Some Reflections on Digital Literacy

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Abstract

Parallel to the societal diffusion of digital technologies, the debate on their impacts and requirements has created terms like ICT literacy, digital literacy or digital competence. This paper intends to sketch some of the broader framing conditions for discussing the conceptualisation of digital literacy. It refers to selected implications and challenges when trying to document or even measure the performance of dealing with digital technologies in our society. The argumentation starts from a sociological perspective and positions digital literacy in the intersection of various societal discourses, which shape the connotations and implications of the term. Depending on these connotations, the concepts of technology, the settings and the level of analysis, a number of possible methods for observing digital literate activities might arise.

(1) Knowledge and information have become essential factors of production besides the traditional factors land, labour and capital. These "new" economic factors are directly linked to digital technologies which store, process and distribute information in order to create knowledge. If the EU intends to "become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion" (EU Council 2000), and research clearly indicates that there is a positive correlation between economic growth and educational outcome, the educational systems have to adapt to these

economic and technological imperatives. In the intersection of digital technologies and human capital lie concepts like "digital literacy" or "digital competence"[1].

(2) As a key competence digital literacy[2] is crucial for a "successful life" in a "well-functioning society"[3] and refers to "work, leisure and communication" in general. Digital literacy is regarded as a prerequisite, as a tool and as a learning objective for living in an IT-enriched world.

(3) According to current sociological system theory the modern society can be observed as a social system which consists of communication. Through functional differentiation the society has developed subsystems which operate in specific manners: economy, politics, education, media etc. Each functional system operates with a specific medium; economy operates with money, the political system with the medium power. These "media" increase the probability of continuous communication processes and sustain the societal development.

(4) The media system observes the society: Mass media do not depict or represent reality but construct a world which *is the* reality to which the society orientates itself. Terms like "media literacy" or "digital literacy" are constructs of the (mass) media as well: News-

1 "Digital competence involves the confident and critical use of Information Society Technology (IST) for work, leisure and communication. It is underpinned by basic skills in ICT: the use of computers to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in collaborative networks via the Internet." EU Commission (2006).

2 Digital competence and digital literacy are not distinguished at that point although they have different connotations.

3 Rychen D.S. & Salganik, L.H. (Eds.). (2003).

papers, policy documents and speeches spread the notion and importance of digital literacy. This implies that the usage and the boom of this term are also linked to the inner logic of the media systems (and the political system) which depend on attention from the audience[4].

(5) Each societal system interprets a term like "digital literacy" according to the inner structures and imperatives in differentiated discourses: The connotations of digital literacy in economy differ from those in the educational system. While the economy stresses the importance of digital literacy as a factor of production and urges to close IT-skills gaps which could reduce productivity, the educational discourse points out dimensions of digital literacy which are beyond the pure instrumental usage of IT: this comprises personal evolvement by creating digital expressions, self-reflexive and ethical dimensions of digital literacy.

(6) The various connotations of the term digital literacy in the different societal subsystems hinder the conceptualization and advancement of digital literacy. The economic system needs competent human capital and demands reliable selection strategies to measure and quantify levels of digital literacy. The educational system not only prepares young people for a successful work life but also educates them in their roles as future citizens. This implies different value sets and objectives, and different strategies for evaluating and measuring digital literacy. Quality of life should be a focal and meeting point for normative discussions.

4 A good example in this field is the media effect of the PISA study on political attention and public debate.

(7) Given the different connotations, stakeholders from different societal areas should be included in the definition process in particular with regard to life-long learning strategies and the compatibility to frameworks of competences and qualifications. This also refers to interfaces between school education and further education.

(8) Digital literacy should be positioned in a network of related terms and concepts: Media literacy (competence), visual literacy, network literacy, ICT literacy etc. Some of these terms are media-specific (ICT literacy[5]), others are more independent from the carrier and the technology (visual literacy, information literacy). Although digital literacy is linked to digital information technology, general dimensions of information and visual literacy are also relevant. This also includes links between the analogue and the digital world of media.

(9) The term literacy refers to the ability to read and write linear text. Any interpretation of digital literacy should not be restricted to writing and print culture. New technologies enable blended forms of oral, written, visual, interactive (tele)communication (e.g. virtual collaborative environments). When transferred to the world of digital communication, concepts and metaphors of the book culture are helpful to ease orientation in virtual spaces (e.g. WWW-pages and bookmarks). At the same time they transfer limitations regarding the

5 "ICT literacy is using digital technology, communications tools, and/or networks to access, manage, integrate, evaluate, and create information in order to function in a knowledge society." (ETS 2002: 2). Furthermore the International ICT Literacy Panel concludes: "ICT literacy cannot be defined primarily as the mastery of technical skills. The panel concludes that the concept of ICT literacy should be broadened to include both critical cognitive skills as well as the application of technical skills and knowledge. These cognitive skills include general literacy, such as reading and numeracy, as well as critical thinking and problem solving. Without such skills, the panel believes that true ICT literacy cannot be attained."

range of possible usages of digital media. A traditional concept of literacy is biased in view of text-based media.

(10) Digital literacy is relevant in all modes of communication with digital means. Since there is a tremendous number of possible social practices with digital tools, there is not one digital literacy but "there will be myriad digital *literacies*".[6]

(11) Two complementary perspectives on technology can be distinguished: (a) Seen as a *tool*, technology amplifies or increases an already given performance. As an example, the automobile can transport goods faster than a horse carriage. (b) Interpreted as a *medium*, technology creates *new* worlds of practices; to take the example: cities have been dramatically changed by cars. With regard to IT, new worlds of working, learning and living are evolving. These new environments and worlds of practice cannot be interpreted as simple amplifications of traditional media. In order to conceptualise digital literacy holistically, one needs to expand the perspective from the individual level to the level of social systems and the society.[7]

(12) For the first time in history, humans have developed a technology which not only stores information (printed books) but also processes information independently from the human brain (computer).

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6 Lankshear, Colin / Knoble, Michele (2005: 8-9).

7 "Indeed, literacy is no longer exclusively understood as an individual transformation, but as a contextual and societal one. Increasingly, reference is made to the importance of rich literate environments – public or private milieux with abundant written documents (e.g. books, magazines and newspapers), visual materials (e.g. signs, posters and handbills), or communication and electronic media (e.g. radios, televisions, computers and mobile phones). Whether in households, communities, schools or workplaces, the quality of literate environments affects how literacy skills are practised and how literacy is understood. " UNESCO (2006: 159)

A digital literate person is able to interact with artificial agents. This interaction raises the issue of information autonomy: To which extent can a digital literate person rely on the processed information, or can doubt and deconstruct delivered information products? The more information processing is done automatically and hidden, the more user-friendly the system appears, - and the less transparent it is for the user.

(13) In context of recent developments, in particular Web 2.0 and social software, new challenges for digital literacy concepts arise: Simple web-tools allow the publication of content for individual or collaborative authors. Software agents can contribute to collaborative and social authorships with digital content and communication processes. New authorship constellations influence concepts of quality assurance and therefore also demand adapted digital literacy concepts. In addition to a receptive information literacy (Can I trust this information?), a constructive information literacy is needed (Which information do I publish?). Privacy issues, informational self-determination and data protection are important content areas for digital literacy.

(14) Complementary to the promotion of digital literacy on individual level in educational settings, social strategies are needed to fight digital divides, in particular second-order digital divides. In countries with a high degree of ICT penetration the digital divide challenge moved from access restrictions to efficient and meaningful usage of ICT. Awareness-raising campaigns or organisational development plans are integral parts of digital literacy strategies.

(15) The selection of practical ways to gauge the level of digital literacy depends on the objective, the target group, and the underlying policy frameworks in conjunction with the different societal discourses (see 5 and 6). Some questions to be answered: Which level of analysis is relevant (the individual digital literate student, groups and/or a digital literate school as a social system)? Which context of usage is relevant with regard to the "myriad of digital literacies" (see 10)? What is the object of measuring (processes or structures)? Which perspective respectively method is applied (self-observation, external observation, qualitative and quantitative approaches)?

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Are "digital citizenship", "digital literacy", "internet maturity" different terms meaning the same thing? If the people are illiterate and using online education, do they get literate? Is there any disadvantage?Â How should a person be called as literate? Why could some people never be digitally literate? Related Questions. From now, what are the advantages and disadvantages of the Internet to the people who are using it? What is a 'digital literacy course'? ! Chapter 4 provides some reasons why I believe some of the digital literacy frameworks you may have come across don't work. We'll discuss non-linearity, the work of Stephen Heppell, skill acquisition, and the SOLO Taxonomy. Most important, though, is realising that literacies are plural and context-dependent. ! Chapter 5 is the pivotal chapter of the book. In it, I introduce the eight essential elements of digital literacies that I came up with in my thesis.Â I discuss licensing issues as well as giving some practical examples of sample remixes you can do right now. Chapter 8 focuses on my post-doctoral work at Mozilla where I've been focusing primarily on web literacy. We'll look at how 'coding' and web literacy differ. Also, why interest-based pathways to learning are important. Digital literacy is important to establishing your presence in the modern world. Lacking the ability to use digital technologies means that there are many things you simply cannot do or access. Possessing digital literacy allows you to improve the efficiency, access to things, fulfillment, and happiness in your life. There are so many things that you gain by ensuring you become digitally literate, and we want to shed some light on them for you. This is not an extensive list by any means, as there are thousands of little ways you can improve your life by learning digital literacy skills. Read o Digital Literacy Reflections. By Caroline and Rebekah. Rebekah.Â "Keeping the most important items that we've read organized in some coherent manner is crucial as we manage our digital reading lives." -Turner & Hicks, 2009, p.115. more_vert.Â - What do we want students to do with digital literacy? - "Digital texts function differently than print texts..." (p.99) -Turner & Hicks, 2009. more_vert. Reading is all about making connections Nowadays, Digital literacy helps to understand and analyze information through digital technology. The use of technology plays an important role within the process of teaching and learning; it can be used to teach reading and writing skills by using digital devices such as laptops, iPads, Chromebooks, or desktops. However, within the context of the use of technology in the area of education, and specifically in the area of language, digital literacy would also encompass its application both in development of language skills and learning of languages (reading, writing, oral comprehension and or