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A Common Practice to Rise Older Adults' Awareness of PD

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Abstract. The design of Information and Communication Technologies (ICTs) for older adults needs particular attention. Older adults' potential and unique ideas in shaping a design process are not being completely considered by designers, who cannot rely on a group of users often unaware of its role. In this short paper, we describe our work in creating a common understanding of the role the final users can have in a process of participatory design. Our work, whose primary goal was not the design of a technology, but to introduce a group of older adults to the use of the computer, led our group of users to comprehend the influence they have on a design process.

1 Introduction

The Participatory Design (PD) is a well-established technique; it furnishes the right lenses to collect and interpret the perspective of the target user group, and it involves the users into an innovation process (Müller et al., 2012). PD recognizes the meaningful contributions that users can deliver when it comes to design "something". For this reason, this methodology is widely used in many areas, and for a large variety of users. PD is increasingly used with older adults to create

diverse kinds of technologies (Rogers et al., 2014; Davidson & Jensen, 2013;); the reason lies with the designers' difficulties to create appropriate technologies for older users (Lindsay et al., 2012).

Differently from other users, older adults do not seem to be completely aware of the role they may have in PD; as they appear to perceive themselves more as "users" than "designers" (Rogers et al., 2014). For this reasons, older adults' awareness about their power in PD should be incentivized. The goal of PD should be to "empower older adults to participate in developing their *own* solutions to overcoming the 'pain points'" (Coleman et al., 2010, p. 176).

In the research presented in this paper, we adopted a PD approach to rise awareness among a group of older adults - who participate in a computer lab - about their role in shaping the design of new technologies. The lab was structured according to requirements and suggestions of the participants, and the results obtained are a direct consequence of the involvement of the user group.

2 The Computer Lab

Since October 2014, our research group of "Social Informatics" at the University of Trento, in collaboration with a Senior Community Center of Trento, carried out an annual computer lab - every year from October to April - for older adults; we concluded two editions so far. This initiative continued the work began by Parra (2014) in collaboration with the same center. The collaboration was based on the mutual interest to find the best methods to introduce elderly people to the computer in order to help them develop new skills and to give them the possibility to socialize (also through the computer).

The lab was held on a weekly base in a computer lab at the University of Trento. The classes of the lab were more informal meetings rather than formal lessons. Indeed, each year, in agreement with the supervisor of the senior center, we involved the participants in a kick-off workshop to grasp which topics would have been more appealing. Participants had to share their preferences on what they wanted to learn. To do so, participants were gathered in small groups and provided with papers, pens, markers and post-its, and through an open discussion they had to create a poster about what they wanted to learn. The workshop also helped us to understand the perspectives of the participants, their experiences with ICT, their expectations, and to give them an active role in the design of the program.

Along the lab, we worked with mostly women, who were 15 in total - men were 4 in the first edition, and 3 in the second edition - and the average age was roughly 72 years; few participants were new in the second edition. Participants were diverse under many aspects: they had different levels of education (from elementary school to university degree) and had different occupations before retirement (worker, clerk, teacher). Nonetheless, there was no correlation with

their computer skills. All of them had basic computer skills, such as Web navigation and emailing. A few participants could be classified as “expert users”: these users mastered social networks, word editor and video editing software. No participant had severe impairments, neither physical nor cognitive. However, participants skipped few classes during the lab – due to other obligations or minor health problems – and therefore, because of this turnover, the average of participants per class was approximately 15 people.

The first edition of the lab was dedicated to a non-formal computer education, decided together with the participants during the kick-off workshop. The lab led all participants to create a personal video (participants were free to choose the subject), with Windows Movie Maker as a “final outcome”.

Differently from the preceding edition, and in accordance with the experience gained, we based the second lab on the concept of “sharing”. Hence, during the kick-off workshop, we encouraged the participants to imagine and describe what they would like to create and share with peers and others through ICT, without considering which tools to use. Participants worked in small groups – provided with markers and papers – that had to be changed every fifteen minutes in order to foster a fruitful exchange of thoughts. Individuals had to discuss with their peers what they wanted to share and also wrote down their ideas on paper.

Once the participants finished the work, we collected all the papers and we had a small discussion about what each one had written. One of the participants, a lady who enrolled for the first time in the computer lab, and who never hid her reluctance to our idea of sharing, stated that “you [we] are asking us [them] the soup we [they] want to eat, before to even know which spoon we [y] are going to use”. This approach belied the expectations of the participants who were expecting to “receive” again a non-formal computer education. F., a participant who enrolled in all the past editions of the computer lab, and who is considered an expert user by her peers, stated: “you caught us by surprise!”. However, older adults actively participated in the workshop, and the preferences that they expressed helped us to gather them in four topic areas (groups): gardening, economy, do-it-yourself and eHealth. Each group had to produce a digital “sharable product”. Therefore, we settled a series of short “technical” classes. We introduced the participants to the use of Google Docs and other simple online tools to allow them to work also remotely and outside the setting we provided. Thereafter, the classes were organized to allow each group to carry out their work *in situ*, with our assistance when necessary. All groups worked on the creation of a text related to the topic they wanted to “share”, with integrated pictures and short videos on Google Docs; we kept the “ownership” of all the Google Docs in order to track changes and communications among group members.

After the works were all completed, we proposed to the participants to collect all their “products” into a simple website. The older users agreed to have a

platform to share their works and, eventually, we built a simple platform on *WordPress*.

3 Results of the Participatory Approach

The whole lab has been built on a “participatory approach”. Differently from a rigorous course, we involved the participants into an interactive work process. Apart from a few specific occasions, dedicated to technical lessons, every meeting – two hours long – was structured as following: At the beginning, participants were introduced to the work of the day; afterwards, every group could work on their “topic” assisted by the members of our research group; the last fifteen minutes, we had a gathering moment to collect feedback and suggestions – about the structure and topic of the class, and, at a later stage of the lab, also about the design of the website – from the participants. In addition, we set a mailing list to communicate with participants who often contacted us to give more feedback and suggestions. We used the mailing list also to deliver surveys (in Google Form) to integrate the fieldnotes we took throughout lab. Moreover, in accordance with the participants’ requests, we also delivered lecture notes of the technical classes.

Along the lab, we noticed that many older adults, regardless their skills, approached the computer as a tool that needed to be “domesticated”, and therefore, they were driven by the idea that there is one specific set of actions to follow to obtain one specific result. In other words, they believed that to master computers was sufficient to learn a specific “pattern” for each possible task. This subtended their unawareness about potentials and limitations of computers, and their difficulty to comprehend the logic that lies behind the interaction with ICT (i.e. metaphors), (Gabrielli et al., 2008). In this sense, our new approach belied their expectations because were based on a limited knowledge of the technology. Moreover, we learned that their expectations derived more from a sort of “social pressure”, which made them eager to learn as many things as possible and not to stay behind the time, rather than being driven by concrete needs respectively specific necessities. To overcome these limitations, we constantly engaged the older adults in discussions to convey the meaning of their participation in the decision making process. Of course, we explained that the “final users’ perspective” is fundamental to a design process, but we built our approach on their involvement through workshops, discussions, and short focus groups. Hence, we iterated this methodology throughout the lab and, despite their initial disorientation, participants gradually comprehended their role in the design process (Bratteteig & Wagner, 2014). As a result, older adults autonomously begun to address issues they wanted to solve, either concerning the *WordPress* site or on new sharing possibilities to explore. Indeed, the *WordPress* site was built on the participants’ suggestions.

To better understand their necessities, we organized a series of workshops – all integrated by a final discussion, which we recorded, that aimed to understand how to design the site: i) graphic requirements (colors, menu, structure etc.) and ii) contents of the website. For the first workshop, we created three experimental platforms - by using three web services, included *WordPress* - that participants had to review individually, with the goal to grasp the fundamental design criteria. Therefore, we delivered a form to all participant, who could review each platform by filling in three statements: “something you like”; “something you do not like”; “something you would change”. At the end of the testing, we had an open discussion that we recorded in order to allow participants to express additional comments. The information we collected through the forms and the final discussion regarded: i) design aspects that participants found unaesthetic; ii) visual features that hinder the interaction with the platforms; iii) textual contents of the platforms. This workshop led us to choose *WordPress*.

Afterwards, we organized a new workshop to arrange the contents of the site; we focused on the “mission” and “about us”. Participants were gathered into four groups to write what they wanted to be published. After the first round, we mixed and regrouped the participants into four new groups, who had to review all texts previously written in order to create a final one. All groups edited similar texts. Surprisingly, no group used the word “older adults”, neither explicated a clear affiliation to a “senior center”, which conveyed their reluctance to be considered “old” and unable to master technologies. Subsequently, we merged the four final texts into one, which we published on the website, together with the “sharable projects” that the participants produced. In addition, we enabled comments on the website.

Once the website was online, we dedicated a first meeting to make the participants explore the new platform. Thereafter, the older adults began to visit and comment it also outside the setting of the lab. All the suggestions and requests we received during the successive meetings or through the mailing list, were followed by our design work on the website, which was consequently followed by a new “revision” of the older adults in an iterative process.

4 Challenges and Future Work

Although the computer lab was not conceived as a workshop to design an online platform, we succeeded in carrying out a participatory design process that led to the creation of a simple website. Nonetheless, despite this accomplishment, the platform is not the main outcome. The creation of a common understanding of practices that led the participants to comprehend their potentials to shape the design process is what we primarily achieved. Despite our role as “designers”, the older adults perceived the website as “their own creation”; as has been proved by the increment of self-involvement of the participants. We can affirm that by

continuously conveying the role they had to play, and by being “at the service” of our group of participants, we fostered their willingness to contribute to the design process more as “makers” rather than “counselors”.

However, we need to consolidate this result. The participants implicitly and explicitly expressed their will to maintain the platform active, and to involve new users – not necessarily older adults – to “share”. In addition, there are diverse features they still want to be integrated into the new website; technical requirements (registration, forum), and methods to autonomously upload their “sharable products”, are still to be implemented. These additional features may allow us to verify the users’ satisfaction with the website, and their usage, which could validate the structure of the PD process. In addition, this work gives space to many other analytic frameworks. The data gathered will allow us to explore other dimensions as the deconstruction of stereotypes and the creation of a small community of practice (Wenger, 2011) among the participant of the computer lab.

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