Healthy Application of Basic Digital Skills*

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Abstract

The study reevaluates McLuhan's "media-theory", Benjamin's ideas of the "here-and-now", and gathers the repeated keywords in theories of key competences in digital era: ability of critical thinking, independence, the ability of learning how to learn, the awareness of complexity and unity, the knowledge of interactions and networking. The fact that we live in a knowledge-based intensely informational age, also means that knowledge is not in itself valuable, but is only a condition for supporting the process of information acquisition and knowledge creation. Today, the reason of learning is not knowledge; rather the other way around: we learn in order to learn how to learn, in order to be able to learn new things later in life.

Key words: Learning, knowledge, key competences, basic skills, interpretation

Healthy Application of Basic Digital Skills and Adult Learning

The present research on digital and visual literacy was originally intended as a kind of media guide that maps the possible ways of preparation to live fully a life in a knowledge-based, intensely information age. However, in the course of the research I realized that I cannot only list the skills and abilities needed for the reliable and creative use of new media interfaces, or the acquisition of permanently changing knowledge and ways of transmission, but I should also find some answers regarding the results of all this. What are the skills and abilities that it shapes, what are the purposes it serves, what are the results it yields? Instead of asking what it is that we have to learn in order to use the internet, we should ask what the internet teaches us.

Technological determinism

A perspective of the history of communication well shows that people are just as much described by their means of communication as by their stories shared with the help of those means. People of the age of orality valued confessions. Speech in that age was always a story narrated and experienced by someone, which could become symbolic in itself, but the individual narrations were not connected, there was no perspective of heading from one

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place to another. This is precisely what literate man gains as the person: he learns how to read, how to make the difference between the author and the writer, how to think along a linear logic of cause and effect, how to assert his own point of view. The appearance of electronic media marks the advent of the age of secondary orality, when the text again is heard, but the monitors display a multitude of actors and performers, while the spectator learns how to choose between divergent perspectives. The digital media are again convergent, the old and new means of communication coexist on the same interface. Their user is not a participant, nor a reader or a mere spectator, but a participating actor, a reader-writer, a spectator-director, all at the same time and alternately. The story he narrates is being created at the very moment of narration, by sharing and re-sharing. One of the fundamental theses of McLuhan's *The Gutenberg Galaxy* is that the media are the extensions of our senses:

> Today man has developed extensions for practically everything he used to do with his body. The evolution of weapons begins with the teeth and the fist and ends with the atom bomb. Clothes and houses are extensions of man's biological temperature-control mechanisms. Furniture takes the place of squatting and sitting on the ground. Power tools, glasses, TV, telephones, and books which carry the voice across both time and space are examples of material extensions. Money is a way of extending and storing labor. Our transportation networks now do what we used to do with our feet and backs. In fact, all man-made material things can be treated as extensions of what man once did with his body or some specialized part of his body. (McLuhan, 1962, p. 4)

In this sense, in this electronic and digital age, the hand also adds to the extended ears and eyes: the contact with our devices is created by our fingers, fingertips manipulating keyboard buttons and touchscreen surfaces (Griffin & Park, 2006, p. 9). Every extension has its consequences, and shapes the way we are able to see the world and ourselves in the world. "Any extension, whether of skin, hand, or foot, affects the whole psychic and social complex" (McLuhan, 1994, p. 6).

McLuhan presents at length and in detail the abilities of the tribal oral man, the results yielded by the alphabet and the age of manuscripts, how the typographic man replaced the perception and the mode of being of this type with his individualism and homogeneity. The next paradigm shift is the age of the appearance and spreading of electronic media, the age of secondary orality. Computer software and digitization make up the new communication revolution, introducing changes we can only partly understand today.

Individual changes always entail the question: Is this right? But, according to McLuhan, we can only count with the results. We must understand what happens, but the moral perspective makes a correct understanding impossible. Changes cannot be prevented or avoided, we can do nothing against them. All we can do is to examine "external manifestations and forms of change" in order to understand "the formal dynamic or configuration of such events" (McLuhan, 1962, p. 213.)

The technological aspect of the acceleration brought about by the invention of the printing press is the age of the industrial revolution (conveyor belt production, mass production), this was replaced by the age when

everything was organized around knowledge and the flow of information. Trilling and Fadel in their book on the skills and abilities of the 21st century date it precisely to 1991: "This monumental shift from Industrial Age production to that of the Knowledge Age economy—information-driven, globally networked—is as world-changing and life-altering as the shift from the Agrarian to the Industrial Age three hundred and fifty years ago" (Trilling & Fadel, 2009, p. 3).

The new age of new media brings the sense of experience opposed to rational thinking, the marginal opposed to a centralized structure, following a guideline, the fellowship of the different opposed to uniformity. While the earlier media extended our senses by also disconnecting them from the entirety of our perception, now the extension of our senses is happening with such a speed and simultaneity that we need to create some kind of collective whole:

> This we do every instant of our lives. But the price we pay for special technological tools, whether the wheel or the alphabet or radio, is that these massive extensions of sense constitute closed systems. Our private senses are not closed systems but are endlessly translated into each other in that experience which we call consciousness. Our extended senses, tools, technologies, through the ages, have been closed systems incapable of interplay or collective awareness. Now, in the electric age, the very instantaneous nature of co-existence among our technological instruments has created a crisis quite new in human history. Our extended faculties and senses now constitute a single field of experience which demands that they become collectively conscious. Our technologies, like our private senses, now demand an interplay and ratio that makes rational coexistence possible. (McLuhan, 1962, p. 5.)

Reiner and Wellman in their 2012 book *Networked: The New Social Operating System* speak about a triple revolution which has led to network individualism: 1. groups and small communities are replaced by communities connected in networks and social networks; 2. personal internet; 3. mobile devices.

The consequences can be summarized in 10 points:

1. People function more as networked individuals
2. Families function as networks, not groups
3. Social networks are larger
4. More internet use → more in-person contact
5. Work at home & away: part-time, full-time
6. Networks are sparsely-knit, loosely-bounded
7. ICTs provide more & more diverse information
8. Shift to interest-based communities

9. Public-private boundaries blurring
10. Transportation fungible, additive with ICTs (Reiner & Wellman, 2012, p. 68).

The here and now

So, this is the cultural and communication context caused by changes in technology. The new media change our lives, our living space, our access to the world, our ways of perception. It is not merely a peaceful growth and novel possibilities, but a radically different culture. Undoubtedly, we are nostalgic for the age we are about to leave, where literacy has led us to values which made us better and more complete, but now we should still face the changes with an adult and sober "that's it", leading probably to a world where the mere ability to read is not enough.

Old values are lost, new values are being born. It has not been so long ago when Walter Benjamin (1936) in his famed essay predicted that art would lose its aura, its cult value in the age of technical multiplicability. The time passed since 1936 failed to confirm it. Benjamin's argument was that the here and now, in which the individual and unique work of art dwells, is lost in the mass occurrence of reproductions appearing in ever newer times and spaces. The "here and now" of the work of art, "its presence in time and space, its unique existence at the place where it happens to be" (Benjamin, 1936), its aura renders its cult value, but in the time of technical reproducibility works of art only possess their exhibition value. Benjamin's rhetoric (withers, vanishes, ceases) clearly shows that he considers all these changes as a negative process, even a battle "exhibition value begins to displace cult value all along the line. But cult value does not give way without resistance. It retires into an ultimate retrenchment", and may even fight back. Ever since in the cult, in the ritual the work of art has only shared its "here and now", its aura with just a few participants, the reproduced messengers have sent masses to meet the presence of the unique work of art. Benjamin's words are tenable:

> The desire of contemporary masses to bring things 'closer' spatially and humanly, which is just as ardent as their bent toward overcoming the uniqueness of every reality by accepting its reproduction. Every day the urge grows stronger to get hold of an object at very close range by way of its likeness, its reproduction. (Benjamin, 1936)

Despite this, reproductions received a popularizing, news-spreading role: what is worth seeing, where it is worth going. There may be infinite photos, detailed drawings and models about the Eiffel tower, but nothing will replace that one selfie that I will take of myself with the tower. The fact that I know it, I have heard of it does not make up for the experience of saying that I have seen it. I was there, in that "here and now". The image authenticates the story, which is not about events, but the presence that Benjamin speaks about.

Presence is an elusive state. This moment it is here, I am here, in the next - my attention digresses and I am elsewhere, first in my mind, leaving behind the anchors of my body, then in body, leaving behind the anchors of my memory. Nonetheless, presence is still simple: somebody either is there or is not. If you are not there, you are

absent. If you are not there, you cannot be a witness. If you were not there, you cannot give an authentic account of the story. If you were there, no matter what you say, you will not say the truth. You will only say what *you* saw, what *you* experienced through your special and unique here-and-now filter. Reality – and what we see of it – is complicated enough even without the new digital media. The prophecy is not fulfilled (the "here and now" aura is alive and well), but the here-and-now of those who could have experienced the previous one becomes questionable. I can be the mother giving water to my son, the supervisor of my student (messenger), I can dictate my personal identification number (telephone), listener to the news of the European championship (television) and the good friend printing some musical notes (computer), all of this in the same space-time: I just have to move around my flat. Taking away the moving around and the water, I could stay by my computer and take care of everything from there. Any space and time, one only needs a good laptop and a reliable internet connection. The applications of new media are so attractive possibly precisely because of this service: they provide us several kinds of presence, multiply us by increasing our exhibition value. We are more sellable if we do it right.

Good and Well

But what is it we need to do it right? What do we need to teach those who have not yet used the new means of communication or have not used them right? What do we expect from people working in various jobs, what is that basic level that can equally be expected from a shop-assistant and a university professor?

Who can be expected to know the meaning of the following terms: DNS-parking, update, cookie, mirror site (the terms come from a questionnaire on digital culture, cf. Hargittay, 2005)? If they don't know them, they will obviously not use them. If they don't know these terms but need them to understand something, they can look them up. Can they be expected to look them up if they don't know them? Can they be expected to know how to look them up? And can they be expected to use them once they looked up their meaning?

While the secret of the "good and well" program has been so far the knowledge and skills offered by books, we must admit now that there are other ways too for us to be better and more accomplished people, our education is not only measured by the books we read. Moreover, just as the books have taught us all the skills that best described the age highlighted by them (linearity, cause-and-effect relations, rational thinking, ability to concentrate, ability to produce patterns and models), the network software available on mobile devices teach us, through their typical use, the skills needed for our independent orientation in this age.

The medium is a metaphor which translates for us the age we have to get along in. It is a test area, a practice field, a simulation scene. While I am reading, I obediently follow the instructions of the author. It does not matter what I am reading, while I am reading, I am within the system of obedience. I will be looking for tested and proven ways for getting along, I will want to prove myself to be better than the people before me. There are ways untrodden, extremely dangerous, inacceptable, and impracticable. The canon does not see what is outside of it. The centre does not accept the periphery. Things contained in the books offer a safe framework for those who

would perhaps get lost: that had happened before, people had already written about it, there is someone before us. In the end, everything falls into place, everything has a beginning, a middle and an end, in the end everything becomes simple.

We could have guessed before that this is not how life is. Life is not the way books show us. Not everything falls into place, there are plenty of errors, and the end of something is always rather the beginning of something, which, at a closer look, is found to have actually started much earlier.

Life is therefore not a disciplined and linear matter, there always are/can be repetitions, twists, dead ends, mergers, transposals (exactly like in a good literary text – if we read it from here). The text constructed in the network is a non-linear hypertext with links, comments, tags as its paratexts. And "that's a good thing because the world doesn't go in a line, and the world isn't organized into separate compartments or chapters" (Rand J. Spirót quoted by Rich, 2008). The world as it always has been (and as it can only be accepted by our most recent communication means).

The Center for Media Literacy (Hobbs, 1998) refers to UNESCO when speaking about its mission:

> We must prepare young people for living in a world of powerful images, words and sounds." For whatever our goal, it does matter in what kind of world we have to achieve it. Dedicated to promoting and supporting media literacy education as a framework for accessing, analyzing, evaluating, creating and participating with media content, CML works to help citizens, especially the young, develop critical thinking and media production skills needed to *live fully* in the 21st century media culture. The ultimate goal is to make wise choices possible. (Emphasis by Á.O.)

The goal named by CML is precisely life, an accomplished life that we have to achieve in the 21st century. Another organization also dealing with education and competences, the North Central Regional Educational Laboratory, in a publication treating the competences necessary for a successful 21st century life, captures the readers with the exclamation: "Extra! Extra! The World Is Different!" (NCREL, 2003). Perhaps the world is different than before, or perhaps we perceive it differently, but it is also possible that we see it in a completeness that people living earlier could not have perceived, precisely due to the new media. In what follows, I will list some characteristics equally valid for the world, the internet, our age, and the medium of network mobile devices:

1. It may seem completely different for different users.
2. It works by relations, it is non-linear by its principles, it is divergent and hybrid.
3. Its importance is only revealed later.
4. Personalized ways (everybody follows their own ways).
5. Everything is always present – it depends on us to see it.
6. Communities, workshops, associations based on interest.

7. Nothing can be deleted.
8. Changing – there are new kinds of uses to be learnt.
9. We cannot simulate in advance the result of certain decisions taken during our activities
10. Although it is a perfectly programmed environment, our access to certain possibilities is minimal or strongly limited.
11. Different levels of access and users
12. Cannot be observed, the data cannot be reproduced, and can be only partly recorded.
13. One cannot remain a mere observer. We must always be active and creatively suspend, rewrite, combine our roles and invent ourselves.

The list could go on, some of its elements could even be merged. The goal is to accept the perspective that the media that prepare us best for the 21st century are the products, the widespread communication means of this age. Science is unable to relate prescriptively to the phenomena it discusses. This may be similar to linguistics, which always imposes the rules of usage, controlled and edited by the Academy and we expect them to be used by individual speakers, but cannot impose them on the language use of communities. The usage is permanently changing, whether speaking about language, media, knowledge, images or relationships. Instead of discussing certain outstanding competences, one should speak about the basic principles which provide the framework to talk about competence-based knowledge, media usage, or abilities of orientation and learning. The webpage of CML contains studies, research reports, concrete suggestions, and educational materials. These materials are elaborated on the basis of a five-step model, and they have in common the acceptance of the following principles (as clarified by Hobbs in his summary of the debates on media literacy):

> Media messages are constructed; media messages are produced within economic, social, political, historical and aesthetic contexts; the interpretative meaning-making processes involved in message reception consists of an interaction between the reader, the text and the culture; media have are unique 'languages,' characteristics which typify various forms, genres and symbol systems of communication; media representations play a role in people's understanding of social reality. (Hobbs, 1998)

Lemke speaks about a “legion of literacies” and their effects on human perception, identity and possibilities:

> Literacies are legion. Each one consists of a set of interdependent social practices which link people, media objects, and strategies for meaning-making. [...] Literacies are transformed in the dynamics of these larger self-organizing systems, and we – our own human perceptions, identities, and possibilities – are transformed along with them. (Lemke, 2004)

Literacy: media, visual, digital, and information literacy

> The notion of 'literacy' as such seems to me to be too broad to be useful. I don't think we can define it more precisely than as a set of cultural competences for making socially recognizable meanings by the use of particular material technologies. (Lemke, 2004)

In this broad sense literacy is hardly different from the competence of cooking or the ability of choosing one's wardrobe. A different semiotic code and different material ingredients are needed to mediate in the process. We might have thought earlier that the semiotic system of the language is fundamentally different from the patterns of visual codes or body movement, and that language can be studied independently from these. However, it has been confirmed by now that we deal with multimedia objects which contain elements of images and films in addition to texts, in such a way that the connection multiplies the meaning of every element and thus the meaning of the whole is not just a mechanical merger of the meanings of the elements. What is more, the position of the creator is taken by the multimedia author (instead of a central voice, a convergent or divergent choir of borrowed, integrated or connected voices), and the position of the reader is taken by the network user whose interpretation of the semiotic object includes the object's earlier interpretations (comments, tags, and shares) as well. Lemke urges us to rethink our concepts and renew our rethinking: "We can't get by any more thinking that there is just one thing called 'literacy' or that is it simply what individual minds do when confronted with symbols one-at-a-time" (Lemke, 2004, p. 284). If information literacy is "the ability to reach and use information" (Rab, 2007, p. 183), then it also includes classic literacy, visual culture and the concept of media knowledge as well. Classic literacy and visual culture can again be regarded as foundational abilities, which are part and parcel of the concept of media knowledge and media literacy. And although it may be true that all these types of literacy do not mean the ability to handle certain tools, but the concrete instrumental knowledge of handling tools must also be present at a certain level. That is – based on Umberto Eco's idea – if we want to use television in teaching, first we have to teach the use of the TV set (quoted by Buckingham, 2015, p. 263). It cannot be our goal in itself to use television or new media interfaces. We use them because in certain aspects they are better adapted to reaching our goal than earlier methods or technologies. So, I think the main thing is that the means of communication be part of the educational, developmental or research processes in their instrumentality. In order to recognize their instrumentality, one must know in the first place how to use tools, and what to use them for, why we need communication means. The literature stresses multiple literacy, the multiplication of literacies (Cope & Kalantzis, 2000; Hull et al., 2003, Lankshear & Knobel, 2006; Lemke, 2004; Masny & Cole, 2009; Wood, 2007).

Multiple literacy

Literacy should be thought of in a system, in activity, in interaction, in partial competences, whose hierarchical role changes with regard to individuals, jobs, functions or goals to be reached. In the changed social context and cultural practices, success and an accomplished life are connected to other kinds of knowledge and qualities. "Building

one's career today means connecting success to other kinds of intelligence than before, especially spatial, visual intelligence" (Keszeg, 2011, p. 264.) For a better understanding of all this, we must reach back to Howard Gardner's theory, who introduced the concept of multiple intelligence. He discussed 8 aspects of intelligence, which are present in everybody and can be developed, even if not to the same degree: verbal-linguistic, logical–mathematical, visual–spatial, bodily–kinesthetic, musical–rhythmic and harmonic, naturalistic, interpersonal and intrapersonal intelligence.

Each of these types of intelligence can be developed, and a certain type of literacy can be built upon each of them, resulting in 8 different kinds of literacy. In Hull et al (2003) Kerka's summary contains further 9 types of literacies (among which such as civil, health, environmental, critical, scientific). Wood's (2007) criteria to describe literacies are: multimodality, social and cultural practice and complex system. *The Handbook of Sustainability Literacy* edited by Arran Stibbe (2009) names 28 kinds of different literacies, which were later completed with 10 more kinds on the website of the handbook. Learning new profession as a goal may need the introduction of new partial competences. Typographic literacy (Ármeán, 2014, p. 37), for instance, can be at the same time a special package of competences of a certain profession, and a fundamental competence of media literacy. Who has never learnt computer word processing, but has learnt media practice, that is, who knows that mediation systems have their special language, are constructed, dependent on the context, and should be understood within a communication process, will never think that typographic writing is transparent, discrete and innocent. Lankshear and Knobel (2006) stress three dimensions in describing multiple literacy: operationality (familiarity with tools, procedures, techniques), culturality (familiarity with the context) and criticality (familiarity with social determination). In the age of electronic or digital literacy, university students learn many things during ICT classes (programs, keyboard shortcuts) which will probably be no longer relevant by the time they complete education and go to the job market. Regardless of the program, the logic that is in the basis of the program, the program as a model are always there as a piece of knowledge – and in this much this knowledge is also part of the competence package of critical thinking. Gillmor lists not competences but basic principles, separately discussing the rules of media consumption and media creation. The principles of media consumption (actually practicing skepticism, judgment, understanding, and reporting) are: "1. be skeptical of absolutely everything; 2. although skepticism is essential, do not be equally skeptical of everything; 3. go outside your personal comfort zone; 4. ask more questions; 5. understand and learn media techniques" (Gillmor, 2008). The principles of media creation are: "1. do your homework, and then do some more; 2. get it right, every time; 3. be fair to everyone; 4. think independently, especially of your own biases; 5. practice and demand transparency."

Conclusions

All enterprises dealing with key competences of the 21st century seem to agree that the basic principles need to be clarified. Thesis sentences must be formulated which can be referenced over and over again, and which can also predict the direction of change as guidance even in case of changing, discontinuing or renewing knowledge. The

repeated keywords delineate the ability of critical thinking, teaching independence, learning how to learn, the awareness of complexity and unity, the knowledge of interactions and networking. McLuhan's conception is also worth revisiting from this perspective. The media which extend the senses are now becoming suitable for connecting in a unity in which the senses of perception on the level of the individual had originally been.

> Our extended senses, tools, technologies, through the ages, have been closed systems incapable of interplay or collective awareness. Now, in the electric age, the very instantaneous nature of co-existence among our technological instruments have created a crisis quite new in human history. Our extended faculties and senses now constitute a single field of experience which demands that they become collectively conscious. Our technologies, like our private senses, now demand an interplay and ratio that makes rational co-existence possible. (McLuhan, 1962, p. 5)

This is the place and role of new media. The wide influence of its tools, applications and techniques does not overshadow the development of the aforementioned types of intelligence, but it becomes the very place where they can be developed and practiced. The fact that we live in a knowledge-based, intensely informational age also means that knowledge is not in itself valuable, but is only a condition for supporting the process of information acquisition and knowledge creation. Today, the reason of learning is not knowledge; rather the other way around: we learn in order to learn how to learn, in order to be able to learn techniques, procedures, and routines later in life. This is what knowledge helps us: it is easier to model the new one if there is an old one to relate to, if the models possess data, content – that is, a face. Interpretation, criticism, skepticism, curiosity are all basic skills which support learning itself, and do not promise a measurable, accumulative knowledge. For what we think we know today, we may have to doubt tomorrow, or even give it up for the sake of a new, resourceful, relevant solution. And this is the healthy way.

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