, & Tarditi, 2005). Unfortunately, the older population is still subject to bias related to their ability to acquire new knowledge. Yet, as indicated by Viguera and Ruiz (2001), an individual can still learn throughout their lifetime, albeit perhaps more slowly.

The groups most affected by the digital divide are often also the most socially disadvantaged: the elderly, who often have few economic resources, a low level of education, live in rural areas, and are in danger of being discriminated against because of their race. Within the above groups, women make up the majority of several of the disadvantaged groups. Although age and gender are recognized as determining factors in computer use in general, how increase in age impinges on the use of computers across gender is not known yet. Clear differences mark the generations using technology. Such differences can be analyzed on the basis of membership to a particular generation or gender. E-equality Observatory (Castaño et al., 2008, pp. 235–238) reports that in the EU, the computer is a tool used by almost all younger people, with approximately 85 percent of people aged between 16 and 34 years using computers. However, the proportion of users decreases with increasing age. The difference in use by gender grows over the years, from an initial situation of equality in the proportion of computer users (actually with a slight advantage for younger women), to a situation of disadvantage for women aged above 45 years (see Table 1).

Table 1. Level of Use of Computers by Gender and Age (Percentage)

Age Ranges (Years)	16–34	35–44	45–54	55–64	65–74	Total
Women (W) (%)	86.1	71.3	47.9	24.4	9.1	58.0
Men (M) (%)	84.6	70.8	57.9	35.0	15.5	63.2
Difference, W—M (%)	1.5	0.5	-10.0	-10.5	-6.4	-5.1

Source: Castaño, Martín, Vázquez, & Añino (2008).

The lack of cognitive activity explains the decrease in learning ability in old age, and this also reiterates the relevance of training and stimulation to activate and reactivate mental facilities (Lerh, 1980). Psychological activation is not a restoration of the previous mental abilities, nor does it restore balance that may have been lost, but it guides behavior toward new roads, both unfamiliar, and challenging (Barberá, 2002). Espinoza (1990) and Bazo (1992) suggest that older people should organize their daily habits, including at least a weekly event to achieve a goal. It may include active participation in computer courses, or activities that bring individuals closer to new technologies.

In Europe, seminars are being held on topics such as the “Education of Older People on the Internet” and many European universities have exercises on their websites. This helps older people prepare for this period of life. However, we must be aware that technology itself is not a creative communication process, but calls for other items or actions that complement and give meaning to the time spent using technology (Cabero & Duarte, 1999). This study aimed to show that technology may be part of the collective need of older people regarding their social participation and training. Understanding these needs would lead to more appropriate design and implementation of specific support programs that include the use of new technologies.

Context and Methods

Montsia is the southernmost region of Catalonia (Spain). The semi-rural area with low industrial activity has 12 municipalities with a population of 64,181 inhabitants (IDESCAT, 2007). About half of the municipalities have less than 2,000 inhabitants. Until recently, this region was predominantly agricultural, cultivating mostly olives, fruit, and rice. Of the twelve municipalities, eight accepted our proposal to hold workshops: Freginals, La Galera, Santa Barbara, Ulldecona, Mas de Barberans, Godall, Amposta, and La Senia. Many of the workshops were carried out in the computer rooms of the nursery and primary schools, as the municipalities lacked classrooms equipped with computers and free Internet access. This arrangement posed significant problems in terms of infrastructure and logistics, as many of the tools were not up to date, and neither the rooms nor the furniture were meant for use by older women. The workshops

were offered to older women, and hence the sample of women for this study was chosen from those participating in the workshops. A total of 86 women aged between 50 and 65 years participated in the workshops. In 2004, according to IDESCAT, 39.08 percent of the population in Montsia was over 45 years old, and 58.04 percent of this population were women (IDESCAT, 2007).

The decision to work with this group was a result of an initial analysis of the specific needs of women in the region. Our analysis of the available data showed a lack of services and support for older women, who also happen to form the largest proportion of the total population of the region. In particular, the choice to work with this group was driven by the digital divide, which particularly affects older women, and currently is one of the strongest factors of discrimination with respect to access to information and knowledge. Although the digital generation gap has decreased in recent years, it continues to exist in rural and semi-rural areas.

The content of the digital literacy workshops, “Technology in the heritage of memory,” was designed by the eventual users of the sessions. In a series of focus group discussions, the women chose the themes that were developed through the workshops, alongside developing digital literacy. Thus, although all eight participating villages had to address a common general theme, “the role of women in society and their access to technology,” other subthemes emerged reflecting the common interest of participants. All these themes assumed importance in the eventual discussions. During the workshops, it was decided to include some common elements that unite women from every region: their experience of social invisibility, their work on the farm, in industry, handicrafts, health services, education, economy, and housework. In this way, they were soon using computers to write a part of their history, from their own point of view.

The main objective of these workshops was to empower the women in the use of ICTs through their perception of themselves. This was done through a short-term educational process in the workshops, in which participants acquire the knowledge and technical skills for using ICT and thus access and participate actively in building the information society, and also change their self-perception. In our research, qualitative methods (focus group discussions, life stories, and interviews) were used to obtain personal data, and the results were evaluated using participatory action research. This was done at a number of workshops in the context of

teaching and learning. This approach allowed us to make visible to women the value of individual and collective experience, and analyze and reflect on their relationships.

The Questionnaire

A questionnaire was designed to help collect personal data and level of digital literacy (see Table 2). This data helped the organizers to tailor the workshops to the needs of the participants, organize the logistics, and develop the training methodology to meet the needs of the learners.

Table 2. Questionnaire Dimensions

Dimension	Content
Biodata and location data	The first dimension captures some important characteristics about the women who participated in the workshops, which actually served as variables in research. These are age and level of education, which may be related to their training in ICT. These questions are essential to know the situation of women and adapt the workshops to their needs.
Access to ICTs	Access to ICTs is critical for training. The availability of a computer at home has a great effect on women's motivation, and helps them develop the required practices. The question related to whether or not they own a computer helps determine the level of ICT use and the limitations, if any, on their use within the family environment. Other questions regarding knowledge of software, frequency of use, and the degree of Internet access were also asked.
Motivation for ICT	The last dimension was intended to probe the motivations of women to participate in digital literacy workshops. This helped us understand their needs and design activities in response to their training needs. The information gathered from this question helped us design some indicators to evaluate our project.

The nine questions in the questionnaire were organized around three dimensions: biodata and location data; access to ICTs; and motivation to use ICT.

To validate the questionnaire, the opinions of four experts were sought: two experts in gender studies, and two experts in educational technology. These experts were academics from the Universitat Rovira i Virgili of Tarragona and the University of the Balearic Islands. They suggested changes in the response options, and in some terms to make them more comprehensible.

Focus Groups

The second instrument used to identify the specific needs of women was focus group discussion. Although the aim was to discuss the main theme, namely, the role of women in society and their access to technology, other themes emerged that also assumed importance in the discussions. Such issues came from both the participants' private experience and from their various social roles in industry, handicrafts, health care, education, and economy. These issues were then used to write a piece of living history of each town, from the women's perspectives, through the use of ICT.

Semi-structured Interviews

Semi-structured interviews were conducted with eight women who participated in the workshops, one from each village. The interviews were recorded with a camcorder and transcribed. These interviews aimed to cross-check the information obtained in the discussion groups, thus producing a triangulated evaluation of the workshops. To this end, we have included questions to assess space, time, the role of trainers, content, media, activities, dynamics, and methodology. The interview collected information on the following dimensions: (a) the role of women in the social context, (b) the visibility of women in the productive system, (c) evaluation of the training process, and (d) evaluation of the conditions set for the training process.

Field Diary

Throughout the training process, the trainers maintained a field diary with notes from their observation of the progress, and limitations and obstacles encountered by women with respect to learning the basic use of ICTs.

Characteristics of the Sample under Study

The workshops were offered to women's associations of municipalities in the region of Montsiá. A total of 86 women between the ages of 35–55 participated. This number represented 0.6 percent of the women in the age cohort, with an average age of 45. Of the women who participated in the workshops, 40 percent are active workers. Most of the remaining 60 percent of the women have been unemployed for two years or longer. Of the participants, 67 percent have elementary education, 17 percent reached secondary, and only 2 percent went on to tertiary education. About 60 percent of the participating women have a computer at home, while only 30 percent have Internet access. The latter data are indicative of the difference between rural, semi-rural, and urban areas regarding access to resources. Of the women participants, 83 percent did not use computers, but occasionally asked their husbands, children, or grandchildren to help them access information.

The workshop duration was nine hours, spread over three or four sessions, depending on the availability of classrooms and equipment, plus a closing session. An introduction given to all participants included a theoretical and conceptual introduction on Information and Communication Technology (ICT). This introductory session promoted the participation of women in terms of recounting women's experiences, documenting these experiences, encouraging women to use technology, developing creativity and teamwork, and promoting dialogue and reflection.

The themes chosen for the workshops were the following: work on the farm and industry, work on the farm and crafts: traditional midwives, the carnival and traditional festivals, traditional crafts: the palm, traditional festivals and shawls, the changing role of women in the trades, and food and crafts: pottery. These were chosen for the familiarity of themes to introduce participants to ICTs. Every town followed the same outline for the development of the workshops (Table 3).

Table 3. Workshop Description

Workshop	Details
Session 1: Introduction Duration: 6 hours	<p>Aim: Adapting the sessions to the needs of the specific group of participants according to the level of knowledge they possessed.</p> <p>Description:</p> <ul style="list-style-type: none">(i) Presentation of content(ii) Skill acquisition regarding the use of peripherals (monitor, mouse, and printer), the use of word processors, and other related aspects. <p>During this session, women were requested to bring in old photos and footage about the role of women in relation to the thematic focus of the workshop.</p> <p>Digitizing of personal photographs and documentation.</p> <p>Description:</p> <ul style="list-style-type: none">(i) Presentation by participants of the photos provided along with an oral explanation of the stories that each photo reflects.(ii) Explanation on how to use the scanner and the scanning process.(iii) Actual scanning of the photographs by the participants. <p>Digital processing of photographs and documents from participants, using the word processor.</p>
Session 2: Photographic Digitization Duration: 1 hour	

(Table 3 continued)

(Table 3 continued)

Workshop	Details
Session 3: Web Browsing Duration: 1 hour	<p>Aim: Developing skills for Web browsing. Description:</p> <ul style="list-style-type: none">(i) Introduction to the terminology and key concepts related to the process of browsing. <p>Acquisition of basic skills of surfing the Internet which was done by practically seeking information about the chosen theme. Aim: "Digital documentation" of women's historical memory through presentation and layout of found and collected material. Description:</p> <ul style="list-style-type: none">(i) Interviews were also conducted with key players in the territory to further provide oral testimony to account for the municipality's history, its people, and traditions.(ii) Discussion and reflection which provided views on the changing role of women in society, about the problems which are faced by virtue of being a woman, and the gender imbalances which still exist and are being experienced by women. <p>Evaluation by participants: An assessment regarding the experience and development of the workshop was carried out through structured interviews. The results of these interviews are collected in the final audiovisual report.</p>
Session 4: Layout Duration: 1 hour	

Findings and Analysis

The starting point for the digital literacy workshops was a general lack of access to computers and the Internet among participants. Technological ignorance had caused participants to have a feeling of inadequacy in handling computers. The basic knowledge acquired by all the participants in the workshops not only served to remove barriers to new technology but also led to the creation of the will to continue learning. Such learning will lead to their assimilation into the new information society and reduce discrimination against the group in the new Information Society.

By using technology in this way, each woman came to appreciate several aspects of their “self-concepts.” This was valuable since the main objective of the workshop was to train women in Montsia in the use of ICT as a tool of empowerment in relation to their self-perception. From the training experience, it can be stated that the self-concept is first subjected to positive transformation. The insecurity and low self-esteem that women showed upon first approaching the computer during the workshops was clearly visible. Upon using a computer, the participants changed the preconceived ideas they had about their own capabilities. Perhaps these women had the capacity to use this instrument and utilize its capabilities, but they had never dared to approach it before.

In particular, during the workshop on Internet surfing and word processing, the participants were disoriented and many had doubts about their understanding and realization of the task assigned to them. A great deal of support and positive encouragement was needed to reinforce the conviction that they could complete the task. Traditional isolation has generated a need for recognition by their fellow workers and educators. One of the major comments made by women participants was that they feel validated and appreciated outside their private sphere, they are valued and respected. With the support of ICTs, participants learned to document their stories and the stories of others through digital literacy, Web browsing, scanning photos, and other forms of technology.

Throughout the learning process, all participants found that managing new technology became more comfortable and familiar. Less than halfway through the sessions, a high level of cooperation between the participants was observed; a strong sense of mutual support and light-heartedness when confronted with mistakes raised everyone’s spirits as well as their desire to learn. Through working partnerships that were

formed, either due to the structural limits or due to the need for such cooperation, it was possible for everyone to use the computers to write their life stories.

A more positive attitude was observed towards the use of the tools, as well as a significant increase in how each individual perceived and valued their own abilities, both in specific terms related to the use of computer tools, and in more general terms, related to their roles as workers, mothers, and wives. An important point is that not only did these capabilities have a personal value for the participants but they also considered it important that others acknowledge the importance of such learning.

It was also observed that participants discussed and confronted the group about personal and collective subjects. There was always the possibility of asking questions to remove doubts and fears, and to discuss convictions and experiences. This whole process facilitated the acquisition of a stronger identity. This process of sharing and retrieving shared memories was essential to ensuring a relatively long-lasting motivation towards learning ICTs. These older women were, therefore, given a space for debate and reflection. The workshops led the participants through a learning process, which resulted in the publication of the following:

- material in electronic format;
- a DVD entitled “Life histories of the women of Montsià,” which collected photographic documentation provided by the participants, on the themes used in the workshops;
- a DVD entitled “Technology in the Heritage of Memory,” which contains comprehensive outputs from the workshops, including the methodology and contents;
- a photo exhibition from photographic material, which reflects the changing role of women in relation to different aspects and contexts of life.

These products produced by women, who previously described themselves as technologically illiterate and considered most new technologies as very distant and unhelpful for their everyday life, have led to the recovery of historical memory. Through the discussions that took place in the course of the workshops, women found time to reflect and then

discuss issues such as work, education, religion, family, and other factors that have evolved over time and altered the role of women in society and in the family. Such discussions led the participants to envision a new role for women in the fabric of society. While giving feedback on these workshops, women described them as an enriching experience which helped them to recover their individual and collective memories—giving them the opportunity to bring out photos of fathers, mothers, and peers—whereas earlier they had never had the space and opportunity to think about such things.

These sessions also allowed them to reflect on the roles different individuals have played throughout their lives, from childhood to maturity, to communicate this path with others, and become aware of injustices while realizing the strength of solidarity within the group. It was an opportunity to gather information that was only made available because all these women were there together and they helped each other remember what time seemed to have erased: the memories of everyday life, of feelings, and of moments in time.

Thus these technological tools have brought about empowerment, respect, and awareness of the capacity that each woman has to use a computer, scan photos, or surf the Web, skills which were unknown to these women. Hence, ICT has served as a means to stimulate memories and stories which had previously only been saved in the individual's memory. It is clear that access to ICTs is not necessarily guaranteed by having a better computer, but access is also about the opportunity to make use of ICTs, for which specific knowledge and interest is required. The lack of training in computer use and the lack of the opportunity to make the most of conditions have led to the generational and gender digital divide.

The ability to overcome the barriers that lie between women and machines, as a result of insufficient training and cultural stereotypes that still remain in our society, has been one of the main challenges for the researchers and women participants. The participants acquired the basic skills needed to use different resources such as computer processor management, Web browsing, photo scanning, and so on. The women participants showed that by learning about using technology while simultaneously introducing cultural components, rhythms, and motives in the education programs helped their learning process. Such an activity recognizes the importance of safeguarding the popular culture that is in

fact a way of life. Thus, women who participated in the workshops were not only working with a social or educational purpose but also working toward a vital goal: empowerment, satisfaction, and liberation.

The training process resulted in a dossier which contains the work done throughout the workshops, a copy of cards made by students, including pictures and a description of the pictures, through which they tried to gradually reconstruct the town's history through the history of its women. Alongside these files, an audiovisual product has also been produced. This was done to create a reference document for the region, and for the possible development of future initiatives, as the workshops are designed to be a permanent feature under the responsibility of the regional councils working toward the transfer of knowledge and best practices.

An exhibition was displayed at the close of the workshops. This exhibition included photographs taken during the workshops and comments about each photo. The exhibition was also used in the opening of the Second Congress of Women in the Montsià Region Council, along with the projection of the video "The technology in the heritage of memory," and the dissemination of the materials created as part of these sessions. This exhibition thus shared the work with a large number of people, as opposed to being closed in a drawer and forgotten. The main aim of this event was to display the memories of the participating women to Montsià families, friends, and others, thus sharing the experience with the whole community. An important element of these workshops was the interaction with individuals—the creation of relationships and reflections. A written document would have reached a relatively smaller audience, but through the photos, a greater number of people were involved in the recovery of women's memory in the eight towns.

Conclusion

This article reported on the process of self-actualization and empowerment of a group of older women through access to ICT tools. Through the acquisition of these skills, these women had the opportunity to recall and document their life histories, and in the process recover their personhood and their role in society. The study found that ICTs could be a

useful means for helping older women maintain contact with the wider world, and in the process keep their minds active and alert for new learning. The use of a “theme” or a purpose for the learning process allows for faster learning, as did the process of cooperation and sharing facilitated by the workshop format. Learning to use computers made the women participants feel valued and appreciated outside their private sphere. Overcoming the digital divide led these women into a new world of knowledge and knowledge building, making them a part of the new Information society.

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