On the myth of the Digital Natives and the Net Generation

▶ Analyses of the frequency and type of media use in persons up to 30 years of age prove that the so-called Digital Natives do not exist. Their media use is a leisure pursuit only, and is not being transferred to learning; it principally serves the purpose of communication with peers, the most important part in the socialisation of young adults. Against this background, the article sheds light on the nature and function of media use in young adults and argues that the learners' individual motives and dispositions most decisively influence the use of new media in learning contexts.

ROLF SCHULMEISTER
Prof. Dr., ZHW Centre for University and Continuing Education, Hamburg

The myth of a media-omnipotent "Net Generation"

The post-1980 generation has come to be known by various sobriquets: TAPSCOTT (1997) coined the phrase Net Generation, while HOWE and STRAUSS (2000) called them Millennials.

The best-known epithet was invented by PRENSKY (2001), who referred to young people as Digital Natives. Ever since, it has widely been asserted that those born after 1980 are Digital Natives because they have grown up with the new media and therefore possess certain distinctive traits – visual orientation, multi-tasking, active learning, tolerance towards minorities – and are team-oriented, inductive learners, who can switch their attention rapidly and give quick responses. PRENSKY casts them as native speakers of the digital language, who even have different kind of brains following the catalyst of the new media "singularity" (or digital Big Bang),, and who differentiate between "legacy" (old) and "future" (new digital) knowledge (cf. SCHULMEISTER 2009a). The term Digital Natives is usually trivialised in the press and media. For instance, the headline for the 30th anniversary of the Commodore computer read: "The C64 turned an entire generation into 'Digital Natives'" (Welt Kompakt 10.01.2012, p. 26, own trans.).

In the same way, the "Net Generation" is just a metaphor. ULRIKE JUREIT (2006) voiced the criticism that the term generation was "now so popular that it risks degenerating into an empty cliché. In the mass media the 'generation' label is a tremendous seller, albeit without any quality standards" (p. 19, own trans.). The age-cohort in question lacks any of the features that would define a generation: homogeneity, identity, self-thematisation, commonly rooted experience, historical reference events or a collective attitude to life. The Internet as a common source is not a sufficient basis for describing a generation. The term Digital Natives implicitly suggests that the technology is the cause of this behaviour, rather than the psyche of young people who have discovered an agreeable form of self-motivated activity in these media. But youth and media researchers are critical of the technological determinism

of such an assertion (BUCKINGHAM 2008; JENKINS 2006). Unifying experiences or collectively endured historical upheavals are not identifiable in the case of today's 25- to 30-year-olds, and any self-identification with Digital Natives applies only to a tiny minority and may stem from a "distorted self-interpretation and world perception" (JUREIT 2006, p. 131, own trans.).

Media usage data refute the Digital Natives theory

Do people born post-1980 really behave in the way that Digital Natives are supposed to? In superficial terms, some aspects seem to support this proposition. For instance, the Kaiser Family Foundation (2010) reports on a massive rise in media use in children between the ages of eight and eighteen years old: young people in the USA spend 7.38 hours per day using media, or even more (10.45) if the proportion of media in simultaneous use is counted. Similar-

ly, the online studies carried out for Germany's two public broadcasters (ARD/ZDF-Online Studien) by the media research network Medienpädagogischer Forschungsverbund Südwest (MPFS) have registered a rise in digital-media use to the same level as television consumption over the last 10 years. The millions of people piling into Facebook seem to support a similar conclusion. It is therefore necessary to look beneath the surface of these high numbers:

First, studies that collect data on media use along with other leisure activities record that non-media-based activities, like outings with friends and parents and playing outdoors, rank highly (cf. MPFS 1998–2009; MPFS 1999–2008). In reality, what matters to young people are not their media but their peers and families. Their free-time activities encompass far more than television, gaming and the Internet: sports, playing music, animals, clubs and church are all significant.

Second, in terms of media use, television is often ranked ahead of other media. In the Kaiser Family Foundation study, television accounts for 4.29 hours and computer use 1.29 hours per day, in the ensemble of media activities, MP3 challenges the position of the computer (2.39 hours).

Third, it is necessary to differentiate computer and Internet use by its various functions. If the activities are analysed according to the different functions, a clear dominance emerges for everything that enables communication: email, instant messaging and postings in social communities. "Almost half of the daily time spent on the Internet is attributed to communication (…). In teenagers, interaction via the various channels takes up 58 per cent of usage time" (BUSEMANN/GSCHEIDLE 2010). Communication is extremely important for young adults. Today the SMS is replacing the landline phone call. The search for role models is another important factor: the teenage magazines of yesteryear are being replaced by websites about sports idols, film stars or animals (THEUNERT 2011, p. 71).

Anyone who expected Web 2.0 to mean a quantitative jump in user participation was initially proved right by the rising user numbers on Wikipedia and weblogs. But in the year 2010 the ARD/ZDF online study (BUSEMANN/GSCHEIDLE 2010) found that although passive Web 2.0 use was still on the rise, the rate of growth was already beginning to fall, and active use of Web 2.0 has already shrunk by 50 per cent. The predominant use of wikis and weblogs is receptive; very few people use them productively. Interest in photo communities, bookmarking, weblogs and Twitter is diminishing: "the picture is crystallising of a two-class society in user-generated content applications" (p. 361, own trans.). This observation is backed by the most recent study from Pew Internet & American Life (LENHART et al. 2010): the blogging rate among teenagers in the USA fell from 28 to 14 per cent between 2006 and 2009. Likewise, commenting on blogs decreased from 76 to 52 per cent. The mobile phone seems to be triumphing over all

other media. This again confirms that communication with peers is the most important socialisation factor for young people. Twitter plays very little part in it (5%). The 14th ARD/ZDF study also confirms "rather modest Twitter usage" (BUSEMANN/GSCHEIDLE 2010). If these findings are considered from the viewpoint of socialisation, it becomes evident that young people select those items from the media mix which best meet their needs as young people. Communication with their peers dominates their life, and entertainment their leisure time. Content plays a more minor role.

Digital literacy

Digital literacy covers a range of issues from information competence through communication competence to media competence. In no way does the term imply that longstanding skills in the context of analogue media have become obsolete. Quite the opposite: reading skills and attentive listening, critical appraisal of information and advertising in newspapers, radio and television self-evidently still belong to the field known in the English-speaking research community as literacy (cf. Media Literacy Expert Group 2007). Whereas the main aim of information competence is to "recognise the need for information, search for it systematically, select it critically and re-use it effectively" (cf. HEINZE/FINK/WOLF 2009, p. 7, own trans.), media competence is defined less in terms of hardware and software use and access to resources, and more by the ability to understand contents and communication processes in the media and to contribute to them creatively (cf. OFCOM 2006a/b).

Young people's media competences: are they "digital" learners?

All this has nothing to do with the media-omnipotence that Digital Natives are presumed to possess. Analyses of digital literacy (cf. box) have shown that such abilities have not developed in students in the way that schools and universities necessarily expect (cf. PAECHTER et al. 2007; HEINZE/FINK/WOLF 2009; OFCOM 2006a/b; LIVINGSTONE/BOBER/HELSPER 2005). These skills do not simply materialise incidentally as a result of web-surfing. No transfer is taking place from leisure media use to learning; other studies back this up (cf. KVAVIK/CARUSO 2005).

Understanding in the sense of digital literacy means culturally interpreting and critically evaluating information and communication in media, with the aim of participating in societal processes and digitally mediated social and political actions in different contexts. Since digital media are especially prone to the manipulation of information, misuse of data, viral marketing and profiling on the basis of individual data footprints, and because they may invoke emotional distress and social brutality, the passion for new ideas definitely needs to be complemented by active engagement and rational evaluation. The greatest deficits that we find, however, are in active participation and creative content generation (cf. LENHART et al. 2010; BUSEMANN/GSCHEIDLE 2010).

Psychological aspects must not be ignored either: many users get lost in the surfeit of information and offers, never-ending communication processes and the attraction of numerous contacts. Since users could so easily be led astray, media competence is about more than being able to master the medium, and – as SHERRY TURKLE (2011) made especially clear in "Alone Together" – also requires the ability to resist being mastered by the medium, and to exercise self-control (cf. SCHULMEISTER 2011).

Media use in learning contexts

The findings of studies on digital literacy are generally applicable to the handling of media in school, university and vocational training. Studies on media use by students[1] confirm that only a minority are equipped with strong media competence and express an interest in seeing more media used. 2,098 students took part in the online survey "Recruiting the Next Generation" (SCHULMEISTER 2009b). They were asked about their use of the Internet. It was found that students used it to communicate daily, for research perhaps on a weekly basis, and for shopping perhaps monthly or less frequently. This ranking reveals a highly pragmatic use of Internet services. Students were either unfamiliar with or did not use half of 32 Internet applications on which they were questioned, including all the significant applications for learning (bookmarking, web conferencing, virtual classrooms, podcasts, etc.). Its principal use proved to be for music. Video, photos and film and Internet radio are the second most frequent type of use, while podcasts, Internet TV, games and weblogs are not used by the vast majority. Only applications promising clear added value are selected, and the rest are de-selected. Several surveys have arrived at similar results (cf. KLEIMANN/ÖZKILIC/GÖCKS 2008; NAGLER/EBNER 2009). In the "ZEITLast" student workload project, a web-based time-budget analysis was carried out in 25 samples from 20 degree programmes, each for five months, logging the amount of time that students spent studying (cf. http://www.zhw.uni-hamburg.de/zhw/?page_id=419; SCHULMEISTER/METZGER 2011). The survey also recorded how often and for how long they used digital media for their studies: media use relevant to the major subject of their study programme was confined to a few minutes per day, rising only slightly in examination periods. This tells us nothing about the total time that students spend using media, since activities in leisure time were deliberately not recorded.

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1 *I confine these remarks to studies about students; I am not aware of equivalent studies for initial vocational training. In continuing vocational education and training, other necessities dictate the trend towards distance study, and hence also towards a simple form of media use.*

What can be concluded from this for the use of media in IVET, CVET and training in general? The vast majority of learners would like to see moderate use of media in teaching (KVAVIK 2005). Communication functions and Facebook earn high approval from school pupils, vocational trainees and university students. E-learning and the rest of the Internet, however, do not measure up to the learners' needs.

Individual motives and abilities determine media use

The attempt to explain this behaviour brings to our attention – not for the first time in history – that causal conclusions about usage cannot be drawn from properties of the technology. The use of media and the misuse of technology, which can always be deployed ambivalently, cannot be ascribed to the capabilities of the technology but to the motives of individuals in the social and cultural context. It is not technology that determines use but social scenarios and cultural practices that influence the type of use (cf. BUCKINGHAM 2008; JENKINS).

Our focus must therefore be directed to the needs and motives of users in adolescence, whose primary socialisation goal is the development of their own identities. The lack of any transfer from leisure activities to learning can come as no surprise, because young people's search for identity is served primarily by communication in their free time. In a young person's world there is a strict distinction between leisure time and learning. Although the media offer rich opportunities for learning, this function goes unused. Young people confine their skills very much to leisure activities like maintaining contacts and communicating with peers via social media, surfing and, to a lesser extent, gaming.

The cautious approach of students to media is a reflection of their learning behaviour, for which social and cultural factors are responsible, along with psychogenic factors of the learning situation, which affect cognition, motivation and fear. Many learners succumb to distractions easily and tend to put off forthcoming tasks (cf. GÜNTERT/SCHLEIDER 2011). Students who do not suffer from poor concentration and low endurance achieve better grades in less study time. For those affected by distraction and procrastination, the disturbances to learning have an adverse effect on their learning outcomes, even when the time spent studying is longer (cf. SCHULMEISTER/METZGER/MARTENS 2012). The overwhelming majority of learners are thus a long way from the ideal of self-directed learning, and for this reason, we cannot reach all learners with a single form of learning provision.

Another reason for the divergence in media-use habits is the diversity of learners. It seems to be a false assumption that everyone would if only they could, and everyone could if only they knew how. The expectation nurtured by some e-learning enthusiasts that everyone will join in can only lead to disappointment. The group of proactive users will not exceed a minimal proportion, because not everyone can muster the self-organisation necessary for participation at all times (cf. REINMANN 2008). Studies on the basis of the self-determination theory of motivation only ever identify a few learners who have the self-determined motivation to learn in the given context (cf. DECI/RYAN 1985; METZGER 2011). It is therefore unrealistic to expect that all the people who use an innovation receptively will go on to use it actively. Internet users who are active producers will always be in the minority, but this should not be taken as a pessimistic assessment. People have different experiences, different interests, and get involved in different social and political issues. Perhaps they act with self-determination in other areas such as sport, culture, and politics or in social life, but not in learning. The diversity of learners is a great asset, and education must do it justice. ■

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