Net generation and digital literacy: a short bibliographical review and some remarks

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A far reaching discussion on the net generation and the need to update teaching methods has been ongoing for a while. A large number of papers on this topic have been published. The most relevant reviews point out that by and large the use of social networks by the net generation does not mean that young people has natural digital skills/competencies they apply in the learning activities.

The present brief review discusses the relevant literature considering the various definitions of "digital literacies". In particular an JISC study "Thriving in the 21st century. Learning Literacies for the Digital Age" (LLiDA Project) is cited, because of its approach to a very detailed definition of learning literacies.

Moreover, in spite of them making use of the most recently available sources like Wikipedia recent papers have shown that the search and reading approach of the net generation – lacks selection criteria and quality

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evaluation skills.
In the conclusions the Author raises questions on the best e-learning methods to teach digital literacies, in a context where the change is fast, and the traditional LMS approach may be a waste of time and money - and, very difficult to put in practice in a time of retrenchment for Italian Universities.

1 Introduction

The net generation's (or "millenials' ") characteristics have been discussed recently by a number of papers. The aim of this short review is to select and discuss the most prominent, and to identify the emerging trends. Furthermore, directions the suggested training methods are proposed.

2 The debate about the net generation

Giuseppe Longo (2009) described the millennial generation's peculiarities, discussing their "anthropological" characteristics and their ability – which he likes to define "opportunistic" - to bend information technology to suit their own purposes; his focus is on the teaching institutions and how they deal with this generation, as apparently the method they learn by is quick, manifold, diverse and lacking depth. Schools' and Universities' teachers are trying to tackle this situation and are discussing what to change in the area of educational methods and contents.

Sue Bennet, Karl Maton and Lisa Kervin (2008) wrote an interesting and critical review about the most important papers on this subject. They first analysed the papers about the existence and characteristics of the "net generation" (mainly Prenski data).

«The claim made for the existence of a generation of "digital natives" is made on two main assumptions in the literature, which can be summarised as follows:

1. Young people of the digital native generation possesses sophisticated knowledge of and skills with information technologies
2. As a result of their upbringing and experiences of technologies, digital natives have particular learning preferences or styles that differ from earlier generations of students»

On the first point the Authors cite a number of papers which highlight the socio-economic and family factors leading to different levels of knowledge and skills in the information technology use. They therefore conclude that there may be as much variation within the digital natives generation as between generations. As for the second assumption, the Authors consider arbitrary to decide

that an entire generation has the same learning styles, and they start discussing whether is really a need for a radical change in the higher education teaching methods (such as the introduction of learning games and a wider use of information technology). In the course of their analysis the Authors point out the fact that young people behave differently in the use of technology at home and at school; moreover there is evidence about their lack of critical thinking, which emerges in the unaware use of information and resources found on the net.

In their conclusions the Authors stress the need of new and updated surveys in depth. They point out the crucial importance of serious analysis based on precise data. Only in depth research may help University lecturers to overcome their "moral panic" and define an appropriate strategy to change methods and approaches.

More recently published papers, both at international level (Jones *et al.*, 2010a; Proceedings of the 7th International Conference on Networking Learning, 2010) and at national level (Rapetti & Cantoni, 2010) converge on the need of more in depth studies, and on the variety of learning styles within the digital native generation; they agree about the fact that the educational context (Jones, 2010b) has a large impact on how young students use information technology in their learning process; lastly, a paper (McNaught, 2009) about the digital divide between teachers and students bring some results which would need further investigation.

3 Digital competence: definitions and points of view

At this point, it would be very important to define "the digital competence or competences": a good reason to discuss about definitions is the convergence of "media literacy", "computer skills/literacy" and "information literacy".

I personally appreciate the comprehensive and extensive meaning of the English word "literacy": in Italian it has been often translated with "*competenza*", which is closer to "skill" than to "literate" (Literate: "1. able to read and write 2. educated or knowledgeable[1]). The Working Group of the Italian Library Association translated on 2003 the ACRL Standards on Information Literacy and "information literacy" was translated "*competenze informative*"[2]. I think that the term "competence" is a partial expression of what we are speaking about. As, in Italy, we fell free to use a great deal of English words in our current language, I prefer to use the term "literacy" when I refer to digital competences; anyway an open discussion about this terminology question would be welcome.

[1] Concise Oxford English Dictionary, 11. ed rev., 2008

[2] http://www.ala.org/ala/mgrps/divs/acrl/standards/standards.pdf Italian translation: http://www.aib.it/aib/commiss/cnur/tracrl.htm3

A recent definition for "digital competences" to refer has been offered by Calvani, Cartelli, Fini and Ranieri (2008):

«Digital competence consists in being able to explore and face new technological situations in a flexible way, to analyze, select and critically evaluate data and information, to exploit technological potentials in order to represent and solve problems and build shared and collaborative knowledge, while fostering awareness of one's own personal responsibilities and the respect of reciprocal rights/obligations.»

In the international literature there are two important and comprehensive documents about learning, the net generation and digital literacy: "Educating the net Generation" by Diana L.Oblinger and James L.Oblinger, published by EDUCAUSE (2005); and the essay, published by the JISC support: "Thriving in the 21st century. Learning Literacies for the Digital Age (LLiDA Project), by Helen Beetham, Lou McGill and Alison Littlejohn (2009).

Beetham and Coll.'s paper proposes a wider definition of "digital literacy" and introduces the concept of "learning literacies"; the study's main objective is to provide JISC and the Great Britain Higher Education Institutions an analysis of current projects and consequent a list of recommendations young generation education process, and the basic competences/literacies to foster their carrier, learners and workers. In the introductory chapters, the Authors make the following statements, explaining the meaning and the implications of the term "literacy":

- A foundational knowledge or capability, such as reading, writing or numeracy, on which more specific skills depend;
- A cultural entitlement – a practice without which a learner is impoverished in relation to culturally valued knowledge;
- Communication – expressing how an individual relates to culturally significant communications in a variety of media;
- The need for practice-acquired through continued development and refinement in different contexts, rather once for-and-for-all mastery;
- A socially and culturally situated practice – often highly dependent on the context in which it is carried out;
- Self-transformation – literacies (and their lack) have a lifelong, life wide impact.

The LLiDA project (84 pages, references included) is really interesting in its practical approach, the detailed analysis of case studies and its final recommendations.

I am not going to propose the digest of the article in this context, although it

is important to stress that the British approach to "digital literacies" considers them strategic, a basic and comprehensive component of the learning process, and a foundation for effective and life long learning.

In Italy there is still a separation between "computer skills/literacy" on one side and "information literacy/media literacy" on the other side. In the past, the distinction, appeared not to make sense in the Anglo-Saxon countries, but now appears now outdated in Europe and Asia too. It originally can be traced back to the traditional Italian separation of the disciplines librarianship related (Arts and Humanities, Cultural Heritage) and computer sciences related (Information Sciences, Engineering, Computer Sciences): in our Universities there is not and integration of "Information and Library Science", usually called LIS.

4 Net generation digital literacy

Although it may misleadingly sound as an oxymoron, this section of the paper separates "computer skills/technology literacy" from "information literacy".

In the area of "computer skills/new technology literacy", Rapetti and Cantoni's paper (2010) has to be mentioned, as do number of recent international studies. In 2008 S. Kumar (2010) surveyed 21 students (18-24 year olds) learning different disciplines: he analyzes the formal and informal use of new technologies. In his conclusions he suggests the need to extend the survey to more countries and contexts, and points out the difference between personal use and "creative "school" use of technologies (text messages, forum online, googledocs, blogs, wikis, podcasts and youtube). A more extensive survey by the University of Melbourne in 2006, analyze 2000 first year students: the Authors (Kennedy *et al.*, 2008) conclude observing that the use of technologies for personal use or in free time does not means knowing how it is used for study purposes; they disagree about the "homogeneity" of behaviour and skills among the net generation, and stress the need of more in depth studies.

In the area of the "information literacy" there is a lot of literature, as the topic is discussed in a number of LIS journals. Recent articles published in non-LIS journals will be discussed here. Non sequitur tra le due precendeti frasi

The very recent "How today college students use Wikipedia for course related research" published on FirstMonday (Head, 2010) presents updated data about the frequency and in depth use, mainly for home works and thesis; The Authors points out that Wikipedia is used as a unique source for a more complete bibliographical search. In a previous paper (Head, 2007) the same Author had described a wider use of sources, from the library web page, textbooks and and teachers' suggested references. Wikipedia and google are the most used sources by the students (Judd & Kennedy, 2008) in the biomedical area,

Lastly, a research about distance learning students (Van de Word, 2010) which analyzes and updates the literature about the "information literacy" is also relevant: the Author demonstrates the crucial need of information literacy instruction for distance learners and uses a strong metaphor:

«For students attending the University "virtually" without access to the physical library, the Internet becomes the primary research information source […] Yet perception of credibility does not imply evaluation of actual credibility, but in fact the opposite, an acceptance of information available through the source as credible, therefore eliminating a perceived need to evaluate the information. The magnitude of information, in text, audio, images and graphics, available online, combined with a lack of oversight and regulation, and these low information literacy skills, creates an environment that could be likened to shark infested worldwide waters for distance college students»

Thus, the Author strongly suggests teaching more than just information literacy "basics" but also include "media literacy" (with no exclusions, from YouTube to advertisement) and crucial topics like "critical thinking" and scepticism about media contents.

Conclusions

Since the important review by Bennet, Maton and Kervin, more and in depth research literature has been published, and it may be that the "academic moral panic" is growing weaker. There is a greater awareness and more literature, and even in our Universities a small number of lecturers are starting to use the new technologies and social networks in their work. It is not easy, and probably knowledge with e-learning and blended learning may help, on the pedagogical and technical point of view.

This new environment confirms and highlights the interactive nature of learning; the quality of methodology is essential for a mindful use of the web 2.0 technology for teaching.

I would like to stress the importance of using the new technology to teach the "information literacy" and the "digital literacy" in a wider meaning of the subject, including the information and the media literacy.

The production of learning objects and the use of the traditional e-learning platforms are, in fact, very expensive and time consuming activities; one strong argument against the production of SCORM objects – which are expensive to produce and to modify – are the very rapid changes in services, interfaces, portals and publishers aggregations, both in the commercial area that in the open access environment. On one side it is always important to start from the basic

learning about the organization of information and the knowledge management fundamentals, but the quick evolution of the collaborative tools suggest not to invest in static, textual and not easily updatable and expensive contents.

On the other hand, if looking at the LIS literature, there is a great deal of practical experience in this field: many Authors are writing about their wide experience in training with web 2.0 technology for student training. One of these papers was written by Lili Luo " "Web 2.0 integration in Information Literacy instruction: an overview": the Author also reports students feedback on the teaching methodology.

In conclusion there is evidence suggesting the need to use the new technologies to support the digital literacy learning, but also – non just because it is fashionable – to confirm a model of online learning for future generations.

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