

## **Online Identity: traces of data or active presence in digital environments?**

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### **Abstract**

The democratization of the online space and multiplicity of tools and applications fostered the development of numerous forms of interaction and communication. As active producers of online content, individuals have now the chance to develop and manifest an identity that encompasses both their personal, professional and academic lives. More than a curriculum vitae, the online identity of individuals can reveal to the wide community the sum of their experiences, skills and abilities to communicate, interact and share online. In the new global and connected world, the study and comprehension about how identity is build and manifested in online environments may be the basis for the construction of a more responsible, conscious and truthful reputation, fostering the creation of more valuable and well-prepared learners.

Introducing a case study developed at the University of Aveiro – Portugal, this paper discusses the importance and challenges of building an identity in digital settings and addresses the main differences between building a presence in physical and online environments. Data was collected through the application of questionnaires, direct observation and in-depth interviews, made to the participants of the study, 13 individuals from a Master Degree Course (convenience sample). Observation included the analysis of the 3692 messages published by the participants on three online spaces: Facebook, Twitter and an institutionally supported online platform.

By focusing on the importance of building and sharing an online identity over the web, this chapter will reflect about the construction and manifestation of identity in

online environments, contributing to the understanding of the importance of building a presence over the web – advantages and challenges included.

## **Introduction**

The development of online tools and platforms fostered the creation of new environments and scenarios where individuals can interact, engage and communicate in several contexts and activities (Buckingham, 2008b; Downes, 2005; Greenhow et al., 2009). Blogs, wikis, photo and video sharing tools, social networks and virtual online environments are being adopted by individuals in educational, social and professional contexts, within and outside education institutions (Clark et al., 2009; Fiedler, 2007; Franklin and Harmelen, 2007; Margaryan et al., 2008; Trinder et al., 2008).

By learning with and through media, individuals are also developing competencies and skills that address their needs and the labour market needs, as well as developing a personal awareness of their own online identity (Aresta et al., 2013; Buckingham, 2008b). As active participants and producers of online content, they have now the chance and challenge of developing and manifesting an identity that encompasses their personal, professional and academic lives. More than curriculum vitae, the online identity of individuals can reveal the sum of their experiences, skills and their ability to communicate, interact and share online.

The online environment emerges as a space where individuals are able to build a self that can be produced, shared, edited and deleted according to their intentions and desires (Turkle, 2011). Introducing Online Identity as a concept that evolves around digital representation, privacy and reputation, this article will discuss the main results of a study focused on the construction of identity in formal and informal online spaces. Nowadays, the conscience and perception about the positive and negative implications of having an online identity becomes a subject of great importance. Presenting the main results of a case study developed at the University of Aveiro – Portugal, this paper discusses the concept of online identity as well as the importance and challenges of building an identity in online contexts.

## **Theoretical overview**

When the online environment is often seen as an alternative space for the construction of identity and where the separation between public, private and personal is difficult to accomplish, the reflection about the positive and negative impact of having an identity becomes one of great importance. While publishing content over the network individuals are also sharing information able to reveal aspects and dimensions of their personal identity: what they think, what they like, their feelings regarding political, social or religious issues. Once archived, this information can be easily recovered, rearranged and reproduced in manners impossible to be controlled by those who have initially produced it.

Taking this into consideration, this section will address some key-concepts associated with the construction of online identity, namely the main differences between building a presence in physical and online environments and the implications and challenges of having an online identity.

### ***Identity***

Although the roots of *identity*, as a word, lay in the Latin term *idem* – meaning “the same” (Turkle, 1995; Buckingham, 2008a) – *identity* is not a closed or confined term. *Identity* can be used to designate the differences and similarities between two entities, to refer to the information associated with the individual’s identification or even to address the conceptualization that individuals have of themselves (Boyd, 2002; Greenhow and Robelia, 2009; Zhao et al., 2008; Peachey and Childs, 2011).

Besides being an important part of the individuals’ self-concept, identity can also refer to the visible part of the self by which individuals reveal themselves to others (Zhao et al., 2008). Outlined by the internal aspects and characteristics that individuals recur to in order to negotiate and relate with their peers, this social identity (Boyd, 2002) emerges as a construction that enables people to work and negotiate in social scenarios: “While internal identity is entirely constructed and maintained by the individual, social identity is perceived externally, relying not on the intention, but the effective expression and perception of an individual's presentation. (...) While interacting socially, people are aware of and react to the feedback that they receive by the other people in an environment (Boyd, 2002:22).”

It is from the interpretation of the received feedback that individuals may opt to validate or adjust their expressions and behaviors as a way to influence the perception

they have created in others, a process of performance, interpretation and adjustment that Goffman (1995) called impression management. In this context, *identity* can be understood as the result of a dynamic, self-reflexive and performative process (Greenhow and Robelia, 2009), based on the intrinsic characteristics of individuals and in the way they internalize and react to the experiences in which they engage (Boyd, 2002).

### ***From analogic to digital: building identity in online environments***

When transposed to the online context, the concept of identity becomes even more complex.

While in the physical world the body – as a way to deliver information – emerges as a central object in the manifestation of identity (Boyd, 2008; Childs, 2011), thereby defining and restraining the individuals' self (Zhao et al., 2008), in online environments individuals have to recur to tools in order to create and define a digital representation of their identity (Boyd, 2002). Unable to represent themselves physically in the digital world, individuals resort to the creation of avatars, e-mail signatures, nicknames, and social network profiles as a way to manifest themselves and interact with systems and other users.

Understood as a continuum, the online dimension of the individual's identity can be understood as the sum of information referred to the individual and published – by himself/herself or by others – online. Either related to authentication – the information that validates user's identity in digital systems – or content – information published by the individual in order to communicate and interact within the online environment –, online identity can be recognized in the publication of content (Coiro et al., 2008; Zhao et al., 2008; Greenhow and Robelia, 2009; Greenhow et al., 2009; Costa and Torres, 2011); in the creation of profiles (Boyd, 2008; Greenhow and Robelia, 2009); in the typology of participation (Fraser, 2007); in the authenticity of the online persona, reflection or antithesis of the physical dimension of the individual (Buckingham, 2008b; Childs, 2011); and in the way it encompasses the different representations of the individuals in a single identity (Warburton, 2008). Online identity emerges as a continuum process, materialized in the way individuals appropriate technology and use it to explore, communicate, share and express their thoughts and opinions.

The digital environment, while providing a space where individuals can interact in new areas, it is also an open environment where different contexts and dimensions of the individuals' lives mingle and intertwine. In order to avoid the collision of different worlds (e.g. professional, personal, social) and the possible emergence of socially awkward or disturbing situations, individuals may choose to build a *faceted identity* (Boyd, 2002), revealing different parts of their selves to different audiences (Boyd, 2002; Coiro, 2008; Stankovic, 2009; Warburton et al., 2010; Childs, 2011; Costa and Torres, 2011). As an alternative to anonymity, the creation of different digital credentials such as e-mail accounts or usernames enables individuals to build specific and adequate reputations, to establish connections in different online environments and, at the same time, to create barriers to the automatic aggregation of their information by mechanisms or search engines (Boyd, 2002). Considered by some researchers as an indicator of a post modern and fragmented self (Turkle, 1995; Stone, 1998, apud Boyd, 2002), the use of different user accounts or records as a form of representation of the online self is a strategy adopted by individuals as an alternative to anonymity. To Boyd (2002), this multiplicity of representations allows individuals to gain flexibility when building their online *self*, presenting different personas in different scenarios, an attitude that reflects the behaviours that already occur in the offline space.

The separation between different contexts, seemingly easy and almost natural, may however be difficult to maintain. In fact, as individuals enter the social dimension of the network and start to establish relationships with other spaces and individuals, they may feel the need to build a more consistent presence, one that reflects their whole identity. In an approach opposed to the popular *digital natives / digital immigrants* dichotomy presented by Prensky (2001), White (2008) introduces the concept of *visitors* and *residents* as a way to characterize the individuals' degree of involvement with and within digital environments, applications and systems. In this approach, visitors are presented as individuals who see the network as a tool and not as a platform for communication, interaction and identity construction. *Visitors* connect to the online environment in order to solve specific tasks - booking flights, communicating with distant relatives - not feeling the need to express or manifest their presence in digital environments (White, 2008).

*Residents*, however, are described as individuals whose identity extends to the online world, and whose interactions with and within the network go beyond the use of home banking or research information systems. Looking at the online environment as a space where they can socialize and express their ideas and opinions, *residents* build a structured and conscious presence that may encompass the professional, academic and social dimension of their lives.

### ***The construction of the online self: challenges and opportunities***

When individuals publish content on the Internet, they are also revealing certain aspects and dimensions of their identity that, once archived, can be easily recovered and reinterpreted. While in the offline world events, interactions and conversations are – to a certain point – confined to a particular physical and temporal space, in the online space content lingers. All information sent to the Internet – either intentionally or not – is by default archived and able to be accessed and interpreted by users, systems or applications in order to create a representation of one’s identity.

Among the main differences between the representation of individuals in physical and digital environments, Boyd (2008) points out: (1) the persistence of information (non-recorded speech is temporary, online text can be stored forever); (2) the content’s searchability (information can be searched and identified through search engines); (3) the content’s replicability (electronic media ease the replication and transformation, by others, of content created by the individual); and (4) the existence of invisible audiences (it is almost impossible to identify and control how and by whom content is searched, accessed and interpreted). In the author’s perspective, individuals should be aware and conscious of the differences between physical and online spaces:

“Past posts are considered part of a user’s digital preset in ways not comparable to the physical domain. Slander and gossip are archived, but the subject has no recourse for adjusting this data. In such incidents, people feel misrepresented and powerless” (Boyd, 2002:37).

Having these differences in mind, individuals have now the chance to make use of the advantages of building a presence over the Internet. Addressing the advantages of building an online identity and its impact and relevance in the academic and professional lives of individuals, Costa and Torres (2011) present the online space as

the ideal place for students to build a presence able to complement their academic and professional lives. To the authors (2011), individuals should consider the construction of a reputation as one of the main advantages of creating and maintaining a stable identity, one that encompasses the different dimensions of their lives.

The construction of a presence over the web enables the individual to build a reputation on the network. In this scenario, identity can be seen as a puzzle or a work-in-progress concept involving both personal and social dimensions of one's lives. Individuals are now encouraged to build and develop a presence able to complement their professional activities and even academic profiles (Costa and Torres, 2011).

Whether in open social platforms, weblogs and online forums, or in institutionally supported platforms, learners are building an identity that arches over many spaces, evidencing their path as learners and professionals. More than a Curriculum Vitae, the individual's online identity may reveal his skills, competencies and abilities to peers and to the wide community.

When the online environment brings together users and communities, the construction of an online identity able to translate and/or mirror the personal, social and professional competencies of individuals can be seen as an asset in the professional/market field. In a context where it is difficult to remain outside the digital world (Costa and Torres, 2011; Warburton, 2009) the construction of an online identity potentially emerges as a way to reveal to a wider audience the individual's professional path and experiences.

### **Building Identity in Online Environments: a case study**

While sharing online content, individuals are also building a presence able to encompass the different dimensions of their real-life identity. In this scenario, online identity emerges as a continuous process, materialized in the way individuals appropriate technology and use it to explore, communicate, share and express their thoughts and opinions to others.

### ***Research approach***

Aiming to analyse how a group of master degree students build, manage and perceive the self they are building in digital online environments, a case study was developed at University of Aveiro aiming to answer the following research questions: (1) when the online environment allows for the connection between individuals, spaces and communities, how do students from a master degree course build their identity in an online space provided by their Higher Education Institution?; (2) what are the main characteristics of the identity built in an institutionally supported platform and in online informal environments?; and (3) what is the importance of having an online identity as a way to express and reveal skills and competencies?

Data was collected through questionnaires, observation and in-depth interviews, made to 13 students from a Master Degree Course (convenience sample, students aged between 21 and 40, seven male, five female).

Observation included the gathering and analysis of the all content published by the participants in three online spaces: SAPO Campus<sup>1</sup> (an institutionally supported platform), Facebook and Twitter, and occurred during a period of nine months. All messages were classified according to its context (personal, social, academic, professional and organizational) and format (text message, link, audio/video content and photos). Personal content included: mentioning family or friends, manifestation of emotions or opinions. Social content included: content related with music or films, messages that did not reveal opinions or emotions. Academic content included: messages related with the participants' academic activity and the publication of essays or other academic works. Professional content included: content related with the participants' professional activity and competencies. Organizational content included: messages shared on behalf of the participants' employees and content that revealed the participants' company or institution. Categories were established based on the works of Fraser (2008) and Kurhila (2006). 3692 messages were analysed: 347 SAPO Campus posts; 1249 Facebook posts; and 2096 Twitter messages.

In-depth interviews were conducted in order to understand how students perceived their online self, and how they handled content and addressed privacy and reputation

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<sup>1</sup> Developed at the University of Aveiro (UA) - Portugal, SAPO Campus (SC) is an integrated Web 2.0 services platform based on user-generated content production and aggregation for use in Higher Education Institutions. SC offers its users – students, lecturers, staff – a technological infrastructure able to foster and promote the development of communication, sharing and collaboration skills, contributing to more relevant learning experiences and offering its users the space to enhance, in an institutional environment, their digital presence and reputation. More about the SC project can be found at <http://campus.ua.sapo.pt/>.



when building their online presence. During the interviews, students were asked to think and talk about the perception they have on their own online identity, focusing on the way they express themselves in online environments, how they manage their privacy and the professional, social and academic impact of their online selves. Students were also asked about the advantages, disadvantages and impact of having an online identity built upon an institutionally supported platform (i.e. SAPO Campus).

### ***Discussion of the results***

#### *Identity in online environments*

As mentioned before, direct observation included the analysis of all information published by the participants in the three online spaces: SAPO Campus, Facebook, and Twitter. The analysis of collected data revealed that, on SAPO Campus, most content (66%) was related with the academic activities of the participants, and that mostly were blog posts. On Facebook, participants shared mainly social content (82% of published content was coded as “social”), most of it consisting of audio/video files and links. On Twitter, users also build a presence based in social content (81% of all publications was included in this category). Nevertheless, 10% of content was related with the participants’ academic activities.

<i>Online space</i>	<i>Content</i>	<i>Format</i>				<i>Total</i>
		<i>Text message</i>	<i>Link</i>	<i>Audio/video</i>	<i>Photo</i>	
<b>SAPO Campus</b>	Personal	0	0	0	0	0
	Social	6	1	3	108	118
	<b>Academic</b>	<b>105</b>	<b>54</b>	<b>21</b>	<b>49</b>	<b>229</b>
	Professional	0	0	0	0	0
	Organizational	0	0	0	0	0
<b>Facebook</b>	Personal	54	5	3	31	93
	<b>Social</b>	<b>74</b>	<b>185</b>	<b>674</b>	<b>86</b>	<b>1019</b>
	Academic	4	41	7	0	52
	Professional	4	43	7	11	65
	Organizational	0	15	3	2	20
<b>Twitter</b>	Personal	40	10	0	12	62
	<b>Social</b>	<b>598</b>	<b>748</b>	<b>272</b>	<b>88</b>	<b>1076</b>
	Academic	68	120	5	9	202
	Professional	26	27	3	2	58
	Organizational	6	59	3	0	68

Table 1 – Content published by participants in Facebook, Twitter and SAPO Campus

### *Managing identity*

When building identity in online environments individuals may resort to processes or strategies in order to obtain a certain control of the information they share online. Questioned about the specific or general strategies adopted when managing their online identity, participants pointed out as main strategies: careful selection of content to be published; avoiding the publication of personal content; adjusting and selecting content accordingly to the platform where it will be published; and the revision and/or edition, *a posteriori*, of past published content.

Regarding privacy management (that is, strategies adopted in order to gain a certain control about their online identity and representation), participants mentioned as being more important: to manage the network of contacts, selecting and adding contacts according to the characteristics of the online space (personal, social, professional); the adoption of different e-mail accounts and/or usernames in order to avoid the automatic aggregation of information by other users or search engines; and the elimination of no longer used online spaces and e-mail accounts.

### *The Online Identity Analysis Model*

During the interviews, participants were asked to talk about the identity they were building in online environments, from a personal point of view. The analysis of data collected through in-depth interviews (and observation) led to the identification and characterization of the students' online identity, and to the creation of a framework and a model able to be used when analysing the online presence of individuals and institutions. The Online Identity Analysis Model (Aresta et al., 2013) approaches online identity from the individual's point of view, considering it as a concept that revolves around three main axes: digital representation, privacy management and reputation.

In this model, digital representation [DR] includes all the information shared by individuals in order to represent themselves in online environments and it is organized in three sub-categories: (1) identification elements (username, profile picture); (2) additional information (biographical information, contact information, personal information, information that establishes a relation with the community and information that establishes the connection between the individuals' different online

spaces); and (3) content (topics addressed by the individual, structure of the discourse, content typology and content format).

Privacy management [PM] addresses the way individuals manage their online self or selves through: (1) the registration process (the way they recur to a single or multiple e-mail accounts or usernames in order to manage their different identities): (2) the contacts management (the way individuals aggregate or segregate contacts according to the online environment they are publishing in); and (3) the contexts management (the way individuals enable the automatic synchronization of content or republish content between their online spaces, thus building connection between the different online spaces).

Reputation [R] addresses the individuals' intentions when building their online identity. It is organized in three subcategories: (1) demonstration of skills and competencies (how individuals share content with the intention of revealing the existence of general or specific skills); (2) visibility and exposure (the way individuals replicate content and information between platforms or online spaces in order to increase the visibility of produced content, and the interaction peers or experts in order to reveal interest and knowledge in specific areas); and (3) reputation scaffolding (the way individuals establish a connection between their online self and the online presence of the institution they are attending, in order to benefit from the institution's reputation).

The Online Identity Analysis Model is graphically represented in Figure 1. Figure 1 also identifies the connections and relations between the three above-mentioned dimensions: digital representation [DR], privacy management [PM] and reputation [R].

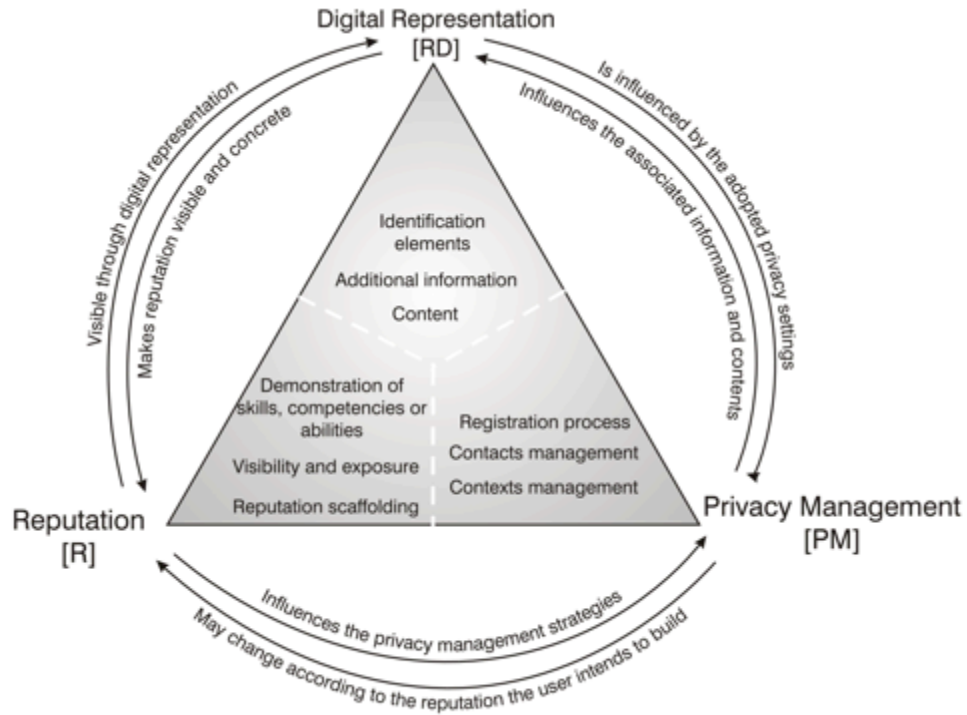


Figure 1 – “Dimensions of the Online Identity Analysis Model” (Aresta et al., 2013:99)

### *Online identity profiles*

The application of the Online Identity Analysis Model (Aresta et al., 2013) to the information collected through the questionnaires, observation and in-depth interviews, allowed the identification of common characteristics of the participants’ online presence. According to the similarities between their online identity and the way they managed their digital persona, participants were grouped in two types of profile: *context-driven* online identity profile and *user-driven* online identity profile. While the first profile included participants who mentioned to manage and distribute information according to the digital environments they were working in, user-driven online identity profile included participants who – although being aware of the visibility and exposition of published content – claimed to be building an online self that mirrors their real offline self.

Participants comprised in the *context-driven* online identity profile were organized in two sub-groups: a) the ones how mentioned to be building a *safe* online presence, based on general and social information; and b) participants who, being careful when sharing information and selecting content according to the online space they were

interacting with, claimed to adopt the online environment as a space where they could build a professional profile and reputation.

Participants included in the first sub-group (five participants), although having an active online presence, opted to restrict their publications to content and information they believe would not be misunderstood by the community. These participants also mentioned not to use the online environment to evidence abilities and/or skills and to have, as main concern, the lack of control about who could access and read their publications. As a result, they chose to build their online identity based on social content, mostly text messages and audio/video files.

The second sub-group included participants (five) who claimed to be using the online space in order to build and reveal, to others, their professional profile and reputation. In order to achieve it, their online profiles included information about actual interests and occupations, expectations and desires about their professional present and future, and also about skills and competences. As these they wanted to expand their area of influence and evidence themselves as professionals, participants included in this group tended to share content between platforms and to interact with experts in their field of interest. Participants included in this sub-group mentioned to have as main concern – when building their online presence – the persistence of data and information. Therefore, they claimed to be careful when publishing content and to try to gain some control over the impact of their identity by selecting and managing their online contacts.

As for the *user-driven* online identity profile, participants included in this group (three individuals, claiming to be building an online *self* that mirrors their real offline self, shared content disregarding the social, academic or professional characteristics of the platforms. Participants mentioned to be comfortable in sharing information regardless of contextual constrains and to be guided only by their desire to share, being comfortable even to address political or ideological issues.

## **Conclusions**

The development of new media blurred the frontiers between being on and offline. When the Internet is increasingly seen as an alternative space for the construction of identity, the conscience and perception about the positive and negative implications of

having an online presence should not be undervalued. In a scenario where individuals have the opportunity to build an identity free of physical constraints, the main challenge – of building an online identity – may lie in the choice between an open or closed identity, between maintaining a unique identity or creating multiple representations of the self (Costa and Torres, 2011).

The question, however, remains: what is online identity? What does it mean to have an identity in online environments? Creating an e-mail account, writing e-mails, having a Social Security number and online access? Or is it the result of a process that may start with “the creation of even one single account” (Costa and Torres, 2011:929) but that evolves to a participation based in interaction, sharing, and engagement? Can an individual, while *visitor* (White, 2008), claim to be building a presence in online environments? Or is that a claim only to be made by *residents* (ib, 2008), individuals who extend their lives (interactions, relationships and statements included) to the online world?

The answer to this question is not an easy one. In the physical world, the construction of an identity is the result of a personal growth and maturation, built also upon the relationships and interactions established with peers. The identity of individuals evolves as a process of self-development and self-learning, one that begins in childhood and ends only when life of the individual ends. On the online space, where interactions are simplified and everything develops at a speed sometimes faster than the one desired by individuals, the creation of an online self should be an even more conscious process.

By presenting the main results of a study focused on the construction of identity in online contexts, this paper may contribute to the understanding of the importance of building a presence over the web, advantages and challenges included.

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## References:

- Aresta, M., Pedro, L., Santos, C. & Moreira, A. (2013). Online Identity Analysis Model: Analysing the Construction of the Self in Digital Environments. *International Journal of Knowledge Society Research*, 4(3), 89-102. DOI: 10.4018/ijksr.2013070108
- Boyd, D. (2002). *Faceted id/entity: Managing representation in a digital world*. Unpublished Master Thesis, Massachusetts Institute of Technology, Massachusetts.
- Boyd, D. (2008). Why youth ♥ social network sites: The role of networked publics in teenage social life. In D. Buckingham (Eds.), *Youth, Identity, and Digital Media* (pp. 119-142). Cambridge, MA.
- Buckingham, D. (2008a). Defining Digital Literacy- What Do Young people need to Know About Digital Media?. in Lankshear, C. and Knobel, M. (Eds.), *Digital Literacies: Concepts, Policies and Practices* (pp. 73-91). Oxford.
- Buckingham, D. (2008b). *Introducing Identity*. In D. Buckingham (Ed.), *Youth, Identity, and Digital Media* (pp. 1- 24). Cambridge, MA.
- Childs, M. (2011). *Identity: a Primer*. In A. Peachey and M. Childs (Eds.), *Reinventing Ourselves: Contemporary Concepts on Identity in Virtual Worlds* (pp. 13-32). UK: Springer.
- Clark, W., Logan, K., Luckin, R., Mee, A., and Oliver, M. (2009). Beyond web 2.0: Mapping the technology landscapes of young learners. *Journal of Computer Assisted Learning*, 25(1), 56-69.
- Coiro, J., Knobel, M. Lankshear C., & Leu, D. (2008). Central issues in new literacies and new literacies research. In J. Coiro, M. Knobel, C. Lankshear, & D. Leu (Eds.), *Handbook of research on new literacies* (pp. 1–21). New York: Lawrence Erlbaum.

- Costa, C., and Torres, R. (2011). To be or not to be, the importance of digital identity in the networked society. *Educação, Formação e Tecnologia* (extra number), 47-53.
- Downes, S. (2005, October). E-Learning 2.0. *eLearn Magazine*. Retrieved from <http://elearnmag.acm.org/featured.cfm?aid=1104968>
- Fiedler, S. (2007). Getting beyond centralized technologies in higher education, Part 2. In C. Montgomerie & J. Seale (Eds.), *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2007* (pp. 1347-1353). Chesapeake, VA.
- Franklin, T. e Harmelen, M. (2007). Web 2.0 for content Learning and Teaching in higher education. retrieved November 20<sup>th</sup> 2013, in <http://190.208.26.22/files/web2-content-learning-and-teaching.pdf>.
- Fraser, J. (2009, June 20). Personal - Professional - Organisational: three basic online identities [Blog post]. Retrieved from <http://fraser.typepad.com/socialtech/2009/07/personal-professional-organisational-three-basic-online-identities.html>
- Goffman, E. (1959). *The Presentation of Self in Everyday Life*. Allen Lane, The Penguin Press, London.
- Greenhow, C., & Robelia, B. (2009). Informal learning and identity formation in online social networks. *Learning, Media and Technology*, 34(2), 119-140.
- Greenhow, C., Robelia, B., & Hughes, J. (2009). Learning, teaching, and scholarship in a digital age. *Educational Researcher*, 38(4), 246-259.
- Kurhila, J. (2006). "Unauthorized" Use of Social Software to Support Formal Higher Education. In T. Reeves & S. Yamashita (Eds.), *Proceedings of the World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2006* (pp. 2602-2607). Chesapeake, VA.
- Margaryan, A., Nicol, D., Littlejohn, A., Trinder, K., Luca, J., & Weippl, E. (2008). Students' use of technologies to support formal and informal learning. Paper presented at the World Conference on Educational Multimedia, Hypermedia and Telecommunications 2008.
- Peachey, A. & Childs, M. (2011). Virtual Worlds and Identity. In A. Peachey and M.



- Childs (Ed.), *Reinventing Ourselves: Contemporary Concepts on Identity in Virtual Worlds* (pp. 1-12). UK: Springer.
- Prensky, M. (2001). Digital natives, digital immigrants part 1. *On the horizon*, MCB University Press, 9(5).
- Stankovic, M. (2009). *Faceted online presence – a semantic web approach*. Unpublished Master Degree Thesis, Université Paris-Sud XI, Orsay, France.
- Trinder, K., Guiller, J., Margaryan, A., Littlejohn, A., e Nicol, D. (2008). *Learning from digital natives: Bridging formal and informal learning*. The Higher Education Academy. Research Project Report, Final Report.
- Turkle, S. (1995). *Life on Screen: Identity in the Age of the Internet*. New York: Simon & Schuster.
- Turkle, S. (2011). *Alone together – Why we expect more from technology and less from each other*. Basic Books, New York.
- Warburton, S. (2008). *Mapping online identity challenges at Rhizome Project*. Retrieved in <http://digitaldisruptions.org/rhizome/2008/10/26/mapping-online-identity-challenges/>
- Warburton, S., García, M., Attwell, G. & University King's College (2010). *Digital Identity Matters*. In Rhizome project. Retrieved [http://digitaldisruptions.org/rhizome/wp-content/uploads/2010/06/rhiz08\\_DigitalIdentityMatters.pdf](http://digitaldisruptions.org/rhizome/wp-content/uploads/2010/06/rhiz08_DigitalIdentityMatters.pdf).
- White, D. (2008, July 23). Not 'natives' & 'immigrants' but 'visitors' & 'residents' [Web log post]. Retrieved from <http://tallblog.conted.ox.ac.uk/index.php/2008/07/23/not-natives-immigrants-but-visitors-residents/>
- Zhao, S. Grasmuck, S. & Martin, J. (2008). Identity construction on Facebook: Digital empowerment in anchored relationships. *Computers in Human Behavior*, 24 (5), 1816-1836.