

## Adolescents' New Media Literacy in Flanders (Belgium)

Steve Paulussen\*, Cédric Courtois\*\*, Peter Mechant\*\*\* and Pieter Verdegem\*\*\*\*

\*IBBT-MICT, Ghent University, Belgium

\*\*IBBT-MICT, Ghent University, Belgium

\*\*\*IBBT-MICT, Ghent University, Belgium

\*\*\*\*IBBT-MICT, Ghent University, Belgium

### Abstract

Teenagers are often described as digital natives having an open orientation, a strong belief in equality and a desire to be judged based on their contributions. However, the cracks in this story are apparent. Several authors argue that teenagers strongly differ in their skills and critical attitude to benefit fully and safely from the Internet's expressive potential.

This paper presents the results of a large scale survey based on a sample of 1725 Flemish teenagers representative for gender, education type and grade, questioning adolescents' adoption of and attendance to media technologies. The findings emphasize the role of context in understanding differences in (young) people's media behavior. As almost all youngsters are online, new inequalities seem to emerge between those who have new media at their individual and private disposal, and those with lesser, or at least more limited, opportunities to participate in today's digital media culture. Another finding confirms the success of Social Network Sites (SNS), which is often tied to the eventual participation of a large portion of their user base. We also discern a small but substantial proportion of adolescents publishing personal information on his or her profile page, which raises fundamental questions about adolescents' online risk awareness.

**Keywords:** Media literacy, youth, Internet use, digital culture

### Youth and New Media

Teenagers are increasingly growing up in digital media-rich environments. Research on European children's use of the Internet and related new media technologies shows that the number of young people online continues to grow. According to the Flash Eurobarometer of 2008, 75% of 6-17 year olds in the EU25 were using the Internet; in the Nordic countries this figure even rises to more than 90% (The International Clearinghouse on Children, Youth and Media, 2009: 7). Representative figures on Flanders, the Northern Dutch-speaking part of Belgium, indicate that 97% of Flemish individuals own a television set, 92% has a cell phone, 81% owns a computer and 78% has an Internet connection (IBBT, 2009).

In Flanders, new media have become commonplace in young people's daily lives, at least in terms of access. However, this does not mean that they all have 'equal access' to the opportunities offered by information and communication technologies (Livingstone & Helsper, 2007). Buckingham (2005: 8) remarks that "*even for those children with home access, socioeconomic conditions influence the level and quality of*

*access (...), as do the different ways in which computers are used in the household".* Also data collected by the EU Kids Online network support the existence of a correlation between socioeconomic statuses (SES) and youngsters' access to the internet (Tsatsou, Pruulmann-Vengerfeldt & Murru, 2009: 113). Livingstone & Haddon (2009a: 22) agree that gender and SES differences across households remain significant, even though they note that especially in the European countries with high access to ICT, these differences are reducing.

Although sociodemographic and socioeconomic variables, such as income, gender, age, education and family structure are still relevant to describe digital inequalities (Roe & Broos, 2005; Vandoninck & Roe, 2008), the explanatory power of these parameters is limited, especially in societies that already have higher levels of computer and internet penetration. In order to better understand and explain differences and inconsistencies in the acceptance of ICT and the intensity and variety of ICT uses, other variables, such as skills, attitudes and 'social resources' must be taken into account (Verdegem & Verhoest, 2009). Furthermore, it is important to consider the context, or the environment, in which new media technologies are used.

Since the 1950's two distinct relevant trends have emerged, characterizing the significance of the home in teenagers' everyday life (Livingstone, 2002). First, family life has become clearly separated from public life; ; this demarcation between public and private space is symbolized by the front door. Bakardjieva (2005), who refers to this private space as the home, describes it as an important internal site of everyday life in which objects from the exterior pervade. It is a space in which people define their ways of using artifacts that reflect society's macro order. This links in with what Silverstone, Hirsch & Morley (1992) mean by 'the moral economy of the household', a concept that refers to the household as a micro-economic system with distinct cognitions, evaluations and aesthetics that is connected with the formal economy through its production and consumption.

Withal, within this private setting, different actors such as parents and their children enact separate roles. As a direct result, Livingstone (2002) also notices a second distinct trend. She points to the relative separation of teenagers' private space from both family and public life, symbolized by the bedroom door. Moreover, both these trends are in close relation with the appropriation of mass media in the home. More specifically, recent studies stress the importance of the private space in relation to teenagers' use of new media technologies. Adolescents' bedrooms are becoming increasingly filled with media technologies, which seems to lead to a *bedroom culture* where "*children and young people spend significant proportions of their leisure time at home with the mass media, increasingly screen media, in their own private space rather than communal or family space*" (Bovill & Livingstone, 2001, pp. 180-181). Bovill and Livingstone found that a room's degree of media richness is positively associated with the time a teenager spends in it.

Moreover, media-rich teenagers spend less time with family and more time on their own (Bovill & Livingstone, 2001).

When looking at differences in young people's uses of the Internet and other technologies (Livingstone & Helsper, 2007), it is therefore relevant to consider the contexts and conditions in which they use or are able to use these technologies, whether the appropriation takes place within a familial or a strictly private context. In the latter respect, it may be useful, for instance, to examine the relationship between the space where new media are used and the degree of risky online behavior. Which brings us to one of the key challenges of today's digital media culture: how can we ensure that (young) people are prepared and empowered to encounter the negative or risky aspects of a digital media life?

### **Challenges of a Participatory Media Culture**

Teenagers are often described as digital natives (Prensky, 2001) or as a part of a 'Net Generation' (Leung, 2004). They are ascribed to all kinds of positive characteristics such as having an open orientation, a strong belief in equality and a desire to be judged based on their contributions. However, the cracks in this story are apparent. Several authors argue that teenagers strongly differ in their skills and critical attitude to benefit fully and safely from today's Internet expressive potential and minimize the risks associated with it (Schulmeister, 2008; Livingstone & Haddon, 2009; Livingstone & Helsper, 2010).

In a report on the educational challenges of the emerging participatory media culture, Jenkins *et al.* (2006) raise three key concerns. First, they point at the emergence of a "participation gap": as most youngsters have gained access to ICT infrastructure, new inequalities seem to develop between those who have the skills, competencies and capabilities to fully participate in the digital media environment and those who are not or less well prepared. This also relates to the concept of "the second order digital divide" (Attewell, 2001). Second, they note a "transparency problem" as young people's critical and reflective awareness about the ways in which (new) media shape our perceptions tends to be rather low. Third, the digital participatory media culture also raises what Jenkins *et al.* (2006) call an "ethics challenge" to media education: the authors warn for a *"laissez faire approach (...) that (...) assumes children, on their own, can develop the ethical norms needed to cope with a complex and diverse social environment online"* (p. 12). To overcome these challenges of participatory media culture, the authors make a strong plea for policy and pedagogical action to increase (young) people's level of digital media literacy and empowerment.

Media literacy is not a new point of academic interest, but with the emerging information society, the literacy debate has evolved and receives new attention, not only among media scholars and educators, but increasingly also among policymakers and *"everyone concerned with people's – especially but not only*

*children's – critical, participatory and creative engagement with all forms of media and communications"* (Livingstone, 2009: 198).

Nonetheless, the concept of media literacy still struggles with definitional ambivalence. Potter (2004) stated that both the media and literacy component of this notion have caused conceptual vagueness. In order to overcome this, Potter (2004: 58-62) distinguishes three possible definitions. He starts with a general definition: "*media literacy is the set of perspectives from which we expose ourselves to the media and interpret the meaning of the message we encounter.*" This general statement can be subdivided into two more concrete definitions. First, media literacy can be seen as a process: "*there are two processes to the media literacy construct. One of these is the process of building strong knowledge structures so as to become media literate. The second process is acting in a media-literate manner during exposures to media messages.*" In addition to this process oriented definition, Potter also refers to a goal oriented definition: "*the purpose of becoming more media literate is to gain greater control over one's exposures and to construct one's own meaning from the messages in those exposures.*"

The definitions make clear that literacy is not a single-sided concept. Other scholars (e.g. Graham & Goodrum, 2007: 474) agree with the conceptual complexity. However, in recent literature, a general consensus seems to be growing around the definition of media literacy as "*the ability to understand and make meanings of the universe of symbolic resources to which we have access, including access to the technical means to do this*" (Livingstone, 2009). Therefore, Livingstone (2004) makes a strong plea for a new conceptual framework underpinning the study of new media literacy. This framework should be media independent and should entail technological, cultural and historical specificities of each medium that need to be studied (Livingstone, 2004: 5).

Following a definition proposed by the US National Association of Media Literacy Education in 1992 (Aufferheide, 1993, cited in Livingstone, 2009: 184), Livingstone (2004, 2009) provides a conceptualization of media literacy by means of four dimensions: (1) access (refers to people's technical and instrumental skills); (2) analysis (refers to people's capabilities to understand and analyze media and media content); (3) evaluation (refers to people's critical capacity to search content, navigate, judge reliability and identify bias) and (4) creation (refers to people's skills and capabilities to contribute to the (re)production media content). Similar conceptualizations of digital media literacy in terms of operational (access), analytical, evaluative and creative skills or abilities are apparent in the research work by Steyaert (2000), van Dijk (2005) and Nordeman (2008) who have elaborated on measuring Internet literacy by distinguishing between (1) instrumental/operational/expressive, (2) structural/informational/reflective and (3) strategic skills.

In this paper we discuss the results of a large scale survey based on a sample of 1725 Flemish teenagers representative for gender, education type and grade ( $M_{age} = 15.23$ ,  $SD = 1.82$ ; 50% M/F), questioning

adolescents' adoption of and attendance to media technologies. The quantitative study is supplemented with findings from qualitative research (40 face-to-face interviews, recruited from the original sample). The interviews addressed fundamental questions on adolescents' new media literacy, such as to what extent risky information disclosure on an SNS profile can be attributed to an insufficient level of media literacy.

### **Methodology**

The present study consists of a two-phased methodology. For the first phase, which comprises a large-scale quantitative survey, 12 Flemish secondary schools agreed to cooperate. These schools, selected to reflect the diversity in education types, agreed to allocate class time to let their pupils fill out the computer-based questionnaire. A total of 1725 Flemish secondary school pupils participated ( $Mage = 15.24$ ,  $SDage = 1.85$ ; 49% Female, 51% Male). After data cleaning, a three-dimensional weighing procedure was applied to correct the sample for gender, grade and education type. As such, the analyzed dataset resembles the Flemish secondary school population (Departement Onderwijs, 2009). The questionnaire comprised questions regarding socio-demographics and adoption and usage of the following media (technologies): television, gaming, mobile devices and computers. The survey data were analyzed using the SPSS 15 and Latent Gold 4.5 software packages.

In the second research phase, a number of 40 face-to-face follow-up interviews were administered. The interviewees were selected from the pool of respondents in phase one, using a maximal variety sampling strategy. These semi-structured interviews dealt with the appropriation of the media technologies surveyed in research phase one. Moreover, the technique of photo elicitation was used to facilitate the interviews. The narrative data were analyzed using NVivo 8.

### **Results**

First of all, the survey shows that by 2010 young people's access to new media technologies in Flanders seems to have reached the point of saturation. As shown in Table 1, almost all youngsters have access to television, mobile phones, computers and Internet at home.

Table 1  
**Flemish adolescents' access to media in 2010 (N=1725)**

Television at home	99%
Television in bedroom	46%
Mobile Telephone	97%
Game device (excl. pc and mobile phone)	89%
Computer at home	97%
Computer in bedroom	43%
Internet at home	94%
Internet in bedroom	62%

The data presented in Table 1 suggest that new media are omnipresent in the daily lives of all Flemish adolescents, regardless of their gender or socioeconomic background. However, although digital inequalities related to gender and socioeconomics have decreased, this does not mean that all youngsters use or are able to use new media in an equal manner or degree. (Livingstone & Helsper, 2007). As argued above, the level, quality and experience of new media use can also depend on the context in which new media can be used. A new 'digital divide' seems to emerge between Flemish youngsters who have media at their disposal in the private space of the bedroom and those who have not. In the next section, we will see how gender differences correlate with teenagers' access to ICT in the bedroom.

#### *Three groups of media users*

The relevance of considering the context in which youngsters use new media is further supported by a latent class analysis of the survey data. This statistical technique allows for the discovery of unobserved subgroups within a given set of categorical variables (Vermunt & Magidson, 2006). Such an approach offers a look into latent structure of technology ownership, media use and context, rather than analyzing the data with manifest dependent variables. For that reason, it affords a detailed and comprehensive view on this complex matter.

In this study, a three-class model yields an excellent model fit ( $L\chi^2(1686) = 1463.19, p = 1, N_{par} = 39, BIC = 21401.95$ ). In the following paragraphs we briefly describe these classes, which significantly differ for age ( $F(2, 1722) = 30.88, p < .001, \text{partial } \eta^2 = .04$ ) and gender ( $\chi^2(2) = 218.21, p < .001$ ).

The first class is made up by teenagers with a *media-rich bedroom* ( $M_{age} = 15.27, SD = 1.88$ ). This group is characterized by relatively high weekly frequencies of watching television, gaming and using the Internet. Moreover, these teenagers share high probabilities of having these media technologies at their personal

bedrooms. Also, we notice very high probabilities of having a cell phones and another mobile devices such a mobile game console or an MP3 player. This cluster comprises 67% boys and is equally distributed over different levels of education.

The second class of teenagers comprises of teenagers with a *media-rich environment* ( $M_{age} = 14.77$ ,  $SD = 1.81$ ). For this cluster, the gender balance is more equal: 55% of them are male. Although their media attendance and ownership closely resembles the one of the first class, it appears that the affording media technologies are be located somewhere else than the bedroom (e.g. the living room or a study).

The third class consists of teenagers with a *limited media environment* ( $M_{age} = 15.64$ ,  $SD = 1.74$ ). In comparison with both other classes, it is characterized by subtle differences in both media attendance and ownership. More specifically, watching television and especially playing video games occur far less frequent. Still, Internet usage only marginally differs. Finally, this third class has a very low probability of having a game console and slightly lower probabilities of having a mobile device, television or computer. In contrast to the other two clusters, this group is predominantly female (75%).

Table 2

**Three clusters: 'media-rich bedroom', 'media-rich environment' and 'limited media environment' (\*  $p < .05$ , \*\*\*  $p < .001$ )**

Teenagers with a...	Media-rich bedroom	Media-rich environment	Limited media environment	Wald	R <sup>2</sup>
<b>Cluster Size:</b>	38%	32%	29%		
<b>Indicators probabilities:</b>					
Television frequency per week				29.41***	.03
0-15h TV	0.31	0.43	0.48		
16-20h TV	0.17	0.17	0.17		
20h+ TV	0.52	0.39	0.35		
Gaming frequency per week				50.67***	.30
0-2h gaming	0.27	0.46	0.95		
3-10h gaming	0.26	0.26	0.04		
10h+ gaming	0.47	0.29	0.00		
Internet frequency per week				80.44***	.09
0u-<10h	0.19	0.46	0.39		
10u-<16h	0.18	0.23	0.23		
16-<26h	0.26	0.18	0.21		
26h(+)	0.36	0.13	0.18		
Mobile device ownership <sup>+</sup>				43.95***	.04

	No mobile device	0.03	0.09	0.17		
	Mobile device	0.97	0.91	0.83		
Cell phone ownership					6.23*	.01
	No cell phone	0.01	0.04	0.04		
	Cell phone	0.99	0.96	0.96		
Television location					159.97***	.30
	No TV	0.00	0.00	0.02		
	TV at bedroom	0.79	0.15	0.36		
	TV elsewhere	0.21	0.85	0.62		
Computer location					79.55***	.10
	No PC	0.00	0.01	0.04		
	PC at bedroom	0.60	0.23	0.44		
	PC elsewhere	0.40	0.76	0.52		
Gaming console location					245.58***	.47
	No game console	0.05	0.14	0.86		
	Game console at bedroom	0.68	0.04	0.08		
	Game console elsewhere	0.27	0.82	0.07		

#### *Participation inequalities among Flemish adolescents*

When we compare the three clusters of young media users, we find slight differences in the ways adolescents use new media and the purposes for which they use them. Teenagers with a media-rich bedroom are, for instance, more likely to use their pc for multimedia purposes than teenagers with relatively limited media access, whereas the latter group tends to use the computer more often for doing their homework. Significant differences are also found in terms of the time spent online. As shown in Table 3, teenagers with a media-rich bedroom spend more time on the Internet than the other two groups.

Table 3

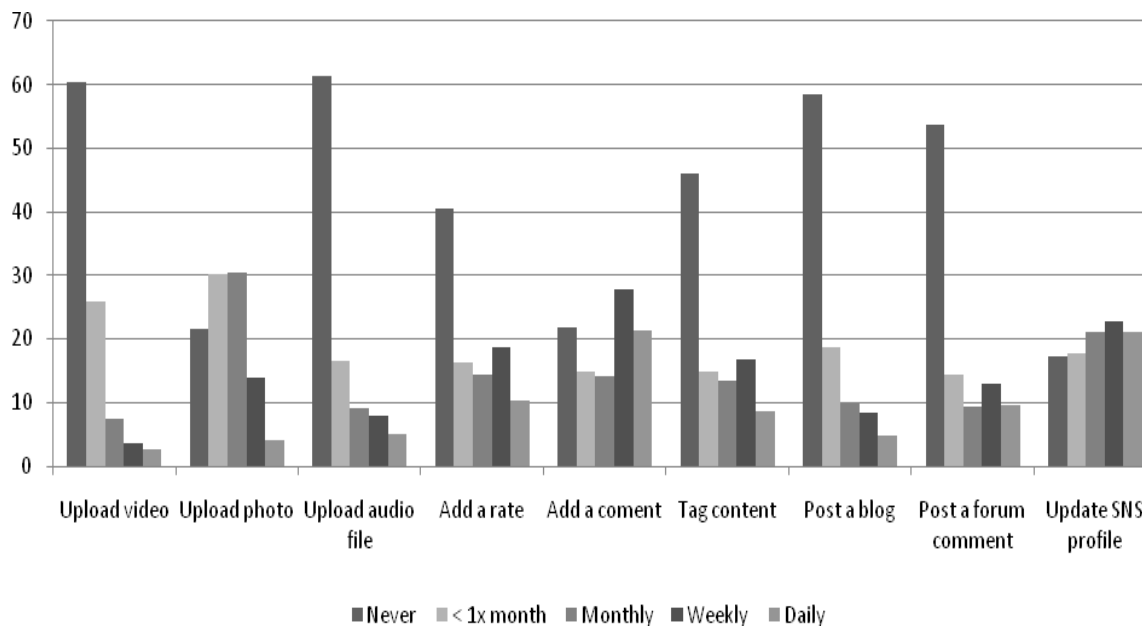
#### **Average time spent online by Flemish adolescents**

	Total	Teenagers with media-rich bedroom	Teenagers with media-rich environment	Teenagers with a limited media environment	Sig.
Internet use on an average week day	2u40min	3u20min	1u57min	2u31min	***
Internet use on an average weekend day	3u58min	4u59min	3u19min	3u17min	***



The survey also offers empirical confirmation of the often heard claim that only a small portion of people online actively participate in the creation of content (see e.g. Joyce & Kraut, 2006; Bughin, 2007; Prieur, Cardon, Beuscart, Pissard & Pons, 2008; Courtois, Mechant, De Marez & Verleye, 2009). Indeed, only few teenagers frequently engage in contributing user-generated content (UGC) – i.e. by uploading photos, video or audio files, adding rates, comments or tags to content on a website or by posting a blog or a forum comment. Aside from the fact that most youngsters regularly update their profile(s) on a social networking sites (SNS) – 65% do this at least once per month – the data in Figure 1 show that also among Flemish teenagers the number of ‘prosumers’ is quite low.

Figure 1  
**% of the sample contributing in various types of UGC**



*Flemish adolescents’ online risk awareness*

Literature on young people and new media often warns for adolescents’ lack of critical awareness about the risks of their online behavior and the important role of parental mediation in this respect (Lobe, Segers & Tsaliki, 2009). On the basis of the survey results and the interviews, we can conclude that in Flanders, parental regulation of children’s new media use is rather loose. Respondents mostly reported parental rules about school work (37%) and nudity (35%), but even these rules are set in quite general terms. Girls seem

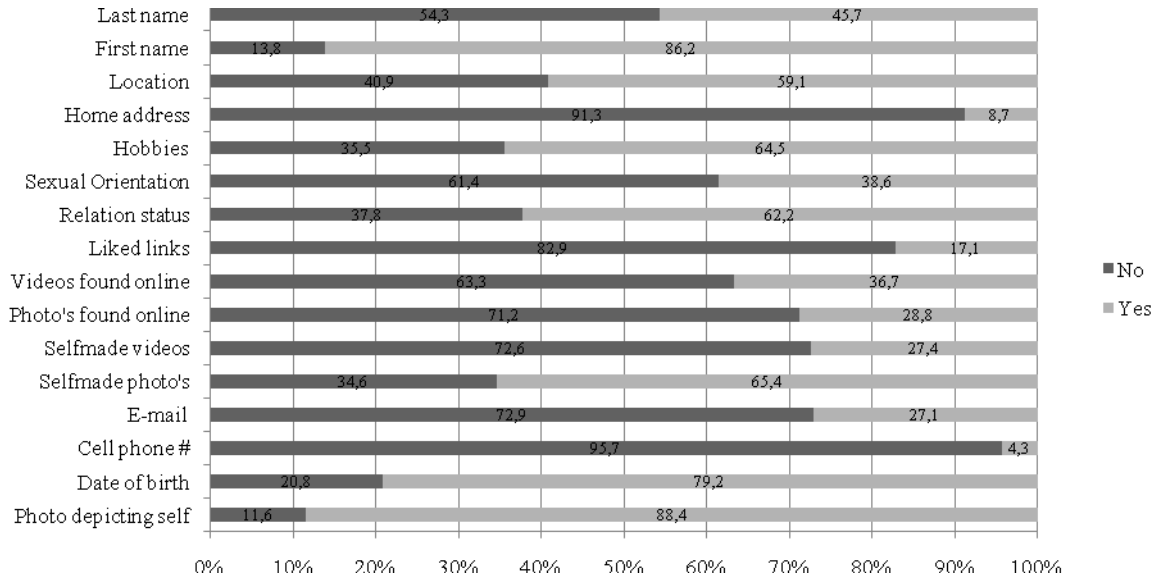
to be more regulated by their parents, especially regarding time online and downloading. The younger the respondents, the more likely they are regulated by the parents. Also, the cluster of teenagers with a media-rich environment is more likely to be regulated by the parents than the other two clusters.

Worries about privacy issues on social networking sites (SNS) also dominate public debates on adolescents' Internet use. For young people in Flanders, social networking sites such as Facebook or its Belgian counterpart Netlog are a central part of their online media use: 87% of our sample claims to have an SNS account; among the youngsters with a media-rich bedroom this figure rises to 91%. 62% of the respondents say they log in on a social networking site at least once a day.

Figure 2 shows the information types that Flemish adolescents add to SNS. Although the majority of Flemish adolescents seem to be aware of privacy issues on SNS, we discern a small but substantial proportion (10%) of them publishing personal information on his or her profile page, such as a home address (8,7%) and a cell phone number (4,3%). Male respondents are significantly more likely to disclose personal information than females.

Figure 2

### Information put on SNS profile



### Some reflections

This paper presented some key results of a representative survey of adolescents' new media use in Flanders, Belgium. The data show that new media have become part of young people's daily lives.

Although gender, age and SES differences are still observable, we argued that sociodemographic and socioeconomic variables do no longer suffice to explain digital inequalities among young people. Therefore, we decided to make a segmentation by means of a latent class analysis. Three clusters can be identified: teenagers with a media-rich bedroom, those with a media-rich environment and those with a relatively media-poor environment.

This approach emphasizes the role of context in (young) people's media uses and experiences. As almost all youngsters are online, new inequalities seem to emerge between those who have new media at their individual and private disposal, and those with lesser, or at least more limited, opportunities to participate in today's digital media culture. Our findings indeed suggest that teenagers with a media-rich bedroom are using the Internet more frequently and in more advanced ways. They tend to use new media more actively and creatively and seem to spend more time on social networking sites. On the other hand, they also seem to be more likely to show risky online behaviour and a lack of privacy awareness, which might be partly explained by the low degree of parental mediation.

We urge to say, however, that these conclusions are still very tentative. More profound analyses, preferably by means of a combined approach of quantitative and qualitative research, is needed to get a better understanding of new emerging participation inequalities among the young 'digital natives'. Furthermore, we believe that continuous monitoring is needed, not only to keep pace with the rapidly evolving new media technologies, but also to examine tendencies in adolescents' levels of new media uses, experiences and (multi) literacies.

### References

Attewel, P. (2001). The first and second digital divides. *Sociology of Education*, 74(3), 252-259.

Bakardjieva, M. (2005). *Internet Society: The Internet in Everyday Life*. London: Sage.

Buckingham, D. (2005). *The media literacy of children and young people*. London: Office of Communications.

Bughin (2007). How Companies can make the most of user-generated content. Retrieved from <http://www.ieco.clarin.com/2007/08/27/usergenerated.pdf>.

Bovill, M., & Livingstone, S. (2001). Bedroom culture and the privatization of media use. In: M. Bovill & S. Livingstone (Eds.). *Children and their changing media environment: a European comparative study*. Mahwah: Lawrence Erlbaum Associates.

Courtois, C., Mechant, P., De Marez, L. & Verleye G. (2009). Gratifications and seeding behavior of online adolescents. *Journal of Computer-Mediated Communication*, 15(1), 109-137.

Graham, P. & Goodrum, A. (2007). New Media Literacies: cultural and discursive skills. In: R. Mansell; C. Avgerou; D. Quah & R. Silverstone (Eds.). *The Oxford Handbook of Information and Communication Technologies*. Oxford: Oxford University Press.

IBBT (2009). *Digimeter Wave 1*. Report. Ghent: IBBT - iLab.o.

Jenkins, H., Purushotma, R., Clinton, K., Weigel, M., Robison, A. J. (n.d.). *Confronting the challenges of participatory culture: Media education for the 21st century*. Chicago: The MacArthur Foundation.

Joyce, E., & Kraut, R. E. (2006). Predicting Continued Participation in Newsgroups. *Journal of Computer-Mediated Communication*, 11 (3).

Leung, L. (2004). Net-Generation Attributes and Seductive Properties of the Internet as Predictors of online Activities and Internet Addiction. *Cyberpsychology & Behavior*, 7(3), 333-348.

Livingstone, S. (2002). *Young People and New Media*. London: Sage.

Livingstone, S. (2004). Media literacy and the challenge of new information and communication technologies, *The Communication Review* 7(1), 3-14.

Livingstone, S. (2009). *Children and the Internet*. Cambridge: Polity Press.

Livingstone, S. & Haddon, L. (2009a). Opportunities and risks for European children. In: The International Clearinghouse on Children, Youth and Media (2009). *Young People in the European Digital Media Landscape* (pp. 15-28). Göteborg: Nordicom.

Livingstone, S. & Haddon, L. (2009b). *EU Kids Online: Final Report*. London: EU Kids Online. Retrieved on January 2010 from <http://www.lse.ac.uk/collections/EUKidsOnline/Reports/EUKidsOnlineFinalReport.pdf>.

Livingstone, S. & Helsper, E. (2007). Gradations in digital inclusion: children, young people and the digital divide. *New Media and Society*, 9(4), 671-696.

Livingstone, S. & Helsper, E. (2010). Balancing opportunities and risks in teenagers' use of the internet: the role of online skills and internet self-efficacy. *New Media and Society*, 12(2), 309-329.

Lobe, B.; Segers, K. & Tsaliki, L. (2009). The role of parental mediation in explaining cross-national experiences of risk. In: Livingstone, S. & Haddon, L. (Eds.). *Kids Online. Opportunities and risks for children* (pp. 107-122). Bristol: The Policy Press.

Nordeman, L. (2008). Mediawijsheid en de e-cultuursector. Naar nieuwe vormen van expressieve en reflectieve mediawijsheid. Retrieved. from <http://www.virtueelplatform.nl/download.php?id=8593>.

Potter, W. J. (2004). *Theory of media literacy: a cognitive approach*. Thousand Oaks, CA: Sage.

Prensky, M. (2001). Digital natives, digital immigrants. Retrieved on March 19, 2009 from <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>.

Prieur, C., Cardon, D., Beuscart, J.-S., Pissard, N., & Pons, P. (2008). The Strength of Weak cooperation: A Case Study on Flickr. Retrieved from <http://arxiv.org/ftp/arxiv/papers/0802/0802.2317.pdf>.

Roe, K. & Broos, A. (2005). Marginality in the information society: The socio-demographics of computer disquietude, *Communications: The European Journal of Communication* 30(1): 91-96.

Schulmeister (2008). *Gibt es eine "Net Generation"?* Retrieved March 19, 2009 from [http://www.zhw.uni-hamburg.de/uploads/schulmeister-net-generation\\_v2.pdf](http://www.zhw.uni-hamburg.de/uploads/schulmeister-net-generation_v2.pdf).

Silverstone, R., E. Hirsch and D. Morley (1992). 'Information and Communication Technologies and the Moral Economy of the Household'. In: R. Silverstone and E. Hirsch (Eds.). *Consuming Technologies* (pp. 9-17). New York: Routledge.

Steyaert, J. (2000). *Digitale vaardigheden, geletterdheid in de informatiesamenleving*. Den Haag: Rathenau Instituut.

Tsatsou, P.; Pruijmann-Vengerfeldt, P. & Murru, M.F. (2009). Digital divides. In: S. Livingstone & L. Haddon (Eds.). *Kids Online. Opportunities and risks for children* (pp. 107-122). Bristol: The Policy Press.

The International Clearinghouse on Children, Youth and Media (2009). *Young People in the European Digital Media Landscape*. Göteborg: Nordicom.

van Dijk, J. (2005). *The deepening divide: Inequality in the information society*. Thousand Oaks, CA: Sage.

Vandoninck, S., & Roe, K. (2008). The digital divide in Flanders: Disappearance or persistence?, *Communications* 33 (2): 247-255.

Verdegem, P. & Verhoest, P. (2009). Profiling the non-user. Rethinking policy initiatives stimulating ICT acceptance, *Telecommunications Policy* 33 (2009): 642-652.

Vermunt, J.K., & Magidson, J. (2006). Latent Class Analysis. Retrieved on May 2010 from <http://www.statisticalinnovations.com/articles/Latclass.pdf>.