

Social networking and the third age

Significance and impact of targeted learning initiatives based on web communities of third agers

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Abstract. Difficulties with access to ICT and an inadequate use of them risk to increase exclusion of the elderly population and to make the socio-cultural and inter-generational gap greater than it has ever been. Online learning environments based on social networking could not only give an opportunity for individual cultural growth, but also for conceiving a range of practical applications of great social significance such as conscientious access, search and use of information, fruition of a multitude of web services, socialization within online communities, and the sharing of experiences and resources. This article aims at verifying to what extent targeted initiatives of e-learning, like the one referred to here, may facilitate the elderly to gain benefits from what the present knowledge society offers, enabling them to be aware of and at the same time active participants in the current innovative processes.

1 Introduction

Within the complex and rapidly changing knowledge society individuals are required to adapt themselves continuously and quickly to the changes affecting all the sectors of everyday life. People reaching the third age are increasingly still active, dedicated to furthering their interests, committed in associations or taking part in volunteer activities, and sometimes they are not completely retired from social and professional life. According to the current principles of lifelong learning, elderly people are still able to acquire and develop a broad range of knowledge and skills that make them feel more prepared to meet the emerging challenges, to catch new opportunities, and thus to fully participate in current innovative processes.

Development of skills in the use of information and communication technology (ICT) is an area which most programs of courses targeted at third agers focus on. These skills can be acquired in the context of traditional learning initiatives, onsite activities, but even through more targeted learning courses based on social

Please use the following format when citing this chapter:

Repetto, M. and Trentin, G., 2008, in IFIP International Federation for Information Processing, Volume 281; *Learning to Live in the Knowledge Society*; Michael Kendall and Brian Samways; (Boston: Springer), pp. 279–286.

networking. One of these online learning initiatives was designed and run by the Institute for Educational Technology of the Italian National Research Council (ITD-CNR) in the framework of the experimental project “Informatica per la terza età – ICT for the third age”. The course outcomes related to the acquisition of skills in the use of ICT have been investigated, detecting attitudes developed in the participants and analyzing long term follow-up.

2 The targeted learning activity

The people who participated in the online course was selected among participants who had previously attended a theoretical and practical training course on the basic use of ICT successfully. These training courses were organized in the context of an experimental educational plan, run by Liguria Region in the last five-year period, aimed at introducing to the basic use of ICT a consistent number of over-60s [1]. The plan envisaged a mixed learning path organized in onsite and distance activities. The distance activities could take two different forms:

- computer-assisted training, to be carried out autonomously in one’s own home and based on the reinforcement of what had been learnt in the classroom;
- online collaborative learning, aimed at an in-depth examination of some topics related to the use of Internet, and targeted at a limited sample of elders who had shown themselves to be totally autonomous in the use of ICT.

This second form of course, identified by the name of “Networked 3rd age”, allowed to establish to what extent online learning based on social networking could be considered a complementary way of learning with respect to traditional classroom sessions. The participants, selected among those who attended the previous onsite course, were indicated by their respective classroom teachers on the basis of the satisfaction of a number of conditions, such as basic understanding of the use of e-mail and Web browsing, and availability of internet access in their own home. The participants recruited in this way were then assigned to two separate online learning groups of about twenty persons, each coordinated by an online tutor, fulfilling the criteria of homogeneity in age and gender.

The course, organized in three modules and in twenty-four learning units, was aimed at developing two specific skills which are essential for the typical social networker:

- the optimum use of search engines for information and resource retrieval;
- the establishment and management of web services based on social networking.

The methodological approach adopted in this course was based on a strategy of online learning, characterized by a strong network interaction between all the actors involved (tutor and group of participants) [2]. Each learning unit is initiated by the tutor who, using an asynchronous computer conferencing service, asks participants - with an explanatory message - to perform one or more exercises. Each participant may dedicate time to the learning activity for as long as he wishes, returning the

results autonomously or in cooperation with other participants according to dynamics based on self-regulated learning, self-help relations and peer-to-peer collaboration.

The learning environment used is based on social networking tools which ensure, in addition to distribution of learning materials, asynchronous communication one-to-many and many-to-many between tutor and participants and among the participants themselves. Within “Networked 3rd age”, a portal offering free spaces and services was chosen with the objective of making participants acquainted with a tool for online communities management that could be used after the course autonomously and at no cost.

3 Activity outcomes

Monitoring and evaluation processes of this initiative, carried out by online tutors and ITD-CNR researchers, was aimed at detecting the achievement of the envisaged learning objectives, estimating participation and involvement level of participants in the proposed online activities, at measuring degree satisfaction and general attitude with respect to the learning methodology adopted to run the online activities. Investigation on the achievement of learning goals and on participation was based on an approach already tested in other online courses [3], focused on analysis of messages and artifacts produced by the participants (in this case exercises) and on the level of individual involvement showed in group interaction. Structured grids were used to establish the correctness of exercises and to perform classification of messages; an incidence table [4] allowed to analyze relations and thus to define the degree of centrality of communication within the online groups. The main tool used to detect participants’ attitude was the satisfaction questionnaire delivered at the end of the course; information obtained from this tool were integrated with data from participated observation of participants’ interactions and of the more personal messages between the tutor and individual participant.

What follows is a summary of the outcomes of the three aspects on which evaluation of experience - conducted in parallel during the course and at the end of it - was focused.

3.1 Achievement of learning objectives

The assessment of participants’ learning achievements took into account the level of correctness of what they produced in relation to the tasks assigned to them. About a quarter of participants completed all the envisaged exercises correctly; one third of them completed three-quarters without mistakes. Thus, more than half of the total number of participants achieved good results.

From the point of view of the complexity of the exercises, about 60% of participants were in the medium-high band, while about 70% correctly completed the exercises considered essential to certificate the achievement of training goals of the online course.

The checks show, therefore, that the acquisition of the contents tackled in e-learning activities was more than satisfactory. However, caution is needed, given the particular conditions in which the experiment was conducted. For example:

- although varied (different entry-level skills, different cultural backgrounds of the participants, etc.) the sample involved was numerically low;
- the content, of a technological nature, lends itself well to training in e-learning courses; it cannot be taken for granted that similar results would be obtained with the same group when tackling other subjects;
- training which had enabled them to acquire the basic notions on the use of network tools and services later used for online interaction beyond the course;
- people were recruited on the basis of pre-screening, made by their classroom teachers, whose key element was a good level of autonomy in computer use.

3.2 Participation and cross-interactions

Analysis of messages shows a fairly high level of participation of both groups though with different dynamics. To analyse in greater detail the dynamics of interaction that developed within each learning group, two separate incidence tables were compiled.

An incidence table is a grid with sender/receiver (S/R) double entry [4]. It is used to record interactions among participants in a discussion group.

Supposing that there are n attendees, the table will measure n by n , and each cell will represent the number of times that each participant has interacted with another group member. The sub-totals of each column represent the number of message emissions, and the sub-totals of each row the number of receptions. The table's total represents the overall number of communications within the group.

Applying two different algorithms to the incidence table yields the centrality index, which measures the extent to which communication centres around each participant, and the participation index, gauging the extent of communication distribution within a group.

In the examined case, only the messages in which there was explicit reference to one or more participants (mentioning the names, or quoting part of a message, etc.) have been recorded in the incidence table. Messages sent to the tutor or socialization messages sent indifferently to the whole group have not been taken into account.

The number of communications were on the whole reasonably distributed throughout one of the groups, even if more centred around four participants; while there was no significant interaction between the participants in the other group, since one-to-one communication between participant and tutor was preferred, aimed mainly at completing the task at hand.

Diversity in the communication dynamics that turned out within the two groups (more "horizontal" in the former and more "vertical" the latter), wasn't influenced by composition of groups, formed using the same homogeneity criteria and started out from almost identical conditions, but rather by the teaching/learning strategy adopted which played a part in such marked diversity. A strategy based on exercises tends, in fact, to give priority to one-to-one communication between the tutor who assigns the

tasks and the single participant who completes them, despite a many-to-many horizontal communication triggered where relations are based on self-help.

The presence of the second type of interaction in one of the groups can be influenced by individual factors such as the group members' greater propensity for online socialization, the tutoring style or the tutor's ability to raise participants' interest and to facilitate socialization and collaborative interaction within the learning group.

3.3 Participants' reactions

The general attitude of the participants towards the online course and the learning methodology adopted in online activities, measured by a satisfaction questionnaire delivered at the end of the course, was very positive.

The feeling of disorientation and mistrust towards computer-mediated communication showed in the initial stages, attributed by the participants to difficulties to relating to people that they had never met in person or to uncertainty with technology tools, changed radically about two-thirds of the way through the course, as showed by 78% of the participants who expressed high satisfaction. Instead, average-high and average-low satisfaction were expressed respectively by 10% and 8% of the participants. This positive judgment was accompanied by the desire to follow further similar online courses to deepen other issues linked to the use of ICT.

4 Medium-term effects

The survey on medium-term effects of outputs, conducted six months after the end of the course, allowed to understand to what extent knowledge acquired during online activities was applied to everyday life. The semi-structured questionnaire used to check the application of these competencies was aimed at detecting:

1. frequency of Internet use;
2. type of Web use;
3. type of interpersonal communication used;
4. personal impressions on how the online activity affected their everyday life.

The use of e-mail to send the questionnaire provided a preliminary information on follow-up: questionnaires handed back and duly filled-in by 76% of the participants who had successfully completed "Networked 3rd age" provided a further element of the effective use of internet, or at least of e-mail use.

Quantitative analysis of questionnaire answers (Figure 1) shows that more than half of the total number of participants connect on average several times a day and that almost all people browse the net regularly.

Difficulties with access to ICT and an inadequate use of them risk to increase exclusion of the elderly population and to make the socio-cultural and inter-generational gap greater than it has ever been. Online learning environments based on social networking could not only give an opportunity for individual cultural growth, but also for conceiving a range of practical applications of great social significance such as conscientious access, search and use of

information, fruition of a multitude of web services, socialization within online communities, and the sharing of experiences and resources. This article aims at verifying to what extent targeted initiatives of e-learning, like the one referred to here, may facilitate the elderly to gain benefits from what the present knowledge society offers, enabling them to be aware of and at the same time active participants in the current innovative processes. Difficulties with access to ICT and an inadequate use of them risk to increase exclusion of the elderly population and to make the socio-cultural and inter-generational gap greater than it has ever been. Online learning environments based on social networking could not only give an opportunity for individual cultural growth, but also for conceiving a range of practical applications of great social significance such as conscientious access, search and use of information, fruition of a multitude of web services, socialization within online communities, and the sharing of experiences and resources. This article aims at verifying to what extent targeted initiatives of e-learning, like the one referred to here, may facilitate the elderly to gain benefits from what the present knowledge society offers, enabling them to be aware of and at the same time active participants in the current innovative processes.

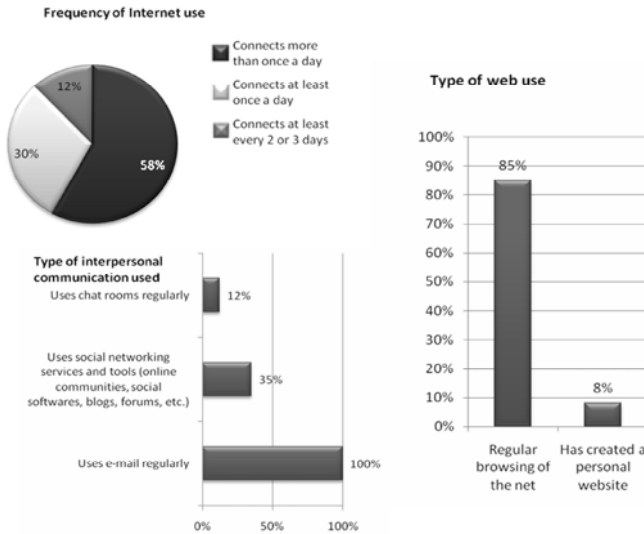


Figure 1. Quantitative data from the follow-up questionnaire

Combination of data given in Figure 1 with the open answers of the participants shows that the Web is used mainly for access to news portals, to local authorities or government bodies websites, to cultural, sports or voluntary associations websites, to those targeted for the third age or concerning health, to online tourism agencies, to websites of museums and libraries, and to use web services of financial nature.

As far as interpersonal communication is concerned, e-mail is the chief means used to correspond with friends and relatives even resident abroad, and to maintain contact with former course companions. It is notable that about one-third of participants uses social networking tools regularly to manage communities similar to that used within the course “Networked 3rd age”, and that a little minority created a personal website.

Finally, results of follow-up give evidence for a continuity between the training period and habitual use of what had been learnt; this thus confirm for third age users what had already been found in the application of this methodology with other age groups [2].

5 Considerations

On the basis of results emerging from the analysis of this online learning initiative targeted at elders, some considerations can be drawn which, combined with those already present in research literature on elderly education, can improve the design of similar initiatives and initiate new research activities related to this issue. The great deal of time available for older people and the absence of spatial and temporal constraints characterising asynchronous communication allow high flexibility for participation in online learning activities. On the other hand, the elderly, compared to younger persons, needs for direct personal interaction for practical reasons of uncertainty with technology tools, but even for emotional and social reasons. Thus blended solutions, in which periods of e-learning alternate with onsite activities, would seem more appropriate. Considering the characteristics of these specific age users, older people has response time, cognitive skills, needs and motivations different from those of younger participants in online courses. The complexity of these factors should be taken into account in the design of material, in the selection of the type of online activities and of learning strategies, in the group forming and in the tutoring style to adopt.

Such as it happens in adult learning, elders should acknowledge the intrinsic value of the suggested learning path. Learning must be contextualized, close to their own experiences and to everyday life. The background of older persons is various and consistent; the richness of their experiences should be promoted and their value enhanced through self-regulated learning, which makes feel them responsible and autonomous, and through collaborative learning too, which promotes knowledge exchange, sharing and construction. Taking into account all these elements, the need of specific training both for designers and for the online tutors who are asked to organize and run online initiatives targeted for the third age arises [5], based on a close matching of e-learning design methodologies, network groups management and the most recent theories of andragogy.

Future research on this topic could analyze samples numerically higher; widen or diversify contents, tackling other subjects; and adopt different learning methodologies to that used in this initiative, even if successful. Concerning this last point the alternative methodologies, which should be based on the most recent lifelong learning theories, if applied to social networking tools could generate learning situations virtuous for elder learning. For instance, autobiography as a learning method has many potentialities in transformation and restructuring processes of the self, more evident during adolescence and mainly during the third age, when this practice becomes essential to attribute a sense to one's own life history and to reorient it.

6 Conclusions

The possession of a personal computer, the availability of web access and the mere use of ICT are, as confirmed by recent studies [6], all indispensable elements but far from sufficient to solve the “digital divide”. An effective and adequate use of new technologies results to be currently one of the key elements to survive in a knowledge-based society; this implies capabilities which discriminate large social classes, strongly represented by elderly population. The diffusion of an initiative like that described in this article could contribute to close the technological, socio-cultural and inter-generational gap which affects especially elderly population of the present knowledge society. The appropriate use of new technologies, in fact, is not a simply a question of technical skills, but entails the sustenance of one’s own self-identity [7] - or its reconstruction - self care, social relationships, dialogue with the new generation. As shown in the present study, basic literacy through onsite training is the first necessary step to spread a culture of the use of ICT among third agers. This first phase should prelude or alternate with an in-depth online course using ICT seen both as the content of training and as learning environment. In such an environment, each learner acquires awareness, creates new horizons of sense, share and negotiate them with others through social networking: in this way he/she progressively achieves those mastery thresholds, not only technical or practical, making him “digitally literate”, and thus more able to participate in and contribute to innovation processes taking place in the present society.

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