The Voice of Learners to Understand ICTs Usages in Learning Experiences: a Quanti-qualitative Research Project in Ticino (Switzerland)

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Abstract: The paper addresses the famous (and perhaps overworked) “digital natives” or “Gen Y” theme with an empirical approach. Moving from a survey on the literature on the topic, showing the implications – practically - in instructional design field and – theoretically – in pedagogy and referring to the main critical voices, the need to observe the problem in depth, overcoming a “global” point of view and adopting a localized-contextualized perspective is argued. Then is presented the research project “Learners’ voices @ USI-SUPSI”, a study set to observe the reality of university students in the Italian speaking part of Switzerland and meant to observe what are the cultural and educative impacts of new technologies in learning experiences. Results show that a monolithic generation of “digitalized learners” does not exist and that – even if age matters – there is a stronger dependence on variables such as learning culture, task-needs, individual skills/predispositions, personal behaviors, and training experience.

Introduction

In recent decades, young learners have been exposed – in many countries – since their birth to Information and Communication Technologies (ICTs), be they portable phones, or computers, satellite television or gaming consoles.

This familiarity with ICTs is likely to affect deeply the way they learn – at home and at school – as well as the way they work and learn on the job; in fact, the workplace itself has changed to accommodate many technological tools, and to fit the so called “information / knowledge society” environment. In recent years a huge amount of literature has tried to describe these learners. Three definitions have played a major role: that of “digital natives” given by Prensky, the one suggested by Oblinger & Oblinger – “Net generation” – and that of “generation Y” (shortly, “GenY”) or “Millennials”, proposed by Howe and Strauss.

Perhaps because most research activities have been done in the United States (US Department of Education, 2004), studies seem to underestimate possible differences, not only at the personal level, but also at the national and cultural ones; moreover, studies tend to be technology-centric, and to overlook actual practices and usages.

To better localize what it really means to learn for a GenY person (i.e., born after 1980), and to provide a deeper and more focused understanding of it, students studying in Ticino – an Italian speaking region of Switzerland – have been monitored, and their strategies and approaches to ICTs and learning analyzed and interpreted.

1. The urgency to address a nebulous debate

Since the existence of a generation of “digital natives” (Prensky, 2001) was asserted, increasing attention has been given to the problem of how young people’s learning is affected by the usages of ICTs. The discourse about contemporary learners has grown substantially over the last decade and many labels have been invented, all of them turning (explictly or implicitly) about the idea of a digitalized/ technologized generation. The most widely diffused ones are: Net generation (Oblinger & Oblinger, 2005), Millennials (Howe & Strauss, 2000), New Millennium Learners (Pedrò, 2006), Screen Generation (Rivoltella, 2006), Digital Learners (Pletka, 2007); some of them are diffused on the internet: Echo Boomers, Net-agers, Next Great Generation, Generation @, etc..

All the above can be categorized into three main families (Rapetti, Cantoni & Misic, 2009):

i. The historic-sociological approach: It turns around the widespread “generation Y” label, mostly referring to the influential book Generations: the history of America's future, 1584 to 2069 (Howe & Strauss, 1991) in which the authors provide an interesting explication of US history: they divided the chosen period into seacula and each saeculum into four generations. Each of them has a main peculiar feature, which recurs
every four generations in an endless cycle: the four generations are the “civics,” the “adaptives,” the “idealists,” and the “reactives”. Gen Y people are expected to be “civics”.

ii. The socio-cognitive approach (and the neurological hypothesis): This emerged in 2001, when Prensky first wrote about “digital natives”, pointing out two pieces of evidence: 1) US children were growing up in a world full of ICTs, especially videogames, and using them they were learning informally; 2) young people were experiencing learning practices in a different way than their parents, and this fact was creating, according to Prensky, a gap between “digital natives” and “digital immigrants”, because «Digital Natives’ brains are likely [to be] physically different as a result of the digital input they received growing up» (2001, p.15). In his subsequent works (2005a; 2006), the author defined his theory and a real cultural boom began: after this everything started to be considered “digital”: digital natives and immigrants, digital era, digital learners, digital literacy, to teach digitally, etc..

Other authors are following Prensky’s steps: Beck & Wade, for instance, claim that skills achieved in playing videogames have an impact on workplace attitudes, because “gamers” are more effective, more competitive, and more loyal to authority than “non-gamers” (Beck & Wade 2006). Again, Palfrey & Gasser have presented some stories about “digital natives”, drawing some generational characteristics (Palfrey & Gasser, 2008).

iii. The socio-pedagogical approach: Because of the wide dissemination of labels mentioned above, since the middle of this decade, another has begun to spread and it is an interesting case, because it merges what is expressed by “generation Y” with the “digital natives” approach, which is how the “net generation” conception (Tapscott, 1997) arose, promoted by EDUCAUSE (Oblinger & Oblinger, 2005).

A parallel analysis, but contextualized for the European condition, should be done about the project “New Millennium Learner”, promoted by the OECD-CERI (Pedrò, 2006).

Even a US state Department of Education felt the need to define that a Digital Native is: “A technology user under the age of 30, who was born into the digital world and is accustomed to receiving information very quickly. The digital native is able to parallel-process and multi-task, and usually prefers to see graphics before text. S/he tends to be more comfortable working in a hyperlinked environment, and when s/he receives frequent rewards or feedback.” (West Virginia Department of Education, 2009).

The crucial point of this theme concerns the instructional design issues implied by the existence of a generation of learners with a brain “physically different” and all the problems related to a generation of teachers who were not trained to lead the class by exploiting the media potentialities and that, therefore risks being absolutely unprepared, thus amplifying the “digital gap”.

The debate crosses any level of education: from primary school (e.g.: Buckingham, 2007; Jukes & Dosaj, 2003), through secondary school (e.g.: Pletka, 2007; Wilson & Gerber, 2008), to university (e.g.: Berkman Center, 2008; Junco & Mastrodicasa, 2007), and is entering as well in Human Resources discourse (e.g.: Erickson, 2009; Gabirout, 2009). In short, it has become a global, universal, continuous issue discussed by scholars, all over the world; and this paper cannot pretend to be conclusive, since virtually every day brings a new article or book about it. It must be underlined that, even if in different aspects, all of the perspectives presented can influence the way eLearning has to be considered and provided (see: Hirumi, 2009).

But, recently, the “digital natives” idea and “GenY” perspective have been criticized (Bennett et alii, 2008; Schulmeister, 2008), for the following main reasons:

- The characteristic of “digital” fits well for objects, but it seems to be inaccurate if referring to human beings. More, it became a fashionable concept because it is very clever and – nowadays – everything risks being called “digital”.
- The concept of “generation” must be brought back to its proper meaning, since “a bunch of people” is not a generation, even if they all use the same technologies.
- This perspective seems to be quite deterministic, because it pretends to describe persons (and their behaviors, habits and beliefs) and it tries to forecast how they will learn and behave, simply from the evidence that they grew up in a world permeated by technologies.
- In addition, most books and articles come from the United States and it could be a dangerous assumption to extend talis qualis their analyses and intuitions to other countries.
- Moreover, this perspective is deeply influencing instructional designers all over the world, because a lot of books have been published claiming “how to teach people in the digital era,” which, again, has to be proved effective and sound in very different contexts.
Attributing characteristics to persons implies generating a priori expectations in teachers and trainers about an undemonstrated and vague “media skill” or “technological potential,” of which digital natives should be “bearers”.

Prensky’s hypothesis can be understood using Cohen’s notion of “moral panic”; this case, moral panic would work as a kind of surrender due to a lack of understanding of new learners’ characteristics and may constitute an alibi to justify teachers'/parents'/educators’ failures: new learners are intrinsically different, and teachers cannot teach them; like natives and immigrants in a country, they will never become the same.

Another interesting point that suggests being cautious about a too strict labeling of the contemporary generation of learners comes from the analysis of the arrival and diffusion of technologies exploited to communicate during history (de Kerckhove, 2003). Human beings developed writing 300 generations ago, printing 35 generations ago, and – in only one single century – telegraph, photography, telephone, cinema, television, fax, personal computer, internet, portable communication devices.

Moreover, as has been suggested (TALL, 2009), the time has come to abandon a natives/immigrants perspective and to adopt a visitors/residents one.

In short, in order to overcome this nebulous debate, it is necessary to pursue «considered and rigorous investigation that includes the perspective of young people and their teachers, and genuinely seeks to understand the situation before proclaiming the need for widespread change» (Bennett et alii, 2008, p. 281).

2. The need to contextualize the claimed phenomenon: “learners’ voices @ USI-SUPSI”

Moving from the call for wider and deeper observation of the topic follows the necessity to study how people use new technologies in defined and precise contexts combining quantitative methodologies – in order to get socio-cultural trends of a group of learners – with qualitative-ethnographic ones – so to go more deeply and see what are the actual usages and to understand related meanings and feelings.

To pursue this aim, within the NewMinE Lab and the eLearning Lab of the Università della Svizzera italiana was conceived the “eEthnography team project” and, actually, the research presented is part a wider study aiming to study in depth what it means to learn in the knowledge society and what are the cultural and educative impacts of the new technologies on learning experiences. In addition to the research being described – which is the cantonal-level implementation of a work in beta last year – some other projects deserve mention: “Learners’ voices @ POLIMI” (set in the Polytechnic of Milan, Como campus), which asked students to create videos representing the influence of ICTs; “GenY @ work” (Rapetti & Cantoni, 2009; Cantoni et alii, 2010), involving nearly 250 young employees of six different Swiss companies; “Learning voices @ UWIOC”, in which the object of observation is the University of West Indies Open campus, which offers eLearning to almost 4500 online students over 16 different-country islands, and which is, therefore a very interesting case of the necessity for ICTs in learning experiences (at the present this research is ongoing). The whole research project has been carried out in contact with colleagues who face the same topic in UK (see: JISC Consortium, 2009), at OCSE-CERI (see: Pedrò, 2006), and in Italy (see: Numediabios Project, 2009).

a. Learners’ voices @ USI-SUPSI: meaning

Considering the motivation for a research project such as “Learners voices @ USI-SUPSI,” the work can be considered as the consequence of a wide literature about a tricky topic that risks unbalancing the focus to the level of theory, intuitions, and popularization intents, in detriment to the empirical evidence and the contextualization needs. For this reason, the major questions behind the research plan can be expressed as following:

- Which technologies are effectively diffused among the students of the Italian-speaking part of Switzerland? What is the role ICTs play in everyday life and, more in depth, in learning experiences?
- How, when, and why do the students choose and use digital technologies for university-learning needs and for eLearning dynamics?
- What are the perceptions/feelings towards the role of ICTs in learning and about eLearning?

Subsequent to that rationale, the data collected should have provided enough information in order to understand if and how, and on what aspects, it is possible to consider young students of Ticino like a digital generation of learners.

To pursue this goal, researchers moved from the lessons learned during the beta phase. In that research (with a little sample of students of Communication Science Master) was used the same protocol of the JISC Consortium (see: http://www.jisc.ac.uk/whatwedo/programmes/elearningpedagogy/learneroutcomes/learnervoices), namely a deep, complex online questionnaire, combined with video-interviews of interesting cases. Two main
problems needed to be fixed: the online survey was too long and complex and the data collected from video-interviews were not enough (too close to being a commentary on the online survey).

So, the online questionnaire was shortened and questions focused only on some aspects, related to what was expressed above; an e-mail was sent to all the students and a web link was put on the homepage of the online platform for eLearning facilities. It must be underlined that – even though the risk of bias exists because of self-selection of the respondents – a simple random sample has been set in order to not predetermine any results due to the observer’s prejudice. Then, concerning the qualitative part, a quasi-ethnographic method was customized, exploiting the LEGO ™ bricks methodology of “Serious play” (see: http://www.seriousplay.com); this methodology worked very well for the parallel research “Gen Y @ work” (Rapetti et alii, 2009). Since the analysis of the qualitative part of “Learners’ voices @ USI-SUPSI” is still ongoing, this paper will focus mainly on what emerged from the quantitative data.

Of course, no one intended to deny the affecting presence of ICTs in everyday aspects of life and, therefore, in education; it is also clear that there is a personal usage to determine the effectiveness of technologies (McLuhan, 1967). So, the questionnaire was designed in order to check the effective familiarity with new devices, tools, and facilities, to understand how these enter into the life of a person and in his/her educative process.

b. Learners’ voices @ USI-SUPSI: from rationale to methodology

According to the fixed goals, questions have been developed, set in the following sections:

1. Personal data (age, gender, course, etc).
2. Owned digital technologies.
3. Access to the internet.
4. Online activities and frequency of usage.
5. Most used applications.
6. The role of ICTs in everyday life.
7. Learning preferences (in general and concerning ICTs).
8. The role of ICTs in studies/learning experiences.
9. eLearning perception.

The research involved 562 respondents over a population of about 4500 students of tertiary education in Ticino, enrolled in the two Higher Education Institutions of the region: USI – Università della Svizzera italiana (Lugano, Switzerland) and SUPSI – University of Applied Sciences and Arts of Southern Switzerland. The study observed a representative sample of the nine main faculties in the territory.

Personal details of participants

Among the respondents 54.6% of students attended SUPSI and 45.4% USI.

Concerning gender of participants, 318 (56.6%) are female and 244 (43.4%) are male.

The average age is equal to 24.5 years, while the median, which divides the sample into two equal portions, is at 23 years. The age ranges from a minimum of 17 years (one case) and a maximum of 75 years. Despite the fact that 50% of students in the sample is located between 21 and 26 years, age was divided into three classes: 17 to 23 years (59% of the sample), from 24 to 29 (28%), and 30 and over (13%). This is primarily aiming to highlight any possible differences between those who belong in Gen Y – namely, the ones born after 1980 – and the others, who are now, in 2009, more than 30. In the second place it was interesting to make a further comparison within the Gen Y itself, between those who are at the beginning of this generation and among the very young, presumably more digitized.

c. Learners’ voices @ USI-SUPSI: main results

In this paragraph will be shown – through descriptive statistics – the main results coming from the data collected. Most informant data are presented in graphs, lists of preferences and tables, and are commented. Findings specifically related to age issues will be detailed in the conclusions.

Owned devices

Digital tools possessed by most participants (> 50%) are:

- The digital camera (87.4%)
- The portable computer (87.1%)
- The printer (81.7%)
- The CD/DVD burner (71.5%)
The webcam (69.5%)
The scanner (65.2%)
The desktop computer (58%)

Concerning the above list, there are not relevant differences by gender, age, or faculties. Furthermore, the data show that only one student does not have any of the specified technology. On the other hand, over-30 students own the technologies that are at the bottom of the list, such as tablet laptops, more than their younger colleagues. Among the less common devices some distinctive differences can be found by the course of study and age. Notebooks and palmtops (e.g. i-Phone, Palm, Blackberry) are owned in the largest percentage by the over 24 years old group, while the CD/DVD burner (optical disc drive, ODD), held in high percentage by all three classes, is mostly used by the 30 and over, probably because with the new technologies and tools available (I-pod, I-tunes, mp3), the GenY people do not need this facility. Moreover, among all those who have the laptop tablet, most attended the Computer Science department (33.3%) and Faculty of Communication Science (16.7%). Students of Communication are distinguished also by the palmtops (26.7% of total). Regarding SUPSI is the DTI (Department of Technology and Innovation) to highlight a higher percentage in the possession of the tablet laptop (the 33.3%). In DSAS (Department of Social and Business Studies) instead we find the largest percentage of students who have the palmtops (22.2%).

Internet Access

Students access the Internet mostly from the university for a period from 0 to 30 minutes (48.1%), while more access from home (64.8%) for over an hour. 52.3% of students also connect from work, of which 18.9% do so for more than three hours (see Chart 1).

![Chart 1: daily internet access (in %)](image)

Online activities: frequency and description of daily actions

Regarding the online activities, we note that the consultation of search engines and the use of e-mail are the most common. Then there are activities generally little-used throughout the sample, such as download podcasts, sell or buy, subscribe to or read RSS feeds, rather than read eBooks. Here below, the six activities that students pursue daily:

- Use a search engine (79.3%)
- Read / write e-mail (78.1%)
- Watch a film / play audio files (38.5%)
- Read newsletters or alerts (36.6%)
- Read newspapers (34.8%)
- Create / Update your profile in social networks (30.9%)

Activities improved by ICTs

Students perceive that ICTs have generally improved the way in which they conduct the following activities:

- The way you do your tasks (83.6%)
The way you collaborate with your colleagues (76.6%)
The way you study (76.2%)
The way you follow your hobbies or interests (72.2%)
The way you manage relationships with family and friends (65.2%)
The way you share your ideas and creations (58%)

Chart 2: Which activities have been improved by ICTs, and how much (in %)

The preferred way of learning
The preferred mode of learning is the traditional one, namely the lessons in the classroom: 94% of respondents said that they like it between "a lot" and "fairly". Among the most favored there is still a classic method, individual study, and search engines (both 89.5%). Online platforms (eLearning) occupy only the fifth place, with 72.1%, preceded by Wikipedia (78.5%). Among the less popular, we find social networks and multimedia supports for learning (CD-ROMs, educational videogames, etc.). Towards the printed dictionary and encyclopedia, the sample had mixed emotions: the 54.9% appreciates them from "a lot" to "fairly", the 45.1% just "a little" or "not at all". The results thus show in the following way:

<table>
<thead>
<tr>
<th>When you learn, you prefer:</th>
<th>A lot in %</th>
<th>Fairly in %</th>
<th>sum</th>
<th>A little in %</th>
<th>Not at all in %</th>
<th>sum in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures in classroom</td>
<td>52.3</td>
<td>41.8</td>
<td><strong>94.1</strong></td>
<td>5.1</td>
<td>0.8</td>
<td><strong>5.9</strong></td>
</tr>
<tr>
<td>Search engines</td>
<td>57.2</td>
<td>32.2</td>
<td><strong>89.5</strong></td>
<td>9.0</td>
<td>1.6</td>
<td><strong>10.5</strong></td>
</tr>
<tr>
<td>Individual study (using books, notes, folders etc.)</td>
<td>50.8</td>
<td>38.7</td>
<td><strong>89.5</strong></td>
<td>9.4</td>
<td>1.2</td>
<td><strong>10.5</strong></td>
</tr>
<tr>
<td>Wikipedia</td>
<td>35.4</td>
<td>43.2</td>
<td><strong>78.5</strong></td>
<td>16.8</td>
<td>4.7</td>
<td><strong>21.5</strong></td>
</tr>
<tr>
<td>Online platforms (eLearning)</td>
<td>35.0</td>
<td>37.1</td>
<td><strong>72.1</strong></td>
<td>22.3</td>
<td>5.7</td>
<td><strong>27.9</strong></td>
</tr>
<tr>
<td>Websites/specialized blogs</td>
<td>33.2</td>
<td>34.6</td>
<td><strong>67.8</strong></td>
<td>23.4</td>
<td>8.8</td>
<td><strong>32.2</strong></td>
</tr>
<tr>
<td>Individual lessons</td>
<td>30.7</td>
<td>35.0</td>
<td><strong>65.6</strong></td>
<td>27.0</td>
<td>7.4</td>
<td><strong>34.4</strong></td>
</tr>
<tr>
<td>Printed dictionary/encyclopedia</td>
<td>16.8</td>
<td>38.1</td>
<td><strong>54.9</strong></td>
<td>35.2</td>
<td>10.0</td>
<td><strong>45.1</strong></td>
</tr>
<tr>
<td>Multimedia supports</td>
<td>13.9</td>
<td>27.7</td>
<td><strong>41.6</strong></td>
<td>38.1</td>
<td>20.3</td>
<td><strong>58.4</strong></td>
</tr>
<tr>
<td>Social networking sites</td>
<td>8.6</td>
<td>11.7</td>
<td><strong>20.3</strong></td>
<td>31.6</td>
<td>48.0</td>
<td><strong>79.7</strong></td>
</tr>
</tbody>
</table>

Table 1: The preferred way to learn
[Sample: 562. This question, missing: 50; total 512 (100%). Multiple choice]
The most useful technologies in studies

The technologies considered most useful for study needs (> 50%) are:
- Search engines (90.6%)
- Laptop computer (86.1%)
- USB key (84.7%)
- Text editor (77.6%)
- Presentations editor (69.4%)

The most useful online communication tools in studies

As for the online communication tools most used in the study, the e-mail is by far the most common (85.3%), followed by IM or VoIP tools like MSN or Skype, used by nearly half (49.8%) of participating students. 3D virtual community (e.g. Second Life), social bookmarking (e.g. Del.icio.us), and microblogging (e.g. Twitter) are those that register less success (less than 5% each).

Praise of eLearning

In order to capture the attitude of the sample to eLearning, students were asked to agree or disagree with a series of statements regarding eLearning. In table 2 the response distribution is showed:

<table>
<thead>
<tr>
<th>Please indicate whether you agree or disagree with each of the following statements</th>
<th>Agree in%</th>
<th>Partially agree in%</th>
<th>Disagree in%</th>
</tr>
</thead>
<tbody>
<tr>
<td>eLearning is an important element of my courses</td>
<td>51.0</td>
<td>38.6</td>
<td>10.3</td>
</tr>
<tr>
<td>eLearning is one of a number of important components of my courses</td>
<td>43.2</td>
<td>43.6</td>
<td>13.2</td>
</tr>
<tr>
<td>eLearning makes learning easier for me</td>
<td>26.9</td>
<td>47.9</td>
<td>25.2</td>
</tr>
<tr>
<td>It would be good if there were more eLearning in my courses</td>
<td>22.1</td>
<td>43.4</td>
<td>34.5</td>
</tr>
<tr>
<td>eLearning makes courses more enjoyable</td>
<td>21.7</td>
<td>43.8</td>
<td>34.5</td>
</tr>
<tr>
<td>My university is not very smart in the way it uses eLearning</td>
<td>10.1</td>
<td>29.5</td>
<td>60.3</td>
</tr>
<tr>
<td>With eLearning I interact more with other students</td>
<td>9.7</td>
<td>29.5</td>
<td>60.7</td>
</tr>
<tr>
<td>Without eLearning I would be unable to study</td>
<td>7.0</td>
<td>32.2</td>
<td>60.7</td>
</tr>
<tr>
<td>Having access to a computer connected to the internet is a problem for me</td>
<td>1.9</td>
<td>4.3</td>
<td>93.8</td>
</tr>
<tr>
<td>I find it difficult to use technological devices</td>
<td>1.2</td>
<td>6.8</td>
<td>91.9</td>
</tr>
<tr>
<td>I find it difficult to use a computer</td>
<td>1.0</td>
<td>5.8</td>
<td>93.2</td>
</tr>
</tbody>
</table>

Table 2: Praise of eLearning
[Sample: 562. This question, missing: 69; total 491 (100%). Multiple choice]

It is clear that participants consider eLearning an important and helpful element in study (51%), but not an essential one. In fact more than half the sample (60.7%) said they would be able to study anyway, even without the support of eLearning.

Rationales in using ICTs for study aims

When asked “In your study you use ICTs for...” it emerges that respondents are using them to gather information, view and download the course material. The last two possibilities are related to the eLearning platform “e-courses”, the primary source for gaining access to university teaching materials. Reading the course material, writing an assignment or preparing presentations, communicating with friends and sharing material, doing a task collaboratively are all performed with the use of ICTs by a significant number of respondents; on the contrary, communicating with teachers and tutors has a low ranking; finally is detected a minimal use of eLearning to perform self-assessment exercises and the majority of students never do online shopping (see Table 3).
In your study you use ICTs for:

<table>
<thead>
<tr>
<th>Activity</th>
<th>A lot in%</th>
<th>Fairly in%</th>
<th>A little in%</th>
<th>Never in%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gathering information</td>
<td>63.6</td>
<td>29.1</td>
<td>5.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Viewing course material</td>
<td>59.3</td>
<td>29.8</td>
<td>9.1</td>
<td>1.9</td>
</tr>
<tr>
<td>Downloading materials</td>
<td>55.2</td>
<td>30.0</td>
<td>10.3</td>
<td>4.5</td>
</tr>
<tr>
<td>Communicating with friends</td>
<td>49.2</td>
<td>30.8</td>
<td>14.7</td>
<td>5.4</td>
</tr>
<tr>
<td>Reading course material</td>
<td>46.5</td>
<td>36.6</td>
<td>13.0</td>
<td>3.9</td>
</tr>
<tr>
<td>Writing an assignment</td>
<td>42.6</td>
<td>36.2</td>
<td>16.7</td>
<td>4.5</td>
</tr>
<tr>
<td>Communicating with colleagues</td>
<td>39.7</td>
<td>40.7</td>
<td>16.3</td>
<td>3.3</td>
</tr>
<tr>
<td>Sharing materials</td>
<td>39.3</td>
<td>34.3</td>
<td>19.8</td>
<td>6.6</td>
</tr>
<tr>
<td>Preparing oral presentations</td>
<td>39.0</td>
<td>33.3</td>
<td>19.4</td>
<td>8.3</td>
</tr>
<tr>
<td>Managing information</td>
<td>37.2</td>
<td>43.8</td>
<td>14.9</td>
<td>4.1</td>
</tr>
<tr>
<td>Doing a learning task individually</td>
<td>32.6</td>
<td>40.1</td>
<td>21.3</td>
<td>6.0</td>
</tr>
<tr>
<td>Reviewing for an exam</td>
<td>31.2</td>
<td>32.9</td>
<td>26.9</td>
<td>9.1</td>
</tr>
<tr>
<td>Planning a group-learning task</td>
<td>28.7</td>
<td>37.4</td>
<td>25.8</td>
<td>8.1</td>
</tr>
<tr>
<td>Doing a learning task collaboratively</td>
<td>27.3</td>
<td>44.4</td>
<td>22.7</td>
<td>5.6</td>
</tr>
<tr>
<td>Communicating with tutors/teachers</td>
<td>18.2</td>
<td>40.1</td>
<td>35.3</td>
<td>6.4</td>
</tr>
<tr>
<td>Listening to course material</td>
<td>17.6</td>
<td>26.2</td>
<td>27.3</td>
<td>28.9</td>
</tr>
<tr>
<td>Self-assessment exercises</td>
<td>16.7</td>
<td>26.0</td>
<td>34.7</td>
<td>22.5</td>
</tr>
<tr>
<td>Doing purchases online (e.g. books)</td>
<td>14.0</td>
<td>17.4</td>
<td>27.9</td>
<td>40.7</td>
</tr>
</tbody>
</table>

Table 3: Rationales in using ICTs

[Sample: 562. This question, missing: 69; total 491 (100%). Multiple choice]

3. Final remarks and open conclusions

As is evident, the students sampled for the research express feelings and behaviors towards new technologies that, on average, correspond with the characteristics attributed to “Gen Y” people; considering the tools and devices they own, it is possible to consider them “digital natives”; they, then, seem to fit in the profile.

But, if the analysis is focused on the questions proposed as research rationale, the reality appears more complicated and the expectations concerning the media (or attitude) skills intersect with other factors, disconnected from the generational or technological dynamics in the strict sense. Results of crosstabs between the variables above explained and the variable age show that a monolithic generation of “digitalized learners” does not exist. Even if no one wants to – and can – deny that age matters, there is also a strong dependence on other items, such as learning culture (of the course of studies), task-needs, individual skills/predispositions, personal behaviors, training/work experiences, and/or economical conditions – confirming what is stressed by Schulmeister: “the web is the medium of the better educated” (2008b, par.8).

In short, it seems unlikely to find in reality the qualities attributed so sharply in books; rather, they seem to occur unevenly and not always as expected. Since learners do still prefer the class lessons and classic learning strategies, we are far away from cyber-students, and the “web 2.0” style has not yet impacted structurally people’s attitude in learning.

The group of students older than 30 is a good example of that: they are the more traditionalist (see table 4), concerning the way to learn, yet they are the most technological. In general, people over 30 – within the entire sample – are the more inclined toward traditional methods such as classroom lectures, printed dictionaries/encyclopedia, individual tasks, individual study through notes, books and folders (the last one also very much appreciated by the younger age groups); but the same group also welcomes search engines, as well as eLearning. But, at the same time, probably for economic reasons, palmtops, laptop tablets and notebooks; moreover, they use media such as podcasts, videos, and digital audios or specific software (for statistics, modeling, and so on) more than the Gen Y.
When you learn, you prefer

<table>
<thead>
<tr>
<th>Age groups</th>
<th>…class lessons</th>
<th>…dictionary/encyclopedia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A lot</td>
<td>Fairly</td>
</tr>
<tr>
<td>17 - 23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nr</td>
<td>137</td>
<td>146</td>
</tr>
<tr>
<td>%</td>
<td>45.4%</td>
<td>48.3%</td>
</tr>
<tr>
<td>24 - 29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nr</td>
<td>80</td>
<td>49</td>
</tr>
<tr>
<td>%</td>
<td>58.0%</td>
<td>35.5%</td>
</tr>
<tr>
<td>over 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nr</td>
<td>51</td>
<td>19</td>
</tr>
<tr>
<td>%</td>
<td>70.8%</td>
<td>26.4%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nr</td>
<td>268</td>
<td>214</td>
</tr>
<tr>
<td>%</td>
<td>52.3%</td>
<td>41.8%</td>
</tr>
</tbody>
</table>

Table 4: Crosstabs showing people over 30 are more inclined to classical way to learn (variables age groups crossed with “class lessons” and “printed dictionary/encyclopedia”).

Generally speaking, we see that a lot of ICTs appear in students’ lives, but the technologies most mentioned are the computer and the cellphone, namely, the devices widely used are substantially the same of the late nineties. The importance of the internet in learning experience has been confirmed: WWW is habitually used to communicate, to share and to gather information; e-learning is considered to play an important role in university learning (but it is also thought as not a necessary one).

As said above, the “digital natives” and “Gen Y” debate is deeply orienting the publishing of instructional design books and articles, most of them – with popularization intents – seem to be the panacea for all ills, but often rely on intuitions that, although useful and interesting, remain unproven or – as partly showed, thanks to this research – incorrect or improper or decontextualized.

In light of the evidence of this survey – albeit limited to the peculiar situation of Southern Switzerland – the outlined theoretical scenario is to call into question the assumptions that the dominant literature offers us; not to deny its value or utility, but taking it as a starting point to deal with these issues locally, observing how the learners really behave in a given and defined context and overcome a supposed universal perspective, in order to arrive at an understanding of the territorial condition, useful positively and strategically to inform all actors and stakeholders in a precise area, to lead to virtuous circles in the system school-university-world of work.

Of course, there is no pretense of generalization, but the work carried on so far invites one to consider that, because of the complexity, a label like “digital familiar” could work better than the “natives” one.

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