

On investigating the individual in the contemporary ICT and media environment*

Tore Ståhlⁱ

Abstract

Research into the rapidly changing area of ICT (Information and Communication Technologies) in society has been performed by companies, educational institutions and governmental authorities as well as individual researchers. Still, there is rather scarce information about the premises for practice, that is, which factors influence how and why individuals use ICT, and how practices of use influence their lives? Do specific groups develop specific practices, and is youth, as it is commonly assumed, one such group?

If so, do the practices influence for example the students' views of knowledge and learning?

The educational area especially lacks information about whether and to what extent ICT influence students in a way that may have consequences for the educational sector. Before proceeding into research on the topic of ICT and youth from an educational point of view, we need to consider the methodological aspects of this enterprise. What are the phenomena we want to identify and describe? Which methods can or should we use for the task?

In this article I will point out some of the shortcomings of previous research on how people use ICT and how it affects their lives. Consequently, I will also suggest how research in this area might be improved.

Keywords: ICT, media, habitus, digital divide

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ⁱ M.Ed., Head of IT, Arcada University of Applied Sciences, coordinator of the MEDA project 'Media, Education and Epistemology', <http://meda.arcada.fi/>, tore.stahl@arcada.fi

1 PREVIOUS RESEARCH INTO USE OF ICT AND MEDIA

Since the advent of ICT into the everyday lives of the broad public, ICT has had a steadily increasing influence on how we¹ search and retrieve information and how we communicate with each other, both privately and professionally.

During the same period, the last two decades, media has changed its character from earlier one-channel, one-way broadcasting, setting the agenda of everyday life, over to multi-channel and multi-media, interactive on-demand multi-casting. Much of this development has been enabled by the technical developments within ICT. Furthermore, different parts of the population have adopted the new technologies in different ways, the young generations often being the early adopters.

For the purpose of this text, I will use the concepts of ICT and media as a pair, for two reasons. First, the border between ICT and media has been blurred, since traditional media like newspapers, radio and television are increasingly being provided in new and ICT-based formats, such as e-papers and on-line publications, newspaper web sites, radio and TV channel web sites and by means of streaming web casts, podcasts and RSS feeds². Second, a large portion of the audience, the young generation in general and the so called Digital Natives (Prensky 2001) specifically, does not necessarily perceive the various kinds of ICT equipment or different forms of media as technology but merely as a natural part of their lives, and as ways among others for receiving or publishing information, for communicating and for accessing various kinds of media resources. This perception is in contrast to the perception among so called digital immigrants who often regard ICT as technology since that is the way it has been brought into their lives. As Ito et al. (2008 p. 8) express it, we should take a broad approach to the media ecology young people are living in instead of looking at specific digital resources.

Unfortunately, previous studies have often focussed on access, technical features, bandwidth capacities and simple frequency of use. The perspective has mostly been technological and market oriented, with service providers and broadcasting companies trying to find out how popular their services are and which services have the potential of becoming seller hits. During the last decade, the investigations into ICT and media have become somewhat more nuanced by including aspects like individuals' motives for use, how they value different kinds of media and ICT services and how much they value having access to them. In the following I give a few examples on previous research without any ambition of presenting a systematic research review.

In the US, Pew Research Center has been investigating ICT and media within The Pew Research Center's Internet & American Life Project for several years, conducting continuous and follow-up research on various topics within ICT and media. Their recent studies, including topics like identity, priorities, work, education and family values, seem to go considerably deeper than their previous ones (see Taylor, Keeter 2010).

¹ I will limit this text to the circumstances in western, industrialised, developed countries, since extending the topic to other types of societies is beyond the limits of this paper

² Consequently, I choose to refer to internet without capitalizing the first letter. I regard the internet not as a collection of web pages, but as a network for transferring different kinds of content. For a discussion on this topic, see e.g. https://en.wikipedia.org/wiki/Capitalization_of_%22Internet%22#Argument_for_common_noun_usage

On the European level, Eurostat is the statistical office of the European Union. It publishes official, harmonized statistics regarding European society and economy. Eurostat is maintaining statistics about topics like the information society, youth and education but on a rather basic statistical level (Eurostat 2011a). There are also some statistics about youth, but regarding youth and ICT the information is on a rather superficial level dealing mostly with computer and internet access, general skills and main areas for use (Eurostat 2011b).

On the national level in Finland, surveys are conducted regularly by both Statistics Finland and by the Ministry of Education and Culture. The Finnish official surveys follow the same line as those on the European level, that is, they deal with information society and technology issues on a superficial and statistical level, focusing on access, frequency of use and perhaps to some extent on reasons for use (OSF 2010).

Since 1994 The Ministry of Education and Culture has produced an annual Youth Barometer as a joint effort together with The Finnish Youth Research Society and The Advisory Council for Youth Affairs. Each barometer has a certain focus or viewpoint, and in 2009 the topic was youth culture and art. These barometers go a bit deeper into how young people experience various aspects of their lives and their preferences, opinions and choices (Myllyniemi 2009, Finnish Youth Research Society 2011). The 2009 barometer's focus on creative activities is tangential to knowledge and learning but still, this barometer does not provide any information that would shed some light on how Finnish youth regards knowledge and learning.

In a series of Finnish surveys conducted in the spring of 2007, the autumn of 2008 and the spring of 2010, focus was not only on internet penetration and use but also on the perceived importance of different kinds of media. In the most recent follow-up, access to internet outsourced television for the first time regarding perceived importance among respondents younger than 35 years of age. On the question "Which media could you not consider relinquishing, that is, which media is the most important for you?" the scores among the whole population were 38% for television, 10% for radio, 32% for the internet and 18% for newspapers. For those aged 15-24, the corresponding scores were 17, 3, 74 and 5%, and for those aged 25-34, the corresponding scores were 9, 3, 54 and 12% respectively. (eMedia 2011)

According to the same survey, newspapers (96%) and television (94%) are still used at least occasionally across all age groups. The increase in the use of internet mediated television is clearly connected to age. Among those aged 15-24, 49% used this form at least occasionally, and the proportion decreased almost linearly with increasing age down to 9% among those aged 65+. Overall, the results show an increase of about 1/3 also in the use of on-line newspapers and ePapers, but not necessarily at the cost of the traditional newspapers but as a supplement to them. The frequency of use "at least occasionally" was asked on a yes/no level, and for those answering positively the duration of using various media was investigated. Also here, a rather clear trend is visible with the older users spending more time watching television and reading traditional newspapers than on-line newspapers and ePapers, and the younger users rather watching television on-line and reading on-line newspapers or ePapers. (eMedia 2011)

As the examples above show, questionnaires used to investigate ICT and media use do not usually acknowledge any explicit theory. A questionnaire used by Gray et al. (2009) in Australia may be mentioned as quite a good example but still rather superficial and technology-oriented. Without generalizing too roughly I suggest that most studies and surveys are made mainly from a technological and market oriented perspective.

2 WHAT IS THE REALITY WE SHOULD BE INVESTIGATING?

The studies mentioned above still seem to be conducted from a mainly technological perspective. They seem to lack interest into how ICT and media influence society, how they influence the lives of people and how the use perhaps also influences the development of ICT and media. They also lack an educational perspective, such as if, how and to which extent ICT and media influence learning and knowing.

An individual's usage of ICT and media cuts across all the three life worlds discussed by Jürgen Habermas (1984, pp. 52, 70): the common and objective physical world, the commonly constructed and subjective social world, and the individually experienced and subjective mental world. The three worlds interact with each other; to mention some examples, (physical) ICT and media require new (mental) competencies but also enable individuals to practice new ways of (social) interaction. Through new ways of interaction and communication individuals negotiate meanings to phenomena that did not exist before, which extends the social world.

Thus, it does not seem appropriate to limit investigation to what gadgets people have and how common they are, but we also need to investigate the interaction between the physical and the mental world: how people experience ICT and media, what desires, preferences and dislikes it awakes and what affordances it offers. Furthermore, we need to investigate the collective experience and interpretation of ICT and media, how ICT and media influences social interaction and communication, and what meanings individuals and groups negotiate for the new phenomena in the social world.

To produce meaningful insights, focus should be on the way an individual uses ICT and media for his/her personal purposes on one hand, and as an agent in a social context on the other hand. We are approaching the field of sociology, and the appropriate step in this situation would be a systematic review of sociological theories and models to find out, which of them might be best suited as a framework for exploring the individual as a social agent in the ICT and media environment. Such a review is, however, beyond the scope of this paper and thus I suggest that one possibility would be to use Pierre Bourdieu's concepts of habitus, capital, field and practice, since they seem especially suited for explaining man as a socialized subject (Krais, Gebauer 2002). Whether Bourdieu's conceptual framework is optimal or even suitable would then be the topic for another paper.

In the introduction I stated that I aim at describing individuals in the ICT and media environment, with the temptation of using the term ecology. The term media ecology has several definitions and the one by Neil Postman seems to support my aim:

“Media ecology looks into the matter of how media of communication affect human perception, understanding, feeling, and value; and how our interaction with media facilitates or impedes our chances of survival.” (Media Ecology Association)

The term media ecology was also used by Ito et al. as they wanted to avoid focussing on single digital resources and instead study the media ecology that young people inhabit, where *“more traditional media, such as books, television, and radio, are ‘converging’ with digital media”* (Ito et al. 2008, p. 8).

Postman’s definition contains several parallels (perception, understanding, value and influence) to the concept of habitus, which may provide a structure for investigating the interaction between ICT and media and the individual. However, since this definition regards media ecology as a line of research which studies media as an environment for human life, it is not appropriate to extend it to ICT and media although, as I mentioned earlier, large parts of the young generation does not regard ICT and media as separate, but simply as different forms of communication and interaction. Thus, for the purpose of this text I will continue using ICT and media environment as a concept describing the human life environment of media and (other) ICT enabled forms of communication and interaction.

3 ON HABITUS, FIELD, CAPITAL, PRACTICE AND TASTE

In this section I will discuss the usage of Pierre Bourdieu’s conceptual framework to structure the investigation of the individual in the ICT and media environment. In this effort I will rely on Bourdieu’s own writings but I will also include contemporary and later interpretations of Bourdieu’s writings. Bourdieu’s way of describing the individual as an actor or agent in a social setting is mainly built up around five concepts: habitus, capital, field, practice and taste. I will try to explain the concepts in successive sections but since the concepts are intertwined, I can’t explain any of them without involving the others. Thus, the subsequent sections refer to each other.

3.1 Habitus

Bourdieu developed the concept of habitus throughout his career. Habitus is to be understood as a system of enduring and transferable dispositions, serving as a basis for the generation and ordering of practices and impressions (Bourdieu 1983, p. 277, Kraus, Gebauer 2002, p. 5). The underlying structure that has produced an individual’s habitus uses habitus to govern the individual’s practice through mediation of its orientations and existing limits (Bourdieu 1977, p. 95). Habitus does not function mechanically but rather dynamically as part of a system, developing new practices for new situations (Kraus, Gebauer 2002, p. 79). Social practice (praxis) is not regulated by habitus alone but instead, Bourdieu sees social practice as the result of the product of habitus and capital in a certain field, also expressed as [(habitus)x(capital)] + field = practice (Bourdieu 1983, p. 175, Mahar, Harker & Wilkes 1990, p. 7).

3.2 Field

The concept of field is another of Bourdieu's key concepts, also referred to as Bourdieu's field theory. His commonly cited definition, that Bourdieu himself regarded as convenient but inadequate reads as follows:

"A field is a field of forces within which the agents occupy positions that statistically determine the positions they take with respect to the field, these position-takings being aimed either at conserving or transforming the structure of relations of forces that is constitutive of the field." (Bourdieu 2005, p. 30)

Bourdieu describes each individual as a player participating in games being played in various fields. In each field, the individual holds a certain position and is also defined by this position. Capital (see next section) represents a power over the field, and (groups of) agents are defined by their positions (enabled by their capital) in the field (Bourdieu 1985, p. 196). Playing in a field includes accepting the rules (doxa) of that field and also requires mastering the rules of the game being played there (Mahar, Harker & Wilkes 1990, p. 7, Barnard 1990, p. 78, Bourdieu, Wacquant 1992, p. 98). By playing cleverly, a player can conserve or even increase his capital in that particular field (Bourdieu, Wacquant 1992, p. 99).

3.3 Capital

The third key concept is capital, also a concept that Bourdieu developed throughout his career. Bourdieu distinguishes three different forms of capital: economic, cultural and social capital, which all can be either inherited or acquired. Economic or material capitals are assets and resources of various kinds, and the only form of capital that is directly and immediately convertible into money. (Bourdieu 1983, p. 143, 1986)

Cultural capital includes our way of life, our traditions, and cultural and intellectual goods. Cultural capital can exist in three different forms: in embodied, objectified or institutionalised states, where the last one includes for example educational qualifications. Cultural capital is often inherited by transmission from one generation to the next one, but can also be acquired. Cultural capital is predisposed to function as symbolic capital, which means it will usually be unrecognized as capital but instead recognized as legitimate competence and authority. (Bourdieu 1986)

Social capital is built up of kinship, social connections and mutual acquaintance and recognition, and like the previous forms of capital, it can be either inherited or acquired. Social capital involves networks of more or less institutionalized relationships. Social capital builds upon exchanges maintained by

"... institutions which are designed to favour legitimate exchanges and exclude illegitimate ones by producing occasions (rallies, cruises, hunts, parties, receptions, etc.), places (smart neighbourhoods, select schools, clubs, etc.), or practices (smart sports, parlour games, cultural ceremonies, etc.)"

which bring together, in a seemingly fortuitous way, individuals as homogeneous as possible in all the pertinent respects in terms of the existence and persistence of the group”. (Bourdieu 1986, p. 250)

According to Bourdieu, there is also a fourth form of capital, in a way derived from the three basic forms of capital: Symbolic capital is also called prestige, reputation or renown, and is according to Bourdieu “... *the form in which the different forms of capital is perceived and recognized as legitimate.*” (Bourdieu 1985, p. 197). Symbolic capital is also another name for distinction. Symbolic capital is what agents use in order to “make a difference”, in order to impose on others their view of the social world or what they perceive as legitimate taste. Agents possess power proportionate to the symbolic capital they hold, that is, proportionate to the recognition they enjoy within a group, which in turn corresponds to the value of their symbolic capital in that particular field (Bourdieu 1985, pp. 204-205).

Thus, the different basic forms of capital are valued differently in different fields, and the position in the field varies depending on the game (Bourdieu 1985, p. 197). For instance, in some connection (field) having a higher education degree (as cultural capital) is valued highly as symbolic capital, whereas in some other field it doesn't matter that much or at all. Capital exists only in relation to a certain field, and its value depends on the field (Bourdieu, Wacquant 1992, p. 98, 101).

3.4 Practice

As mentioned earlier, Bourdieu regards social practice as the result of the product of habitus and capital in a certain field, also expressed as $[(\text{habitus}) \times (\text{capital})] + \text{field} = \text{practice}$ (Bourdieu 1983, p. 175, Mahar, Harker & Wilkes 1990, p. 7). Thus, practice depends on both habitus and capital and the field (Bourdieu 1983, p. 175). Habitus is mainly formed by history and provides the predispositions for an individual to act, but is also dynamically formed by experiences and practice. The different forms of capital provide the assets that enable practice but then again, the field also influences the (symbolic) value of the different forms of capital. Furthermore, taste (partly via capital) also influences practice.

3.5 Taste

According to Bourdieu, taste is about the way an individual chooses to present his social space to the others, thus depicting his status and either conforming to or distancing himself from a group. Taste is not inherent but acquired during the socialisation process into society (here also in the sense of a class or a group). The surrounding society may set the legitimate taste but on the other hand, taste is also about imitation or distinction. Thus, the individual may either accept or conform to a taste propagated by a social group in order to gain acceptance within that group, or the individual may express another taste, thus marking a distance from that particular group. Depending on the individual's symbolic power, he may also impose his taste upon the other members of the group, thus

contributing to setting the legitimate taste. (Bourdieu 1983, p. 405-416, Mahar, Harker & Wilkes 1990, p. 19)

Depending on class and the available capital, the individual may choose to follow or be forced to follow different kinds of taste. The choice is largely dictated by practical reasoning, and the individual usually experiences it as a free and natural choice. Bourdieu talks about the imperative for choosing the necessary, and in this “taste for the necessary” not much importance is placed on aesthetics but instead on functionality, on what is necessary. The reason may be material deprivation such as lack of economic capital, excluding anything but the necessary, but also a habit formed by the class and its experiences; “*this is the way we do it*” or “*that is not for the likes of us*”. (Bourdieu 1983, pp. 277-310, 594)

Bourdieu mentions three areas of consumption: 1) food and alimentary articles, 2) culture and 3) self-fulfilment (Bourdieu 1983, p. 299). In the area of self-fulfilment, taste for the necessary may actually inhibit self-fulfilment, if the individual due to lack of capital cannot allow himself to do anything else but the necessary (cf. Robinson 2009).

4 RESEARCH INTO THE INDIVIDUAL IN THE ICT AND MEDIA ENVIRONMENT

Besides studies of the kind mentioned above, conducted from a mix of economic, marketing and technological perspectives, there are also attempts aimed at explaining use and preferences using some theoretical frames of reference. In the following I will present a few studies that are not to be regarded a systematic research review, but simply as examples illustrating the possibility of applying Bourdieu’s conceptual framework for exploring the individual in the ICT and media environment.

Henderson et al. (2002) have studied the use of mobile phones among young people, and found that phones were basically commodities within a material economy but as such, they were used for generating and exchanging social capital. In some cases, mobile phones were also used as status symbols and to show off, that is, to express or generate symbolic capital.

In his qualitative study, Sven Kommer investigated the differences between student teachers’ and their pupils’ attitudes towards and use of ICT and media. Kommer (2006, p. 168) identifies media competency as a prerequisite for everyday practice, and acknowledges habitus not only as use and competence but also as taste and attitudes.

Bonfadelli (cited in Meurer 2006, p. 191) points out a difference in taste regarding internet use such that those with more education focus more on instrumental and information oriented use, whereas the less educated use internet in a more unspecific and entertainment oriented way.

Further, Kommer (2006, p. 168) argues for an understanding of the habitus as necessary for dealing with pedagogical use of ICT and media. Kommer as well as Meurer (2006) identify teachers’ and pupils’ different ways of valuing ICT and media as a barrier for

successful development of ICT and media competencies. The media habitus common among teachers, tends to reproduce disadvantaging structures (for example book = good, internet = bad), thus hindering a meaningful use of ICT and media for educational purposes (Kommer 2006, p. 169). Teachers seem to have developed a taste for the necessary, limiting their practice strictly to what is perceived as meaningful and hindering them from extending their experiences (see Robinson 2009). Both Kommer and Meurer describe situations where teachers experience a conflict between the practice dictated by their personal habitus and taste on one hand, and what they perceive as being the legitimate taste on the other. In order to solve this conflict, we need to dig deeper into the *habitus* of the agents, the legitimate *taste* and the existing *capital* within the educational *field*.

In a rather large scale survey based on data from 4001 adult respondents and conducted by the Pew Research Center (Horrigan 2007), a typology of technology users was developed from three dimensions describing people's relationship to ICT, namely assets, actions and attitudes. The classification resulted in three broad categories: elite tech users (31%), middle-of-the-road tech users (20%) and few tech assets (49%). Using statistical cluster analysis on those respondents who reported having cell phones or being internet users, nine different types of users were identified within the broad categories.

Horrigan did not use any theory to guide the classification but based on the category descriptions, one can easily see a connection to Bourdieu's concept of taste, the elite users having developed tastes of luxury or freedom, whereas the task-oriented middle-of-the-road and the few tech users rather express a taste for the necessary, that is, limiting their doing to what is possible within the resources available to them and focussing on clearly goal oriented tasks.

In their qualitative study among young people all having access to ICT, North et al. (2008) also reported access to ICT as having the function of symbolic capital. More importantly, they identify the connection between habitus and cultural capital, and point out that the educational system does not necessarily bridge the digital divide. Instead, educational institutions may fail in creating availability to cultural capital to all since what the school sets up as important, has relevance for and is accessible only to those who already possess cultural capital. Thus, North et al. emphasise that bridging the economically entrenched digital divide by providing all with ICT resources, as a form of economic capital, is not enough. Educational institutions also need to incorporate ICT use that focuses on vocational, creative and communicative aspects in order to overcome what they call socially entrenched digital inequality.

Based on survey and interview data, Robinson (2009) describes spatial-temporal constraints and emotional costs (as lack of economic/material and cultural capital) as factors creating inequality among young people. Robinson identified considerable differences in the informational habitus among respondents with differing internet access. Respondents who could practice high-access and high-autonomy internet use, adopted a playful or exploratory stance towards on-line information seeking, whereas those with constrained access developed what might be called a taste for the necessary; a task-oriented approach to internet activities and avoiding "wasteful" activities that were not directly connected to their school work. The advantaged respondents' learning benefitted from the open-ended roaming and browsing that the disadvantaged respondents could not allow themselves. Thus, the differing feedback loops from "playing seriously" vs. developing "a

taste for the necessary” lead to opposing forms of information habitus that increased the differences between the two groups in terms of differing cultural capital even more. It is interesting to compare the findings of Robinson with the ones of Bonfadelli (earlier in this section). A synthesis could be that the disadvantaged users either focus fully on the task at hand or, if they do not have the basic insight that ICT and media can be used for searching information, use them for pure entertainment. In both cases, they never manage to advance to the stage of playing seriously, thus being stuck either in an unproductive practice or in one where their learning does not develop.

Neale and Russell-Bennett (2009) surveyed what value users derive from social networking applications, and found that the value is a combination of functional value and social and emotional value. The functional value was mostly about having access to up-to-date information and other resources, which can be seen as both an economic and a cultural capital. Regarding the social and emotional value girls indicated self-expression as an important motivator, whereas boys indicated social competition. Perhaps these both can be interpreted as social capital that, used in the appropriate way considering the field, can be transformed into symbolic capital.

Song (2010) takes a rather broad approach in applying the Bourdieusian framework for analysing the cultural dimensions of on-line communities and Web 2.0. Song identifies websites as structured spaces that interact with given dispositions that make practice and participation meaningful. In this approach she uses most of Bourdieu’s concepts including habitus, field, capital and practice.

Dagmar Hoffmann (2011) analyses the creation and construction of “self” in digital and on-line games. Although she does not explicitly use Bourdieu, his conceptual framework can easily be applied to the points she brings forth. Hoffmann points out increase in disposable time, in education and in autonomy to act, and the ability to define and (re-)construct oneself as new privileges enjoyed by the individual in current society. These privileges also offer the individual the possibility (or require him) to position himself, which for some individuals poses an extended autonomy, for others a source of uncertainty. These privileges can be regarded as social and cultural capital that require the individual to have a developed taste in order to be able to fully utilise the capital for his purposes. Hoffmann points out the virtual worlds and on-line games as special kinds of fields, where the participants can alter their avatars (habitus), pretend to have assets (different forms of capital) they wouldn’t have in real life, and test the boundaries of the rules (doxa) without having to worry about the consequences. A failed game can always be restarted and you can even fix new “lives”. By changing identity, the failures of earlier games never harm you in terms of decreased symbolic capital but instead, they can broaden your experience and increase your capabilities in all subsequent games. And if you play successfully, you would choose to keep your identity, since through success you will gain reputation and respect (symbolic capital).

The roots of Bourdieu’s concept of habitus lie in his ethnological studies, where he used several field research methods for qualitative data collection: observation, photographing, interviewing experts and participatory observation, and later also statistical methods (Bourdieu 1983, p. 405ff., Mahar, Harker & Wilkes 1990, pp. 37-44, Kraus, Gebauer 2002, p. 8). As the examples above show, qualitative data has been used to investigate use of ICT and media (Henderson, Taylor & Thomson 2002, Kommer 2006, Meurer

2006, North, Snyder & Bulfin 2008, Robinson 2009). Bourdieu himself has also used a questionnaire for quantitative data collection (Bourdieu 1983, p. 405ff.), although that questionnaire now appears hopelessly outdated for use in the 21st century. However, quantitative studies applying Bourdieu's conceptual framework into ICT and media in relation to education seem rare. A search on the topic resulted in only one study by Gatrell et al. (2004). The study linked area of residence as social and symbolic capital to health inequalities, and thus the setup is rather close to this topic, although in another field.

5 ICT AND MEDIA IN LEARNING AND EDUCATION

As shown in the previous section, efforts have been made to go deeper into the topic of the individual in the ICT and media environment. So, is there anything lacking in these works? Why should we extend and if so, in which direction?

Looking into the future, Facer and Sandford (2010) present some interesting implications for future research in education and technology. First, they recommend that educational research should pay more attention to education and learning also outside formal educational practices. Since informal and non-formal learning outside schools is often ICT and media enabled, research into this area could well be supported by the Bourdieusian concepts presented earlier, by providing a way of grasping the new ICT and media enabled fields and the agents using their capital to occupy positions in these fields. Second, Facer and Sandford call for research into the role of the individual as agent in *the socio-technical context*, an interesting expression for the new field of ICT and media environment.

Finally, Facer and Sandford criticise the general tendency of not questioning the taken-for-granted assumptions of one inevitable future. Following this tendency, we run the risk of designing future education that will serve its purpose only if that particular future becomes reality. The concepts developed by Bourdieu could well serve as a frame of reference for research that could appropriately measure the effects of educational policies in an early stage, so that adjustments in the policies could be undertaken more dynamically to better serve the new learners living in the rapidly changing ICT and media environment.

Important openings have been made by North et al. (2008) and Robinson (2009), who showed that it is not just about a digital gadgetry divide but more importantly, about a socially entrenched digital inequality. This digital inequality forces disadvantaged students into a taste for the necessary, which keeps them trapped in unproductive practices and hinders them from developing their learning. Instead, providing opportunities for what Robinson calls "serious play and enriching recreation" might actually enable something like the Vygotskian proximal zone of development. Robinson also identifies access, attitudes and skills as factors influencing learning.

Van Dijk (2008, p. 290) presents a recursive and cumulative model of access to digital technologies containing four types of access, marking the necessary steps to make use of digital technology. The first step is motivation to use a technology of some kind, with some resemblance to the digital habitus and taste described by North et al. (2008). The next three steps express that only when having unrestricted and autonomous (2) material,

physical and temporal access to ICT resources, the individual will be able to develop her (3) skills, which in turn will enable and empower her to (4) use ICT resources for her personal objectives. Lack of the three latter types of access have been suggested as causes for so called primary, secondary and tertiary level digital divide. The latter steps also resemble Robinson's (2009) emphasis on high-autonomy access.

Taken together, the above examples show that it is a matter of the interplay between different forms of capital, the habitus and the field, expressed by Bourdieu as $[(\text{habitus}) \times (\text{capital})] + \text{field} = \text{practice}$ (1983, p. 175). They all influence which position the individual can occupy and the taste he can follow. Thus, they all have consequences for practice, where learning as consumption through self-fulfilment may be regarded as a form of practice.

Consequently, from the perspective of education, research on the individual in the ICT and media environment should focus on whether, in which ways and to which extent use of and access to ICT and media may influence the individual's way of viewing knowledge, his way of learning and his opportunities for learning and for developing his way of learning. Furthermore, or as part of this, as Facer and Sandford (2010) point out, we need to take a critical stance towards the (too common) assumption that there is only one inevitable future to which we must adapt or resist. Instead, education has certain responsibilities that need to be reflected in research on the role and future of education, the first challenge being to answer the question about the purpose of education.

In trying to answer the question put forth by Facer and Sandford, the "four key dimensions of change" that are significant for conceptions of knowledge and knowing, as identified by Colin Lankshear, may prove helpful: changes in "the world to be known", changes in conceptions of knowledge and processes of "coming to know", changes in the constitution of "knowers", and changes in the relative significance of and balance among different "modes of knowing" (Lankshear 2003). Also Roger Säljö, in his insightful article "CAL – Past, present and beyond", in the special issue upon the 25-year anniversary of The Journal of Computer Assisted Learning, points out that technology affects how society builds up its social memory, thus changing our interpretations of what learning is and changing our expectations about what it means to know something. Säljö (2010) actually suggests that "*... perhaps in this new [media] ecology, what we need to learn and remember, and how we do it, will be different from what we are used to*".

The previously described studies provide us with a hint of which direction to take. Although some of them applied only one or two of Bourdieu's concepts, they showed that the whole set of concepts can be used. The next step would be to include all of the previously described concepts in order to get a proper picture. Using all the Bourdieusian concepts referred to above, it should be possible to describe individuals with various habitus in the different fields of the ICT and media environment. What are the characteristics of the different fields such as closed learning management systems vs. open social media? What is the habitus of the users inhabiting the different fields and what positions do they occupy in these fields? What forms of capital do the individuals possess that enable them to occupy certain positions? In what settings are certain individuals capable of developing a taste for luxury (playing seriously) and what settings force other individuals to develop a taste for the necessary?

6 HOW TO GO ABOUT – QUANTITATIVELY OR QUALITATIVELY?

In “An invitation to Reflexive Sociology” Wacquant asks Bourdieu for advice on how to study a field and Bourdieu states three necessary and internally connected steps (Bourdieu, Wacquant 1992, p. 104ff.): First, one needs to study the position of the field in relation to the field of power. The second step is to map out the objective structure of the relations between the agents’ positions in the particular field. Finally, one should analyse the habitus of the agents in the field.

From Bourdieu’s advice follows that the first concept to define and delimit is the field itself, which in this case would be the field where users use and interact with and through different kinds of ICT and media. Throughout the previous sections I have used the concept of ICT and media environment, but it might also be possible to use the concept “ICT and media consumption field”, to distinguish it e.g. from fields for development, production, marketing etc. It may be worth noticing that at this stage, I do not talk about NetGeners or Digital Natives, since I don’t know yet who the players are. Instead, at this first stage I call for studies regarding the position of the ICT and media consumption field in relation to the field of power, which poses the problem: what, in this case, is the field of power?

According to Bourdieu, “*the structure of the field ... is defined by the structure of the distribution of the specific forms of capital that are active in [the field] ...*” (Bourdieu, Wacquant 1992, p. 108). Having a sound knowledge of the different forms of capital enables us to “*...differentiate everything that there is to differentiate*”. The different forms of capital are possessed by agents playing their positions and using their capital to their advantage. Thus, I suggest the ICT and media consumption field could be regarded as holding three groups of agents:

- 1) Consumers having various needs and preferences (stemming from their habitus), and practicing various tastes when consuming ICT and media. The ways of consuming partly conform to the usage intended by the producers, but partly the forms of consumption are an unforeseen product of the consumers’ individual and collective preferences and innovation capacities.
- 2) The producers, ICT manufacturers and media companies producing equipment, gadgets and media services with new features and capabilities, and trying to convince the consumers about the excellence and superiority of their product.
- 3) Representatives of “the official taste”, that is, different official institutions in society such as the educational system, religious societies and the state, exerting power upon producers regarding what they should produce, and upon consumers regarding what and how they should consume (cf. Kommer 2006, p. 169 regarding disadvantaging structures).

In addition to the three groups of agents we can distinguish a special kind of force influencing the game played in this field, often referred to as “the market forces”. The market forces can be regarded as an aggregation of the choices of the first group of agents, individual consumers, but they are probably also influenced by other factors such as currency

fluctuations and the national and global financial situation. Therefore, I suggest the market forces cannot be regarded as a separate agent but still, it influences the playing conditions for the three agents.

Consequently, the field of power would be the forces operating between these three agents, struggling for domination, for setting the legitimate taste. As Bourdieu states, defining the field is a challenging hermeneutic circle since it requires defining the forms of capital, which in turn requires knowing the logic of the field (Bourdieu, Wacquant 1992, p. 107-108).

Having defined the field and the forms of capital, the second step would be to investigate the structure of the relations between the agents' positions in the field. Focus would be on the consumers as the only individual agents, and on how the position of a consumer relates to the other consumers' positions. The third step would be to study the habitus of the ICT and media consumers in terms of trajectories, preferences, knowledge, skills and current choices.

Questions to be explored are: is it possible to distinguish what in literature has been called Digital Natives and NetGeners and if so, what positions do they occupy? Who are the other players, and what are the relations between their positions? Going further, we should study the habitus of the different players; what forms of capital do they possess, and what connections can be traced between their capital and favourable or unfavourable opportunities in their trajectory?

In order to answer the questions above, we obviously need to gather information about how individuals have been influenced by and how they interact with various kinds of ICT and media. When starting to investigate the trajectories, actions, habits and attitudes of individuals, the suggested starting point is usually some qualitative method for data collection such as observation or interviews. This kind of data collection is usually performed on a limited group of individuals, which brings about the problem of choosing individuals with the highest potential of providing the broadest and most descriptive information.

We have, however, no reason to believe that a population, such as an annual cohort of young students, would be a homogenous group of individuals but on the contrary, it is rather probable that the population is heterogeneous. Considering this, limiting observations to a small group of individuals would most certainly entail overlooking potentially relevant characteristics, since there is high risk that the small group of individuals will not cover all variations occurring within the population. Thus, the conclusion should be that it is meaningful to start with a broad, quantitative approach providing a superficial but broad birds-eye view.

Regardless of how this information is gathered, it will result in a collection of (unordered) data unless we structure it in some way. Structuring data serves the purpose of revealing trends and discerning patterns, that is, trends and patterns that can be ascribed to certain groups that have something in common. Structuring is also about being able to draw conclusions about the frequency of those trends and patterns both within and across groups. Thus, one way of structuring would be to identify groups of individuals, that is, classes:

*“On the basis of knowledge of the space of **positions**, one can separate out classes, in the logical sense of the word, i.e. sets of **agents** who occupy similar **positions** and who, being placed in similar **conditions** and subjected to similar **conditionings**, have every likelihood of having similar **dispositions** and **interests** and therefore of producing similar **practices** and adopting similar **stances**.”* (Bourdieu 1985, p. 198, my emphasis)

The emphasized words in the citation above provide us with some hints of what we should be looking at:

- The users’ biographies and trajectories in relation to their current use of ICT and media.
- Their perception and understanding of ICT and media and how they value them.
- How ICT and media influence them and how they influence ICT and media, or how they use ICT and media as a tool for influencing their surroundings.
- On which fields, such as open vs. closed environments, do they play and which positions do they occupy?
- Which stances do they take, for example offensive or defensive, passive or active, pro-active or re-active?
- What forms of capital do they possess, and what symbolic value do the forms of capital constitute?
- What kind of power does their symbolic capital allow them to exercise, for example in setting the legitimate taste?
- Can we distinguish a “taste for the necessary” vs. “playing seriously” among some individuals and if so, is there a connection to the field, their position and their capital?
- Who are the ones defining and (re)constructing themselves, and setting the taste?

Bourdieu’s theoretical definition of “class on paper” is actually what is done in the statistical method of cluster analysis. As Bourdieu states, it is not an actual class in the sense of a group of people gathering, acting and “struggling” together, but rather a probable class where the individuals with similar backgrounds under similar circumstances act and practice in similar ways. Describing classes is about grouping entities (individuals) by similarity, which aims at minimising within-group variance and which may also involve maximizing across-group variance. When classification is based on multiple dimensions, we may talk about creating a typology (Bailey 2005, p. 889).

When the ground for classification is not known, as in the current study, but the task is to explore which observations or variables can be used to form classes with internal similarity, this can be done using cluster analysis. This stance is also supported by Arabie et al. (2005, p. 317) stating: “*Clustering should be among the first multivariate data analysis techniques employed in attempting to identify homogeneous groups, equivalence classes, or multimodal data*”. The method does, of course, not provide conceptual classes but theoretical ones, and the conceptualization of the classes will follow afterwards, through interpretation.

7 CONCLUSIONS

In the introduction I criticized previous research into ICT and media for being too much focussed on technological features and marketing, regardless of whether the studies had been performed by companies, educational institutions or governmental authorities. These shortcomings were illustrated by some examples from both the US, Australia, Europe and Finland. As the examples show, such approaches only provide us with information about the physical world such as how new computers people possess or how fast internet connections they are using etc. This information is superficial and does not provide information about the experiences of ICT and media, the mental world, or how ICT and media influence individuals or groups in constructing their common interpretation of it, the social world. Thus, the information does not form a ground to build on in order to go further, to study the relationships between ICT and media on one hand and learning individually and in groups on the other.

Another concern is that technical and physical access alone does not guarantee that users can take advantage of ICT and, often ICT-based, media. We may have over-bridged the first-level digital divide, but there is still wide-spread secondary and tertiary-level digital divide. Often, the latter ones are overlooked; e.g. it is commonly assumed that all youngsters are Digital Natives. The fact is, however, that all youngsters are not Digital Natives, and also among those who may be regarded as Digital Natives or alike, a secondary and tertiary-level digital divide exists (Ståhl, submitted). By investigating ICT and media use only on the level of device access and internet penetration, we will not be able to identify a secondary and tertiary-level digital divide. To conclude, instead of simply investigating the ICT and media environment, we need to investigate the individuals in this environment, and how the ICT and media environment influences the living, learning and being of both individuals and groups.

As stated earlier, the conceptual framework of Pierre Bourdieu is well suited for explaining the individual as a socialized subject. The examples presented showed that using Bourdieu's concepts it should be possible to explore dimensions that have not been explored before, which also helps understanding relevant aspects of the interaction between ICT and media and human life. To mention a few dimensions especially relevant from the educational perspective: What kind of ICT and media services are experienced as attractive and motivating by users? Is this experienced in the same way by all users? Which players have the power of dictating which ways of using ICT and media is appropriate? To go further on this: Are educational authorities setting the taste according to their own, outdated habitus thus hindering the young generation from using ICT and media in a way that would allow them to experience the use as meaningful and thus support their learning?

As I mentioned earlier, I cannot guarantee that Bourdieu's conceptual framework is the optimal choice but it would definitely be worth trying. It is obvious that applying Bourdieu's concepts to operationalise this field of research is an arduous enterprise. Giving it a serious try is, however, the only way of finding out if it will bear fruit.

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