



Sincronía
ISSN: 1562-384X
sincronia@csh.udg.mx
Universidad de Guadalajara
México

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Sincronía, no. 74, 2018

Universidad de Guadalajara, México

Available in: <https://www.redalyc.org/articulo.oa?id=513855742028>

Forms of social capital that foster mature adults' online activity

Formas de capital social que fomentan las actividades en línea entre adultos maduros.

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Abstract: New literacies are an integral part of everyday activities in current societies. In Mexico there have been important initiatives to reduce the digital divide among the young by providing infrastructure and didactic resources through public schools. However, such efforts are not necessarily sufficient to guarantee successful experiences with new literacies, because infrastructure may reduce the digital divide but not the participation divide. We argue that in this country there is a considerable number of older adults who are not able to participate in new literacies and who would benefit from a collaborative learning approach for developing these skills. With this in mind, in this article we analyze the literacy practices of four adults who successfully learned to engage in new literacies later in life. Through a focused ethnography, we discuss the resources (material, technological and social) that enabled these adults to participate in different online activities that were relevant for their jobs, thereby increasing their potential to be financially independent. An important finding was the role of their social capital for acquiring these new skills, particularly the help provided by their younger, more technical savvy social connections. The support provided by the participants' social connections was pivotal in achieving their goals. In particular, intergenerational collaboration between these adults and technologically-literate younger people from their environment proved to be an invaluable asset for their learning and acquiring the ethos of new literacies.

Keywords: Literacy of cooperation, Adult education, Competences for new literacies, New ethos.

Resumen: El uso de las nuevas tecnologías está presente en todas las esferas del mundo actual. En México, se han hecho esfuerzos importantes para reducir la brecha digital en la población joven a través de políticas encaminadas a la dotación de equipo y recursos didácticos para la educación pública. No obstante, contar con tales recursos no garantiza su uso eficiente, pues su disponibilidad mitiga la brecha digital pero no necesariamente la brecha de participación. Sostenemos que en este país existe una población adulta, actualmente marginada de actividades que involucran el uso de las nuevas tecnologías, que necesita desarrollar habilidades requeridas por las llamadas nuevas literacidades bajo enfoques más colaborativos. En este sentido, en este artículo analizamos las prácticas de literacidad de cuatro adultos, usuarios recientes de las nuevas tecnologías digitales, que transitaban exitosamente hacia el uso eficiente de estos medios. A partir de una etnografía enfocada, discutimos los recursos (materiales, tecnológicos y sociales) que habilitaron a estos usuarios para participar en experiencias en línea relevantes para sus actividades laborales. De esa manera, el desarrollo de estas nuevas habilidades incrementó su posibilidad de ser más independientes económicamente. Un hallazgo importante es el papel que desempeñó el capital social de los participantes, ya que el apoyo brindado por sus conexiones intergeneracionales fue decisivo para lograr sus metas. Como personas alfabetizadas en las tecnologías, los jóvenes fueron un recurso invaluable

Sincronía, no. 74, 2018

Universidad de Guadalajara, México

Received: 28 February 2018

Revised: 25 April 2018

Accepted: 29 May 2018

Redalyc: <https://www.redalyc.org/articulo.oa?id=513855742028>

para su aprendizaje, de tal suerte que los participantes fueron capaces de adquirir no solo los conocimientos técnicos, sino incluso el ethos de las nuevas literacidades.

Palabras clave: Literacidad de la cooperación, Educación de adultos, Competencias para nuevas literacidades, El nuevo ethos.

Desarrollo

Information and communication technologies are increasingly present in all kinds of day-to-day activities such as work, civic engagement, politics or socialization and education (Livingstone, Van Couvering & Thumim; 2004; Camacho, Gómez & Pintor, 2015). This has resulted in changes in the traditional distribution of power and knowledge, and in the models for individual and organizational interaction (Graddol, 2006). Nonetheless, access to the infrastructure, skills and knowledge required to participate in digital media remains uneven.

Access for all people to online activities has been a goal of educational policies worldwide. However, in Mexico these policies have been constrained to filling in the so-called digital gap. In other words, they have aimed to fund for projects that only provide access to the infrastructure, such as computer labs and internet access. One example of this was the unsuccessful *Enciclomedia project* that provided 5th and 6th grade classrooms in the public elementary school with multimedia equipment (Tinajero, 2009). The project failed for several reasons, one of them was that the contextual conditions of the different schools were not considered. Another major reason for this failure, of particular interest here, was that teachers were not adequately trained to develop the skills needed to integrate the new technologies to their educational activities.

Nowadays, a considerable number of adults remains vulnerable to the marginalization caused by the use of digital technologies, particularly those with low levels of literacy living in emergent economies (Australian Communications and Media Authority, 2009; Eynon & Helsper, 2011; Livingstone, et al., 2004; Organización para la Cooperación y el Desarrollo Económico, 2013; Shafique & Mahmood, 2009). This phenomenon has been referred as the *participation gap* (Jenkins, Clinton, Purushotma, Robinson, & Weigel, 2006), where providing access to the technologies is insufficient if participation is not guaranteed through the skills required for digital literacy. New literacies skills differ from those needed in traditional literacy practices, mostly due to an outstanding collaborative nature that has also been proved to foster a *new ethos*.

It is important to mention that the participation gap with new technologies among older population has been frequently neglected in Mexico. For instance, in 2016 only 60.53% of adults between 35 and 44 years took part in some activity using internet; this rate decreases to 45.5% among those between 45 and 54 years old, and to only 21.6% among adults who were 55 years and older (Instituto Nacional de Estadística, Geografía e Informática, 2017). These numbers indicate that the possibility for many of these adults to participate in the practices that involve digital technologies is severely constrained. This hinders their engagement in

currently important actions, for example: civic activities such as paying taxes, obtaining services (making medical appointments, bank services), or being informed; social activities to be in contact with relatives and friends, sometimes physically distant; or other more pressing needs such as working in different industries.

In this article we analyze the literacy practices of four adults, aged from 38 to 61, in the public space of a cybercafé in Mexico. Analyzing their activities at the cybercafé is important since at the time of the study, their contact with new technologies was in general fairly recent or scarce; however, these particular adults appeared to be quite successful. This allowed us to focus on the resources that contributed to their learning to participate in digital practices. We base our analysis on the New Literacies framework and discuss aspects of the participants' network awareness and the type of social connections that enabled them to become confident participants in online activities.

We begin by introducing the theoretical framework of New literacies and a summary of its main concepts. Also, we define two main components of this conception: the new technical stuff and in particular, the new ethos. After the description of the method, our results describe first the activities that were recorded in the observations and the affordances found by the participants in the new technical stuff. We continue by pointing out the significant role that the participants' social connections have in their becoming more competent (or helping others to be competent) to participate in activities related or executed in digital technologies. We conclude by highlighting the collaborative nature of new literacies and their new ethos which should ideally permeate other formative experiences among mature adults to become active participants of new literacies in both informal but also formal learning.

Our research took place in Ensenada, a city in the northern state of Baja California, Mexico. A government study reported that Baja California is one of the states in Mexico with some of the best distribution of, and access to the technologies. Nonetheless, recent data reported that in 2015 only 59.5% of families had a computer at home, mostly in the urban areas; and of those, 56.2% had access to Internet (Secretaría de Comunicaciones y Transportes- Instituto Nacional de Estadística y Geografía-Instituto Federal de Telecomunicaciones, 2016). In this context, cybercafés provided public access to about 30% of Mexicans in 2014, and to 14% in 2016 (Asociación Mexicana de Internet, 2014, 2016). For that reason, despite the spread of mobile technologies, cybercafés are thriving businesses in many cities and rural places that give access to digital technologies.

We claim that there is a mature adult population who needs to develop the skills necessary to take part in new literacies, in order secure a more financially independent and fruitful older age. Although the participants in this research developed some of those skills through trial and error, we advocate more collaborative pedagogical approaches. Such methods should encourage other adults to become active members of these new forms of a literacy of cooperation, under social interactions with peers

and other younger participants already competent with new literacies practices.

1. New Literacies and the “new ethos”

According to Cope and Kalantzis (2001), the digital technologies are a decisive factor in the transformation of literacy. In a digital turn, the use of media has given rise to substantial changes in how people communicate and interact (Area, 2011; Kress, 2003; Mills, 2010). The media users are expected to be critical consumers and producers of digital content, able to participate in dynamic forms within economic, civic and social contexts (Coiro, Knobel, Lankshear & Leu, as cited in Pahl & Roswell, 2012; Jacobs, Castek, Pizzolato, Reder, & Pendell; 2014). A theoretical framework to approach these practices is that of New Literacies. New Literacies theories focus on the processes of elaboration of meanings that take place in a broad variety of evolving social practices under new conditions that involve (but are not solely restricted to) the mediation of the digital technologies. (Knobel & Lankshear, 2014); “New Literacies involve a shift from material inscription to digital coding, from analogue to digital representations.” (Knobel & Lankshear, 2014 p, 98). Such practices have been described by this framework as highly participative where the distinction between those who write and those who read the information becomes unclear (Knobel & Lankshear, 2014; Lankshear & Knobel, 2011). In **Table 1** , the main concepts of the New literacies framework are briefly defined.

Table 1
Table 1. New literacies framework's main concepts

Concept	Brief description
New literacies (Lankshear & Knobel, 2011).	Literacy activities and specialized modes of use mediated by the technologies of communication, that involve witty and critical uses to access, produce and disseminate knowledge
Major factors of influence in new literacies (Domingo, Jewitt & Kress, 2014).	1. Multimodality. It integrates images and other resources to texts adding other meanings that require more complex interpretation skills. 2. The displacement of the printed text as a dominant means by the digital text that adds lateral structures of hypertextuality. 3. New structures, social relationships, and forms of authority, agency and textual genres in writing forms. 4. New textual modes and means that involve new forms of organizing visual information, multiplicity of information sources and opinions, and new and more complex forms to build meaning.
Contextual phenomena related to New literacies (Lankshear & Knobel, 2006, 2007 & 2011).	1. Two forms of social participation practices and digital interconnectivity in the web: The Web 1.0 and the Web 2.0 under a more participative paradigm. 2. A new technical gender (the new technical stuff), and a new ethos gender (The new ethos stuff). 3. A new manner for the social world to operate in more collaborative forms of interaction in the cyberspace (the Mindset 2) distinct from the traditional way of more individualistic participation (Mindset 1).
Perspectives for the New literacies (Domingo, Jewitt & Kress, 2014; & Lankshear & Knobel, 2007a & 2011).	1. The paradigmatic perspective recognizes the contribution of the New Literacy Studies to understand new literacies as socially 2. situated practices where contextual, cognitive, social, political, cultural, technological and historical components characterize specific Discourses used to communicate and negotiate the meaning by means of texts, as described by Gee (1990, 2011). 3. The ontological perspective that identifies two main components of new literacies, those that have to do with the technical aspects that enable the use of electronic digital technologies and programming languages (the new technical stuff), and those related to particular forms of being, acting and believing that have resulted in new values of participation, collaboration, distribution and affinity (the new ethos stuff).
New literacies skills (Lankshear & Knobel, 2011; Jenkins, et al., 2006)	New competences, knowledge, attitudes and perspectives are required for more autonomous forms of learning and critical interpretation to take part of reading and writing in new literacies activities, such as play, appropriation, multitasking, distributed cognition, and collective intelligence.

Lankshear & Knobel (2011) use the term New Literacies to refer to the specialized, clever and critical uses of the media, which enable the production and dissemination of knowledge. New literacies can be defined as literacy activities inserted in a wide variety of social practices that take place by means of digital media, and require more complex competences than those of traditional literacies. They are often associated

with opportunities for greater economic success and social wellbeing (Lankshear & Knobel, 2007a, 2007b, 2011).

In understanding new literacies it is necessary to learn how people participate in new literacies: what they do, what they think, and how they negotiate meaning with others, how they use alternative texts, how they form new and particular identities, values, and feelings within a new mindset (International Reading Association, 2009; Lewis, 2007). For Jenkins (2006), among others the concepts of participatory cultures and collective intelligences are vital to understand new literacies. Participatory cultures involve participants actively playing different roles while interacting with one another; whereas collective intelligences correspond to the interactions within media cultures that empower their participants.

Jenkins et al. (2006) identify a series of interpretative, operative and critical skills required to be able to participate in new literacies activities, some are defined in Table 2.

Table 2
Table 2. New literacies competences

Competence	Definition	Example
Play	Eagerness to explore, experiment and manipulate resources to solve problems on the media.	A user of digital technologies that takes risks trying different unknown resources in software or Internet, to learn to use them.
Appropriation	Capability to trace and mix contents from Internet in new meaningful and cultural forms.	A teacher who takes information, images and more from different sources in Internet to design her own didactic material.
Collective intelligence	Ability to build knowledge for common interests in collaborative manners.	Communities of users who seek for and share knowledge to learn about a topic of common interest or to solve a problem (practical, technical, or a social concern)
Distributed cognition	Skill to interact with technological and sociocultural tools available in the media.	A videogame player who finds resources to keep playing in different spaces of the game or among the other players.
Transmedia navigation	Ability to gather and synthesize information from different spaces and sources	Someone who gets information about a topic and moves through different spaces in Internet to gather it from different sources.

Jenkins's framework is akin to Lankshear & Knobel's work regarding new literacies (2011). In particular, their proposal of a "new ethos" is similar to Jenkins' notion of participatory cultures. For Lankshear & Knobel (2011), three factors have enabled the emergence of these participatory cultures or new forms of being: (1) technologies that facilitate the participatory cultural engagement; (2) multiple possibilities for users to move in overlapping configurations to carry on their actions; and (3) different degrees of participation and collaboration in multiple social activities.

Lankshear & Knobel (2007b) explain that New Literacies distinguish between peripheral and paradigm cases. The former involve simply using digital technologies to reproduce old literacy practices. Conversely, paradigm cases involve both the use of new technologies and a series of innovative values, priorities and sensibilities which differ from those that characterized traditional literacies. Let us approach two major notions of new literacies about it.

1.1. The 'New technical stuff'

The new technical stuff, which core is digitality, corresponds to the digital technologies and the use of programming languages (Lankshear & Knobel, 2011). These means enable access to retrievable resources (known as affordances) that are often used to create new meaningful artifacts. Such artifacts can be intensively distributed in a diversity of spaces, and simultaneously sent to many people who "share meanings across time and space, even across languages and cultures" (p. 58). The new technical stuff eases those exchanges as well as alternative forms of negotiating encoded meaning by means of instant messaging interfaces where people, physically separated, interact and perform varied roles.

1.2. The 'New ethos stuff'

New values of participation and collaboration are also integrated into literacy practices in the form of a new ethos (Knobel & Lankshear, 2007; Lankshear & Knobel, 2011). The core of the new ethos is the idea that technological change involves also a set of new values of participation, collaboration, distribution, relatedness, dispersion of skills and knowledge that enable learning in new affinity spaces, it is, physical and virtual spaces for social learning (Gee, as cited by Lankshear & Knobel, 2011). These values were originally integrated by the new capitalism into the practices of work, business, and social order giving rise to the so-called new web architecture, the Web 2.0. But it soon permeated the social practices of other domains of daily life, as an interactive platform to ease participation and affinities in spaces where not only experts but many people generate content that increases the variety and quality of the information available in the virtual spaces.

Google is an outstanding example of the architecture of this Web 2.0. Its product is a database managed by the company but generated by means of the collective participation and distributed intelligence of millions of users. Companies such as Booking.com provide apps for users to provide reviews on the places they visit (e.g. restaurants and hotels), and make them available for other users. Non-profit enterprises also become platforms for participatory cultures, like Wikipedia, which mobilizes collective intelligences promoting free and open participation to donate knowledge that nobody owns (Lankshear & Knobel, 2011).

1.3. The social capital in New Literacies

In order to understand the social network that enables a participatory culture, Lankshear & Knobel (2011) state that, in the context of new literacies, the social capital involves a literacy of co-operation and a “net(work) awareness”. This entails knowing who to trust and who are “high-quality connections” (Lankshear & Knobel 2011, p. 27). Here, the notion of social capital provides a valuable tool to analyze forms of collaboration that empower media users. Conceived as “the capacity to get things done with other people without going through official channels” (Rheingold, as cited by Lankshear & Knobel, 2011, p. 27), social capital implicates here valuing with whom and for what to cooperate, and being aware that simply using social media in individual forms is not enough to participate in new literacies (Lankshear & Knobel, 2011).

2. Method

We conducted a one-year long focused ethnography that aimed to access the culture of the participants around a series of work activities they carried out, often with the support of digital technologies. These activities took place at an urban cybercafé in the city of Ensenada. The cybercafé had two workspaces, one with a reception desk and nine computers for the customers, and a contiguous coffee shop where people could drink or eat something while using their own laptop, reading a newspaper, or even holding a work meeting. Three women in her thirties worked in the place, either collecting money for the services and products, serving drinks and food, keeping the place clean, and helping users who needed help to use the technology. We obtained the permission of the cybercafé's owner to conduct the research among his customers, with the support of his employees.

2.1. Participants

After an initial process of observation that aimed to have us familiarize with the dynamics of the cybercafé, we selected the participants based on what Creswell et al. (2007) define as convenience criteria. Hence,

we chose cases which access was feasible and who were representative of the reality of interest. They had to be adults older than 35, not to be taking part of formal learning programs, to be regular users of the place, to accept to participate in the study, and to continue their participation until the end of the observation period. Given the ethnographic nature of the study, a number of 4 to 6 participants was considered sufficient. A pseudonym and other information about each participant are provided in Table 3 and Table 4.

Table 3

Table 3. General information about the participants

Participant	Esther	Rocio	Elias	Juan
Age	38	55	58	61
Gender	Female	Female	Male	Male
Education	High school diploma and 2-years of training in education assistance	Middle school	B.S. in Oceanography	B.S. in Chemistry
Job	Dance teacher	Catalog salesperson	Retired from a fishing business. Currently running his own seafood business, and working as a part-time high school teacher	Retired from management. Currently working in business counseling and as a part-time higher education teacher

Table 4

Table 4. Information about the participants' experience and initiation in using digital technologies

Participant	Esther	Rocio	Elias	Juan
Previous experience with digital technologies	Basic with Office software and Internet navigation	None before using the companies' webpages	Moderate with Office software, but not recent	Only familiar with email messaging
First time they used digital media or Internet	12 years (intermittent use)	4 years	5 years of continual use	Less than 1 year
Why they started using or retaking digital media	At school, as a student	For work, as a salesperson	For work, as a business person and a teacher	For a new job as a professor and a business consultant
Who helped them	Teachers	Sons	Sons and self-learning	Co-workers and sister
Outcomes of their activities	Used technologies for further studies and work as a teacher	Learned to use webpages as job resources	Learned to use internet resources as materials for his classes and to administrate his business	Learned to use online platforms and find educational resources for his teaching work

2.2. Data collection

Data was obtained from two major sources: observations and interviews conducted by one of the researchers, 10 observations and 12 interviews with each participant. The observation sessions were arranged according to the participants' needs and availability. They used to call us every time they planned to go to the place; one researcher used to go and stay during the time each session took (an average of one hour each time). This work aimed to witness their activities at the cybercafé, in particular those involving the use of digital technologies and texts. The observations were recorded with a video camera placed near the person so that it was able to record what the person was doing. Additionally, field notes were taken during each observation. A focused interview with the participant was conducted after each observation, to clarify, expand the information collected in the researcher's field notes, and answer the possible questions raised during that day's observation (for example, what or how she had accomplished a task, what problem was the person facing to solve a need, to explain in some detail some aspect of his/her activities,

and more). We also implemented two in-depth interviews, one prior to the observations to know about each participant's life, work and other activities, motivations to use the technologies, and more. The second in-depth interview was carried out at the end of the observation period to wrap up the process, clarify or confirm any necessary aspects.

2.3. Data analysis method

All interviews were fully-transcribed. Field notes, transcriptions and video information were coded inductively, by the two researchers and two assistants (during series of three or four revisions), to identify the activities performed at the cybercafé. Deductive analysis was applied later to the data to identify evidences of the use of new literacies skills, based on the framework by Jenkins et al. (2006).

3. Results

We begin with a characterization of the work-related activities executed by the participants at the cybercafé, followed by a description of the technical resources and then the social network that allowed them to successfully fulfill the many tasks they performed at this place. In the final section we provide an account of the new literacies skills they gradually developed while learning to integrate the technologies to their work.

3.1. Activities

3.1.1. *Esther*. A dance teacher at an elementary school, she learned to use the computer and basic software in senior school, about 20 years ago. She then studied to be a teacher assistant and continued using some basic Windows Office programs (*Word*, *Excell*, and *Power Point*) during her studies. Not many years ago, she started using music mixes and power point presentations for her work as a dance teacher. She comes to the cybercafé whenever she has free time between classes to perform two main activities: prepare music mixes and design backgrounds for dance presentations. For the music mixes she works with free software, such as *audio-joiner*, which she downloads from Internet to upload and mix music from different sources (Internet, her cell phone memory, portable digital memories, or CDs). Sometimes, she adds sound effects available at YouTube. Once the mix is ready, she cuts the remaining parts of a melody or leaves out parts of the lyrics she finds inappropriate for her elementary school students.

For the school festivals, Esther prepares background sets that match the music topics. She uses the Office program Power Point, and then seeks and selects free images from webpages available on Google. She places and organizes the images in several slides of an open file. In the process, she edits the images and adds short texts or color to the background.

3.1.2. *Rocio*. A catalog salesperson, she had never used the computer until she had to do it for her job. About four years ago, she volunteered to take her first training to use the webpages from the companies for which she sells products. She comes almost every day, some weekends too, to the cybercafé to perform several work tasks. For instance, she explores products in online catalogs or places orders and payments for the products. She also uses social media and other means to do part of her consultation with customers and suppliers (*email, Facebook, chats, cellphone, and WhatsApp*). She sometimes explores familiar or unknown resources available at the companies' websites to learn about the characteristics of the products; or checks promotions only available online. She sometimes watches training videos online.

3.1.3. *Elias*. He learned computer programming 40 years ago in the university, but stopped using it. Instead, he learned to use some software from *Windows Office (Word and Excell)* for his work in the fishing industry. Currently retired, he runs a small family business and works as a part-time Chemistry high school teacher. He visits the cybercafé regularly and works mainly on two online portals. One is a government webpage where he fills government forms required for the fish and seafood shipment orders to clients. The second is another government page that provides access to software to conduct business's administration chores, such as generating invoices, sales and report taxes. Sometimes he downloads invoices attached to emails. He also consults with customers, suppliers, and business partners (his sons) by mail, cellphone or WhatsApp. Also, he watches videos to prepare his Chemistry classes and make knowledge more accessible to his students. He may download and save these videos in a portable memory.

3.1.4. *Juan*. He works as a free-lance business consultant and as a part-time teacher in higher education. For a little more than 40 years, half of them in managerial positions, he only needed to use the email. There were always technicians and secretaries to do other computer activities for him. At the cybercafé, he consults with customers, employers, and students by email, an online platform, the cellular telephone or *WhatsApp*. He works in activities related to planning his classes: He searches for articles, dissertations or videos; provides feedback to student homework on an online platform, or prepares exams. As a consultant he may seek information on online newspapers for his customers. **Table 5** summarizes the activities performed by the participants and the media spaces they use to work.

Table 5

Table 5. Participants' online activities and visited digital spaces

Participant	Esther	Rocio	Elias	Juan
Online literacy activities	1. Remixing music for choreography 2. Background set design	1. Exploring online catalogs 2. Placing sales and payments online 3. Consulting with customers and suppliers 4. Job training 5. Collaborating with colleagues	1. Government procedures 2. Business administration supported by government software 3. Online payments 4. Watching videos	1. Consulting with customers, employers, and students 2. Planning classes online 3. Searching for information for consultancy services
		1. Online catalogs and webpages 2. Facebook 3. Outlook	1. Government webpage 2. Administration software 3. YouTube	1. Gmail 2. YouTube 3. Newspapers 4. Online college platform

3.2. New technical stuff resources

The following examples show the affordances provided by the new technical stuff visible at the cybercafé:

- Online catalogs and sales companies' webpages with resources to learn about their products and promotions, and virtual spaces to set up a "personal office".
- Smart cellphones which apps afford quick asynchronous interactions that may include text, images of products, photographs of payment receipts, or recorded voice messages.
- Online government platforms where a business owner can stay up-to-date in his/her sales and taxes.
- Universities' online platform to upload lesson plans that students, school administrators and teachers can consult, and send and receive feedback.
- Office software and access to the Internet where animated power point presentations create virtual settings for artistic presentations.

3.3. "Knowing who to trust"

References to the support provided by other people were frequent in the participants' responses and observations. Despite the initiatives taken by the adults in the study, their levels of competence would not have been the same without this support. There were usually more experienced and younger users of digital technologies who cooperated with all the participants. They could be familiar and even related users such as their own children (adolescents or young adults), elementary school or

college students of some of the participants, the cybercafé operators, or themselves helping other adults. The fact that they were considered to be more proficient and open to collaboration was crucial for the adults when asking for help. For instance, the cybercafé employees sometimes helped Rocio to print a document or open a new email account, or Juan to search for information or navigate through a webpage when filling forms, in forms that were rather empathetic. The participants perceived these collaborators to be more knowledgeable and confident and that their knowledge of technologies was, in their words, “natural for them.” Other collaborations with Rocio involved young trainers who supported her to learn how to use a company’s webpage or her youngest child, a college student. She laughs when sharing how she asked her son to help her learn to use the webpages, “I used to chase him around the house, almost pulled him to beg: ‘Teach me, teach me please!’”. In any case, it was by means of these collaborations that she became both a confident user of the webpages needed for her work and, at the same time, someone who was able to help other saleswomen to learn to use these technologies to increase their income.

Co-workers were relevant collaborators for three of the participants. Rocio spent considerable time supporting and then working with some colleagues on the webpages. Sometimes, beyond aiming to increase their sales, they seemed to actually enjoy using the media, mutually helping each other and obtaining other rewards such as prestige, recognition, and greater motivation to use the technology, while enhancing the cooperation and socialization. She explains that, “It is a lot more interesting and fun to study the webpages with my friend [another saleswoman], I teach her what I know, and she also helps me find solutions”. In another case, Juan became a successful learner of the digital technologies also thanks to the support of others, former co-workers and college students. When, after retiring, he started teaching and faced the challenge of using digital technologies, he told his new college students, “Young men, I’ll teach you all I learned in forty years of work, if you help me to learn to use these little appliances, in return”. Though in a different context, this support was indispensable for Juan to succeed not only in an activity that provided him with some additional income (which he actually did not need), but more importantly with a personal project: to keep being active in an activity he really enjoyed. In Elias’s case, collaboration to learn involved working with an employee to solve work-related problems, sometimes using two or three computers or common online spaces to share information, generate invoices, or prepare financial reports. Whereas he was training his employee in the use of the programs, someone who was evidently familiarized with computers, Elias often appeared to be open to listening to the employee’s ideas to solve some of the work-related issues. This has to do with an attitude that is intrinsic to collaboration: open mindedness to listen to other people’s ideas and to value them. Despite the fact that Elias considered himself to be an autodidact, he recognized that his two sons had taught him to do several activities in the media, such as listening to music from Internet and

downloading videos and movies, “they are by far much more skillful than me.”

For her part, Esther sustained that she has always something to learn from her elementary school students; she explains how they advise her to make the music mixes, “They tell me how to do it and add sound-effects because they are really good at that, they produce their own mixes”. She also referred to her adolescent first-born who sometimes comes to the cybercafé to help her with the preparation of the mixes. She says:

When he was a little boy, I used to help him to do his homework on the computer... It was him who encouraged me to stop paying someone else to make my music mixes and to learn to do it on my own.

Rocio claims that, “younger people know it better! Even my grandchildren tell me, ‘Nana,... get on YouTube to download movies!’.” Rocio explains that the support given by her three young adult sons has been vital to solve most of the challenges she has faced with the media, “If I have a problem, I call my kids to teach me, sometimes unwillingly, but they teach me.”

Juan seemed to share the same perspective about his collaborators by saying, “My students taught me to use the technology because they use it quite well, they were born with it.” He mentioned the difficulties he experienced when he went back to teaching after he retired from business, “I was almost petrified to see how much teaching had changed with technologies! However my students have willingly supported me to use them”. We find that these collaborations also enabled the emergence of “agentic actions” (Moje & Lewis, 2007, p. 20), it is actions that require personal initiatives for the participants to become more skillful and confident with the technologies (see **Table 6**).

Table 6
Table 6. Agentic actions

Participants/ actions	Esther	Rocio	Elias	Juan
Asking for help to learn or solve	x	x	x	x
Exploring internet resources	x	x	x	x
Practicing what they learned	x	x	x	x
Using the media to solve personal needs	x	x	x	x
Collaborating to learn with others	x	x	x	x
Creating a comfortable working or learning environment	--	x	x	x
Centering in the tasks and goals	x	--	x	x
Selecting reliable information	--	--	x	x
Recognizing limitations	--	x	--	x
Updating in the use of programs	x	--	x	--

All in all, here we demonstrate that having the social connections and “knowing who to trust” were just as important as having access to the technologies in learning to successfully participate in new literacies activities.

3.4. Types of learning

It was evident from the participants' activities that they were in the process of developing several of what Jenkins et al. (2006) classified as the skills required to participate in new literacies. We must point to the fact that such skills development was rather a side-effect of their activities and not necessarily an aware choice. The design of the activities they perform requires the participants to develop both the technical skills (new technical stuff) and the attitudes (new ethos stuff) they use. Such skill growth had to do rather with the purposiveness of their work activities (that involved the use of digital media) than with a purposeful or conscious process of learning to use those abilities. How the participants unconsciously develop the skills through their activities, rather focused on the outcomes of such work, is described below.

Play. This competence was evidenced in the fact that each participant had to experiment with their surroundings as a strategy to find solutions to the problems involved in their work. In doing so, they also had to take risks and be diligent in trying different resources available on virtual spaces. One such case is exemplified by Rocio and her colleagues, who were observed playfully probing the web pages and online catalogs in search of promotions and sales events that were not available on printed catalogs, and that would give them better opportunities to increase their sales and profits.

Similarly, Esther tended to practice this skill by exploring new versions in the search of online free software to prepare her music mixes. In the instances when she did not understand something, she looked for resources to solve her needs. In particular, she preferred the tutorials from YouTube because, as she said, “there is always a tutorial for everything!... It is almost impossible not to find a solution in tutorials.” Elias's stated that learning to use Internet ‘stuff’ was a matter of, “clicking here and there... [until] one is able to identify and follow procedures and patterns.” His description resonates with Kalantzis's conception of the new technical stuff, “You click for ‘A’ and you click for ‘red’” (as cited in Lankshear & Knobel, 2011), implying that finding resources was a matter of experimenting to develop which, with some time and practice (though unconsciously achieved among the study participants), resulted in developing the competence known as play.

Appropriation. Defined as the ability to sample and remix media content in new meaningful forms was also required by some of the participants' activities of at least three of the participants. An evident case was Esther, who regularly had to search for songs, videos, sound effects, images, and more on Internet. She then combined them with computer software resources to produce new multimodal artifacts such as music

mixes, background set designs and other artifacts. Similarly, Elias and Juan tracked down information from scientific articles, reports and videos to prepare their classes. Juan usually read, summarized from different sources, and sometimes made power point presentations or modified those available on Internet to help his students learning, because “[It] is more visually attractive and understandable for them”.

Another competence developed was Transmedia navigation, the ability to transit through diverse artifacts and spaces. Transmedia navigation involved the participants’ disposition and need to visit different Internet spaces and media artifacts during their activities. They could simultaneously use varied webpages, social networks or software, sometimes alternately accessed via different electronic devices (computer, cellphone, portable memories, or even printed notebooks with registers of information obtained from or transferred to the online spaces).

Multitasking. An ability to carry out simultaneous tasks on the media was made evident by Elias. For example, working in two different computers, doing two or more tasks simultaneously, such as making information migrate from one screen to the other, and work in both computers were activities that contributed to the accomplishment of an important part of his business administration work. He was often observed using a calculator, filling an online format on one computer and revising information on his own laptop, while answering customers, employees and suppliers’ phone calls; and checking the time to attend a meeting with someone else in a different place.

Distributed cognition. The ability to interact with technological and sociocultural tools, was evident in some of the participants’ actions. Different forms of collaboration become required to succeed in some of their tasks. The participants benefit from a variety of knowledge resources distributed on the media, their social network, the people with whom they may do things together, and from the different situations, too. To succeed, they had to overcome fears and engage in different initiatives. For example, one day complaining about the risk of miscopying an Internet link on his notebook, the first author of this article, who was observing him that day, suggested there was an easier manner to do it. He immediately asked her to teach him. Other examples can be revisited in the section of forms of collaboration.

Collective intelligence. A competence that enables to learn and advance knowledge in collaboration with others with common goals was also present. For example, Elias and his employee collaborated to pursue common work goals. They spent time revising business information together on different computers or working on the same computer, discussing a report, or exchanging information either face-to-face or by email. Another such example was provided by Rocío and her colleagues. They would meet at the cybercafé not only to work individually, but to help each other and share knowledge and experience on sales. They could share “sales tips” or new promotions, participate in work meetings, or even celebrate social gatherings. At the end, this enhanced everyone’s economic success and wellbeing.

5. Learning a literacy of cooperation

In this research we have aimed to contribute to the understanding of how mature adults without previous, recent or continual experience with digital literacy developed the skills and knowledge that led them to participate in new literacies. The analysis of the activities practiced by four adults in a cybercafé allowed us to identify the following: (1) evidences of their development of new skills and attitudes as described by Jenkins et al. (2006) and exemplified above, that are consistent with both the “new technical stuff” and particularly, with the values and attitudes of “new ethos” of New Literacies that allow the emergence of, for example, new forms of collaboration and exploration where taking risks with the resources available in technology was vital (Lankshear & Knobel, 2011); (2) the occurrence of peripheral and paradigm features of new literacies in their activities; and (3) the role of their high quality social connections and the emergence of some *net(work)* awareness that enabled them to thrive in these new environments.

Several of the participants' activities remain as peripheral cases, where only the new technical stuff is present. Such activities cannot be considered true examples of new literacies; instead, they overlap with traditional literacies where the use of the technology simply eases individual actions. Instances of this are provided by the saleswoman when she fills in a purchase order on a company webpage, by the seafood businessman when he fills forms on a government portal, by the dance teacher when she mixes music with a cut and splice software; or by the university lecturer when he learns to communicate by email.

However, it is important to mention that without access to the new technical stuff, these mature adults would not have been able to probe the technology and transition to the new literacy skills and the literacy of cooperation.

Paradigm cases incorporate the new ethos (new sensibilities, values and priorities) characteristic of new literacies. Instances of paradigm cases were also present in the participants' activities. They all engaged in social interactions to cooperate either with more experienced and usually younger users (thereby benefiting from their high-quality connections), or with other colleagues to succeed in a common endeavor (thereby demonstrating the values of the new ethos). This is evident when Elias and his employee work together on the computers and specialized software to solve daily work challenges, but also to exchange ideas and make mutual suggestions about possible ways to solve a problem; they do so face-to-face or virtually in order to help one another and achieve their tasks.

Collective intelligences of paradigm cases are also evident when Rocio shares what she has learned to help other saleswomen learn. Although she is more knowledgeable than most of the other saleswomen, she continues practicing and learning on her own. Besides, she and her colleagues often explore the portals clicking here and there, interacting, discussing, and helping each other to understand more and better the functions on the webpages. In the order of sensibilities, Rocio genuinely encourages and

helps other colleagues to use a webpage so that they can also increase their profits. Knobel and Lankshear (2007, 2014) denote that new literacies are less-expert dominated, and that people who participate in collective intelligences become sources of distributed knowledge. Rocio embodies one such case in spite of her limited schooling (middle school).

New values and orientations belonging to the new ethos are present in several of the participants' actions and in those of their close connections, such as their students, employees and children. In the four cases, cooperation was essential in learning to use the media so that their work activities could be accomplished. It is this combination of the new technical stuff and the new ethos which in turn results in the participants' becoming network aware and their gradually developing and practicing the new literacies skills.

Research about adults' needs and involvement in the use of digital media and participation in new literacies is still insufficient. Besides, it has rather focused on diagnosis and quantitative studies on experiences rather constrained to academic settings (educational and training programs where adults participate. We believe that this work contributes to add an ethnographic dimension to learn how some successful adults develop the skills to solve work-related needs that require them to use the media, under more collaborative views.

All in all, we hope that these findings contribute to raise awareness of governmental, private and educational institutions to design and implement strategies to diminish adult marginalization due to the lack of competences to participate in the current dynamics of activities mediated by digital technologies. Besides, universities could create spaces, such as social service or professional practice, where their students provided support to mature and older adults so that they became able to participate in activities of their interest that are now available in Internet and digital technologies. Such support would enable, to some extent, that mature adults learned to use the technologies to more successfully achieve their work or other personal purposes. Otherwise, Jenkins et al. forewarning that "technology and economic change are conspiring to create a new cultural elite and a new cultural underclass" (2006: 61) will become a regrettable reality.

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