New Literacies for Digital Citizenship

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Abstract
The meaning of citizenship has usually been associated with the power of individuals in the process of social decision-making. Throughout the history, effective citizenship has required functional literacy skills as the fundamental factor for attending societal life. In the past, the 3Rs (writing, reading, and arithmetic) were considered to be enough for a normal citizen because people could communicate satisfactorily based on these skills in public spheres. They could also benefit through traditional literacy skills from the mainstream communication channels like newspaper, radio, and television. Depending on the linear characteristic of the mass media, participation of citizens was limited in the social arena. However, new communication technologies have changed the nature and scope of citizenship. New kinds of literacies have emerged regarding the new media such as Internet, Web, Twitter, blogs, YouTube, Facebook, mobile technologies and so forth. Today’s citizens are expected to attend social processes anytime and anywhere. Thus, they are required to have mastery in new literacies which allow them to use all kinds of emerging technologies to share their views and make their voices heard. In fact, this comes as a requisite for real democracy because digital citizenship is largely based on contemporary literacy skills in which the technology plays an important role. This paper elaborates various kinds of new literacies and discusses their relationships with the current practices of digital citizenship from a technological perspective.

Keywords: New literacies; Digital citizenship; Media literacy; ICT skills; Effective citizenship; Web 2.0; Social networks

Introduction
The meaning of citizenship has usually been associated with the power of individuals in the process of social decision-making. Social decision making has always required appropriate skills both for accessing to information and processing the obtained information since the ancient ages. In the digital age of the current times, the forms of information have changed drastically. Considering the potential of the new information and communication technologies (ICTs), skills such as reaching, interpreting, understanding, reconstructing, and sharing information have become fundamental responsibilities of citizens for a democratic society (Aufderheide, 1993; Christ & Potter, 1998).

Nowadays everything is changing quickly and people feel obligated to keep pace with these changes. Why Drucker called the changes as “shock” should be questioned in this perspective. Information is an integral part of daily life in today’s society in order for individuals to survive
against information-related requirements. Production of knowledge requires different skills than those necessary for producing goods. Thus, the concept of shock could be interpreted partly as the feelings or the confusions of people, being aware of not having necessary skills for the new literacies.

Kress (2010, p.6) remarked that the communication practices transformed from reading and writing to designing and distributing. The content is often being displayed with multimodality, combining text, image, motion, sound, music etc. Nowadays computer screens substitute book pages of the past so that image has gained popularity instead of text. Consistent with this trend in the ICT field, social relations and structures of the authority have changed at a great extent.

The attitudes towards information have also changed. People became addicted to information. Readers, as the audience, have become digital users. Information processing has been transformed from being passive receivers to active information processors, who must engage, construct, respond, and act with information. These new skills have changed the form of information flow in such a way to have greater impact on the life of individuals along with the meaning of citizenship and common practices of democracy (Knight Commission Report, 2009). Overcoming this challenging shock requires employing corresponding literacies with digital technologies in citizenship practices.

Theories of Technology and New Literacies

The changes in the new technologies and their effects are strongly related to changes of the age, forms of production, and the nature of society. In order to understand the effect of new technologies on citizenship, the subject should be overviewed through different approaches to technological development. The relevant views are usually grouped as theories of autonomous technology, technological determinism, political selection approach to technology, and critical views towards technology (Timisi, 2003).

Theories of autonomous technology assign importance to the technology itself. This view contends that technology has a different development logic, and people do not have an impact on it. It means that technology develops and evolves in its own course, regardless of outside factors. Therefore, possible interactions between technology and society are usually neglected or underestimated in this view.

Technological determinism defends the idea that technological development itself has created social changes because technology has such a revolutionary power. For example, the authors defending this view consider ICTs the main factor behind globalization. This approach has been criticized to give all the credit and responsibility in social change to the technology alone by neglecting the contributions of people, society, context, politics, and history.

According to the political selection approach, technology has been determined by political forces and capitalist needs. Technology in this view has progressed based on preferred needs and uses. This view perceives the concept of need as the driving force behind all technological developments because new technologies are created as solutions to problems which are based on needs.
Finally, critical approaches emphasize the effect of technologies on people, including the hegemonic relationships. The authors in this group have mostly highlighted the negative consequences of new technologies on culture and society. They contend that technology hides reality by mass communication devices. Mass communication has a tradition to see people as passive users so that they create false consciousness. According to critical authors, technology and science aim to serve interests of the capital instead of needs of the population.

These “technology theories” interact with certain kinds of new literacies. In fact, most of new literacies are intact with new technologies of information and communication. New literacies could be explored by three main approaches, namely by their technological characteristics, social characteristics, and ideological characteristics. The first one focuses on the capacity of new technologies, the second is interested in the uses and implications of new technologies, and the third one pays critical attention to their effects on the beliefs, behaviors, attitudes, ideologies, social structures, cultures etc. (Timisi, 2003).

Sometimes it is not easy to separate these three approaches because of their integrated and interactive structures. The reasons for various uses of the technology could be changed by cultures. Sometimes technology creates certain changes over the society including the role and functions of citizens. Therefore, all the new literacy approaches will be discussed here with an emphasis on digital citizenship.

Characteristics of New Literacies

The word literacy comes from the root “literature” and “literate.” The word literature was defined “to mean being discerning and knowledgeable (adjective), and a body of writing of nationally-acknowledged aesthetic merit (noun)”. According to Luke (1989, p.188), the word literature was changed as literary and literacy toward the end of the nineteenth century respectively, under the discussions of being literate and being literary had different meanings. The term literacy has become popular instead of literary (cited in Livingstone, Van Couvering, & Thumin, 2008).

Before the Internet, main information resources were newspapers, books, radio, television, films etc. These information resources shaped or affected decision making process in order to fulfill the citizenship responsibilities and exercise democratic rights. They mostly focused on understanding printed and audiovisual messages. Thus, the literacy they required was often called “print literacy” and “media literacy.” As information technologies have changed rapidly especially with the emergence of the Internet and other related applications like Web, Twitter, blogs, YouTube, Facebook, mobile technologies etc., new multimodal information forms have been created. Because traditional literacy could not meet the requirements of the digital age, more complicated skills are needed in the name of new literacies. In the digital age, it is a vital requisite to fully understand and use the capacity of new information and communication technologies.

Gilster (1997) defined basic skills for digital literacies as assembling knowledge, evaluating information, searching, and navigating in non-linear routes. Hobbs (2008) underlined the importance of ethical responsibilities and self-confidence for new literacies. In addition to some skills and ethics, digital literacy also covers knowledge and creative products in the digital environments (Calvani, Cartelli, Fini, & Ranieri, 2008; Jewitt, 2008). Based on these discussions, Covello (2010) grouped the subdisciplines of the digital literacies as information
literacy, computer literacy, media literacy, communication literacy, visual literacy, technology literacy. Generally speaking, the concept of digital literacy may be considered the sum of all these literacies (Lankshear & Knobel, 2003).

New kinds of literacies have emerged (mostly based on the development of Web 2.0) regarding the new media such as Internet, Web, Twitter, blogs, YouTube, Facebook, Wikis, LinkedIn, mobile technologies, Second Life, Instagram and so forth. New literacies differ from the previous ones, mainly due to their operational, interactive and user-based technological characteristics. The development of Web 2.0 has radically changed the information flow activity from one direction to multi directions. Information is not passively received anymore. Users have more control and interaction opportunities over information. The term publishing information has been changed as participation in information-sharing process. Audiences became participants (Simsek, 2012). The control over the data has increased. Moreover, all the applications were freely accessible (O’Reilly, 2009). Numerical representation of data (digits 0-1), modularity of the information units (sound and image could be separated), automatization (less effort for digital information), variability (different versions of the same message), transcoding (various formats of digital messages) are the core of the Web 2.0 applications (Manovich, 2001).

Social characteristics of the new media were defined by Public Media 2.0, which is one of the recent American University Center reports for social media. These are: choice, conversation, curation, creation, and collaboration. Choice is one of the important debates on old mass media. Digital media is synchronous, enabling to access whenever one likes and whatever one wants. From the hypodermic needle view, a big advance is pursued by handover in the control over information to users. Now every digital user could have their hypodermic needles. They could explore, compare, discuss, or create the contents and shape their choices/decisions. Conversations are enabled by discussions, comments, blogs, rankings etc. Curation includes aggregating, sharing, ranking, tagging, reposting, juxtaposing, and critiquing content using Web 2.0 applications. In other words, creation, sharing, and evaluation of a digital content are easily possible. Creation of the new media product is not so hard and becomes a part of the daily life. Collaboration implies different roles during the production of digital information process (Knight Commission Report, 2009, p.40).

Similarly, Dede (2009) suggests a category system for current Web 2.0 tools, which has crucial implications for digital citizenship: Sharing (communal bookmarking, photo/video sharing, social networking, writers’ workshops/fanfiction), thinking (blogs, podcasts, online discussion forums) and co-creating (wikis/collaborative file creation, mashups/collective media creation, collaborative social change communities).

Jenkins, Clinton, Purushotma, Robinson, and Weigel (2006, p.4) delineate a set of novel literacies based on the new media as the following (One should keep in mind that most of these skills or competencies have never been a part or component of traditional literacies). Play: The capacity to experiment with one’s surroundings as a form of problem-solving; Performance: The ability to adopt alternative identities for the purpose of improvisation and discovery; Simulation: The ability to interpret and construct dynamic models of real-world processes; Appropriation: The ability to meaningfully sample and remix media content; Multitasking: The ability to scan one’s environment and shift focus as needed to salient details; Distributed cognition: The ability to interact meaningfully with tools that expand mental capacities; Collective intelligence: The ability to pool knowledge and compare notes with others toward a common goal; Judgment: The ability to evaluate the reliability and
credibility of different information sources; Transmedia navigation: The ability to follow the flow of stories and information across multiple modalities; Networking: The ability to search for, synthesize, and disseminate information; Negotiation: The ability to travel across diverse communities, discerning and respecting multiple perspectives, and grasping and following alternative norms (cited in Dede, 2010).

Interaction of New Literacies and Digital Citizenship: Digital Democracy

Williams (1989) defined information as a power to be free, creative, and entrepreneur (cited in Simsek, 2000, p.220). People who hold information have been privileged almost throughout the history. Modern technologies and new literacies changed the hierarchical structure of the information flow as creating a network society. Traditional media literacy issues often focused on advertising and consumerism; the quality of news and journalism; media ownership and consolidation; media violence and behavior; the representation of gender, class and race; and media’s impact on public health or well-being.

Current research embodies the capacity of creativity, learning, and social connectedness of Internet along with digital media by new literacies (Hobbs & Jensen, 2009). The free flow of information through new technologies is consistent with the requirements of deliberative democracy and corresponding citizenship practices. People, in essence, need relevant and credible information in order to be free and make self-governing decisions.

Hobbs and Jensen (2009) defined both digital citizenship and new media literacies as “the skills and knowledge needed to be effective in the increasingly social media environment, where the distinctions between producer and consumer have evaporated and the blurring between public and private worlds create new ethical challenges and opportunities for children, young people, and adults.” Both of them serve as mediators for democratic citizenship instead of being passive media audiences. Hacker and van Dijk (2000) focused on the term of digital democracy defining “the use of information and communication technology and computer-mediated communication in all kinds of media for purposes of enhancing political democracy or the participation of citizens in democratic communication.”

It could be inferred that digital citizenship and new media literacies are not easily separable. They meet on the point of new skills. Generally, there is a tendency to accept digital citizenship as a result of new literacies. However, it is only partly true. One can be competent in new literacies but not use these skills for citizenship practices. New literacies provide opportunities to be more informed and participative. The potential of new literacies does not guarantee democratic citizenship practices. In other words, democratic citizenship is a wider concept which also covers new literacies.

In order to understand the interaction between new literacies and democratic citizenship, the latter should be more deeply examined. Citizenship is an old term implying the relationship between the individual and the state. Digital citizenship, on the other hand, emphasizes being active and possessing democratic values compared to passive citizenship depending on mass media for information. Digital citizenship is generally defined as “the norms of behavior with regard to active technology use.” Digital citizenship also includes being aware of technology-related ethical, societal, and cultural issues, being able to use web applications, and being able to use these technologies for self-development like lifelong learning practices (Ribble, Bailey, & Ross, 2004).
Digital citizenship covers not only technical proficiencies. Dede (2009) suggested the 21st century’s main skills as core subjects (global awareness, financial, economic, business and entrepreneurial literacy), learning and thinking skills (critical-thinking and problem-solving skills, communication skills, creativity and innovation skills, collaboration skills, contextual learning skills, information and media literacy skills), ICT literacy (the ability to use technology to learn content), and life skills (leadership, ethics, accountability, adaptability, personal productivity, personal responsibility, people skills, self-direction, social responsibility). It appears that in the new world of virtual technologies, digital citizens are expected to combine cognitive, affective, psycho-social, and technological skills. The interaction of all these skills produces an ideal digital citizen for the 21st century (Dede, 2010).

Rible, Bailey, and Ross (2004) also underlined the term of digital citizenship. Digital citizenship has been elaborated in terms of both citizenship practices and the issues of technology use. Nine general domains constitute digital citizenship in this respect. These are the following:

- Etiquette: Electronic standards of conduct or procedure;
- Communication: Electronic exchange of information;
- Education: The process of teaching and learning about technology and the use of technology;
- Access: Full electronic participation in society;
- Commerce: Electronic buying and selling of goods;
- Responsibility: Electronic responsibility for actions and deeds;
- Rights: Those freedoms extended to everyone in a digital world;
- Safety: Physical well-being in a digital technology world;
- Security (self-protection): Electronic precautions to guarantee safety and privacy.

Digital citizenship has both supporters and opponents regarding the paradigms of technology. The technological theories focus on capacity of teaching and learning via the new literacies in order to perform citizenship requirements. Ideological theories question individual and system interests by using new technologies for various purposes. Social theories put forward the behaviors and sociological change, both positively and negatively.

From the supporters’ side, digital citizenship practices facilitate life both for the state and the individual by their technological characteristics. Through e-government applications, citizens could easily pay taxes or traffic fines and perform other tasks related to governmental affairs. Citizens could get information about services, payments, applications, protests, and various views. Libraries and museums could be used more effectively. Discussion opportunities give citizens to convey their opinions.

These social characteristics of the new media have a potential to serve an ideological platform in order to adjust democratic values and develop citizenship practices. Participation, shared views, discussions, and debates bring to mind whether these Web 2.0 applications could create a society living in a communicational action world as suggested by Habermas. It should be carefully discussed whether new public sphere could have been created via skills of new literacies.

Ideal public sphere should be open to everyone. Appropriate conditions and equal power relations are needed to accomplish this ideal. Because technology is not neutral and usually defends the hidden powers, the only solution of the society is restarting ideological criticism which took place during the end of the 19th century in France (Oskay, 2000). Ideological criticism aims at creating a more liberal and enlightened society by considering the hidden pressures and determining the real interest with complex information processing. If one is curious about some technology issues, he/she should take into account the cultural and
economic relations (Geuss, 2002). People should be informed about economy, international relations, educational issues, and other functions of the governments. Informed communities could easily communicate, coordinate, discuss, and solve problems as well as making more valuable decisions during selections and daily life activities like housing, entertainment, taxing etc.

In the ideal public sphere, having equal rights determines the quality of communication and citizenship practices. The term of “informed citizen” was frequently used. One of the aspects of being informed is related to the rights. There are main citizenship rights: legal, political, social, and participation rights (Janoski, 1998). Internet serves as a medium to learn and practice these citizenship rights combining digital environment to the real one.

Democracy needs a participatory culture. People are expected to be interested in their citizenship responsibilities. Van Deth (2001) evaluated democratic experiences historically as voting (campaining, contacting officials; 1940s-1970s), protesting (protest actions, social movements; 1970s-1990s) and participating (social engagement, civic participation; 1990s-...). Di Gennaro and Dutton (2006) stressed that the internet could increase political participation by lowering the costs of involvement, establishing new groups, creating new channels of information, and removing or reducing the effect of gatekeepers. The power of participation has been reinvented by creating online participation in addition to offline participation (cited in Chatur, 2001).

Digital citizenship could create a more transparent, connected, and participatory democratic environment via its interactive, non-hierarchical, user friendly nature. This is an optimistic view to online political participation, namely “mobilization” resembled to the views of technology supporters. In contrast, “reinforcement” approach discusses that Internet could not alter the citizenship practices dramatically. Although more availability and accessibility to information is accepted, it could not guarantee political participation. “The middle ground” signified that Internet has no ability to improve or reduce political participation (Chatur, 2001).

Some democratic values are indispensable for democratic citizenship. Knight Commission Report (2009) summarizes these values as openness, inclusion, participation, empowerment, common pursuit of truth and the public interest. Openness implies that everybody could reach information which support civic and personal decisions. Inclusion means everybody’s interests and views are covered and they could accommodate their needs. Participation refers to the encouragements about joining and using information systems for civic as well as individual issues. Empowerment is related to the personal and community development by following their talents, interests, and dreams. Common pursuit of truth and the public interest create a form of decision making process by differentiating the overall quality of the information. They require assigning importance to public welfare. Information flow and hierarchical differences in the new literacies enable to democratic values be more easily adopted.

The democratic culture and its values are strongly related with digital literacy skills. Citizens could be aware of their environment by appropriately learning, creating, using, responding, forwarding, and sharing new media contents. Democratic participation and active citizenship are developed by multimodal and multifaceted channels. Also, lifelong learning and personal fulfillment opportunities may be improved by new literacies. It is important to note that informed, participatory, critical, expressive, ethical, and creative individuals make democratic society a reality (Livingstone, Van Couvering, & Thumin, 2008).
Buente (2001, p.43) proposed a digital citizenship model which summarizes crucial elements to achieve citizenship competency. That model is illustrated in Figure 1. As aforementioned, it should be noted that ICT access and information as well as technology literacy is a necessary but insufficient condition. The relationship between digital citizenship and new literacies could be rarely reciprocal. A high degree of interest in citizenship practices may lead to focus on digital citizenship and acquire new literacies respectively. The required skills are almost identical. Additionally, democratic values needed for the citizenship are not different for new literacies. Many democratic values could be acquired by new literacies. New literacies are prerequisite for digital citizenship. New literacies increase the availability of relevant and credible information and broaden the capacity of individuals to get, share, compare, and contextualize information by developing new skills. In democratic systems, everybody is expected to have equal opportunity to communicate and share their views with others (Knight Commission Report, 2009, p.17).

![Digital citizenship model](image)

**Figure 1. Digital citizenship model (Buente, 2001, p.43)**

**Required Skills for New Literacies as a Part of Digital Citizenship: Digital Identity**

Internet and related applications provide ready-made programs and networks to construct, utilize, and share information instead of struggling for preparing such programs. New literacies emphasize mostly user-generated content utilizing technologies like Facebook, YouTube, and Twitter to access, navigate, discuss, interpret, produce, and disseminate new generation of multimedia-based messages. However, the necessary skills for new literacies as requirements for digital citizenship are much more than those indicated here.

Area and Pessoa (2012) defined the goal of literacy as “to develop each subject’s ability to act and participate in an independent, cultured, and critical way in cyberspace”. New literacies emerged and need to be learned due to new culture of the consumption, an acquisition of information via transformation of the solid culture into liquid culture. Using all these Web 2.0 characteristics does not only require new literacies. Identity in the digital territory is seen a higher construct of literacies, which enables the citizen to act as a person with culture and independence as well as with critical abilities and democratic values. In other words, digital literacies enable one to acquire a “digital identity.”
The proposed integrated Web 2.0 model above has two dimensions: Learning environments or dimensions on Web 2.0 and skills and competencies to be developed in the literate subject. **Learning environments or dimensions on Web 2.0** includes learning experiences of using Web 2.0 as a *universal library* (information literacy, using new digital sources), as a *market of services* (being aware of the rights and responsibilities while purchasing or working), as a *hypertext jigsaw puzzle of interconnected microcontent* (navigating from one document to another and constructing the meaning), as a *public space for communication in networks* (exchanging information in social networks, developing collaborative social behavior), as a *territory of virtual interactive experiences* (interacting in 3D virtual environment, in simulated reality).

**Skills and competencies for digital identity throughout Web 2.0** were listed as *instrumental* (technical control over technology), *cognitive-intellectual* (cognitive skills for selecting, analyzing, interpreting data critically), *socio-communicative* (the acquisition and development of behavioral norms and positive social attitude), *axiological* (the awareness that ICT are not aseptic or neutral from the social viewpoint, the acquisition of ethical and democratic values engendered by the correct use of information and technology) and *emotional* (learning how to control negative emotions, empathy and the construction of a digital identity characterized by an affective-personal balance) competencies (Area & Pessoa, 2012).

Luke (1996) notified some skills in this regard: being able to read and interpret images in a media-text, symbol saturated environment, multimodal configurations and to be able to construct, control, and manipulate visual texts and symbols (cited in Jewitt, 2008). Citizenship skills in the digital world are defined by educators as: (1) technical skills; (2) communication skills; (3) skills in acquiring and using information; (4) consumer skills; (5) influence on information society policy. Individuals who are at digital divide risk groups were determined as middle-aged and older people, adult population not actively employed, and special-needs groups (Finish Ministry of Education, 2000).

There is not an ideal world in which new media and democracy interact. Gaps of information, broadband, literacy, and participation are main problems in the digital citizenship activities (Knight Commission Report, 2009). Information gaps occur when individuals do not have equal chances to access and use Internet as well as Web-based applications. “Information ecology” is a term symbolizing the accommodation of individual and social information needs. It is also related to openness, inclusion, participation, and empowerment which are major democratic values. Broadband gap is an issue related to speed of the Internet service. Literacy gap points not to having some skills. Individuals lacking basic skills are not expected to acquire more advanced skills. They will experience problems with the new digital applications for effective citizenship. Participation gap is the final issue for citizenship practices; it refers to the degree of access to new technologies at home.

**Conclusion**

New literacies for active digital citizenship are multi-faceted. Web 2.0, online participation, citizenship rights, technological capabilities, Internet, social networks, values, norms, being informed, critical attitude, and digital divide are among key issues in interaction of new literacies and digital citizenship. Digital identity is a higher construct of digital citizenship, and new literacies certainly interact with this concept. Technology becomes a way to develop the
digital identity which includes digital, social, and cultural norms/values. Digital citizenship and new literacies need both supporting public policies and individual responsibilities to generate necessary competencies.

References


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