



## Learning by using digital media in and out of school

### **Raquel Miño-Puigcercós**

University of Barcelona  
E-mail: rmino@ub.edu

### **Juana M. Sancho-Gil**

University of Barcelona  
E-mail: jmsancho@ub.edu

### **Abstract.**

*The gap between the compulsory secondary school, students' daily experiences and interests and social demands seems to have significantly increased. Nowadays disaffection and disengagement with school, low-attainment and early school leaving are found not only in disadvantaged students but also practically among all social groups across countries. The traditional conception of learning prevailing in most schools does not seem able to meet the educational needs both of young people and society. Living and learning in a digital and globalized world implies considerable challenges for schooling, and these are reviewed in this paper.*

*We build on the outcomes of an ethnographic case about young people learning inside and outside school using different media. First, we discuss the challenges posed by contemporary compulsory secondary education while also establishing the scope of our research. Then we explore the transitions of students between inside and outside school and the characteristics of a learning process in which switching constantly between online and offline environments is a given. Finally, we make suggestions, which can be taken into account by schools seeking to offer students more meaningful and authentic learning experiences.*

**Keywords.** Life-long Learning, Youth and Media, Digital Literacy, Secondary School, Virtual Ethnography, Participatory Research.

### **1. Introduction**

In the first quarter of the 21st century, compulsory secondary education is facing formidable challenges. The educational agendas of secondary schools, teaching methods and curriculum content, need to meet the students' daily life experiences, interests and social demands. In this context, the ongoing phenomenon of school disaffection, disengagement, low-attainment and early school leaving is not only evident in disadvantaged and non-mainstream students (Bernstein, 1970) but practically all social groups across countries (OECD, 2003; Harber, 2008; Yan & Jament, 2008; Graham, Van Bergen & Sweller, 2015).

Education, understood as the capability to *know what, how, where, when, why and for what* would appear to be fundamental for any human being. Not only is education essential for finding or creating a job, but it is also a

prerequisite for living as a democratic and *glocal* citizen (Grubb, 1987; Robertson, 1995). It also allows people to understand “the intersection between their lives and global issues and their sense of responsibility as local and global citizens” (Nair, Norman, Tucker & Burkert, 2012, p. 56). Moreover, taking into account the complexity of contemporary societies (Boltanski & Chiapello, 2002; Castells, 2006, 2012; Bauman, 2006, 2007; Sennet, 2006; 2012) today more than ever people need to have access to educational and learning processes that foster the best of oneself and life-long, life-wide and life-deep learning skills (Banks, Au, Ball, Bell, et. al, 2007; Jackson, 2011).

Thus, the need for young people to learn both at an individual and social level has never been greater. However, a growing number of students seem to find school irrelevant (OECD, 2003) to the point of leaving school without any qualification<sup>1</sup>. This situation has increased the interest and need to understand and find ways of tackling this phenomenon (Skinner & Furrer, 2008; Taylor & Parsons, 2011; Christinson, Reschy & Wylie, 2012; Duncan, 2013). Even more, it is encouraging, or should encourage, researchers and policy-makers to take more into account that, for as argued by Phillips (2014, p. 10):

Learning is a phenomenon that involves real people who live in real, complex social contexts from which they cannot be abstracted in any meaningful way. Difficult as it is for researchers to deal with (especially if they are suffering from physics envy), learners are contextualized. They do have a gender, a sexual orientation, a socioeconomic status, an ethnicity, a home culture; they have interests—and things that bore them; they have or have not consumed breakfast; and they live in neighborhoods with or without frequent gun violence or earthquakes, they are attracted by (or clash with) the personality of their teacher, and so on.

So, the role of schools as privileged organisational metaphors and their role in fostering or preventing students’ learning should be revise:

Schooling worldwide is characterised by misery, boredom, bullying, deceit, anxiety, humiliation, brutalisation, ethnic – and many other types of – discrimination, religious – and many other forms of – indoctrination, sexual – and many other kinds of – exploitation, and testing to destruction. It should not be like that. It should be fun (Douse, 2005, p. 1).

As it should be reconsider the kind of knowledge and skills young people need to acquire and develop in order to take an active part in social life. As Lankshear & Knobel (2003) emphasise, being a literate individual means much more than using the linguistic systems. Digital literacy not only means being able to read and write texts, but also to use and understand discourses underlying texts, videos, images and sounds. If all these aspects are to be taken into account, the traditional secondary school curriculum implemented in most secondary schools seems a rather poor response.

As discussed in a previous work (Sancho, 2010), today students are literally besieged by aural, visual and sensorial stimuli, which provide them with very distinct living and learning experiences, which are often neglected or rejected by schools. According to Twenge (2006), these people belong to Generation Me, the first generation able to speak the language of self: "Just be yourself." "Believe in yourself." "Express yourself." Etc.

For these people the so-called Web2.0 appears to be a perfect set of tools for expressing the “self” through digital social media that facilitate authorship, creativity, collaboration and sharing between users and effective information handling. The members of this generation have been called *Millennials* (Howe & Strauss, 2000), Instant-Message Generation (Lenhart et al., 2001), *homo*

*zappiens* (Veen, 2003), the *Net Generation* (Oblinger and Oblinger, 2005), the *Gamer Generation* (Carstens and Beck, 2005) and even the Einstein generation (Boschma & Groe, 2006) by being considered smarter, faster, and more social.

However, in recent years, authors such as Nicholas Carr have started to question whether Google was making us stupid<sup>2</sup>. He went on to argue that Internet was making people increasingly superficial (Carr, 2011). His writings fuelled an ongoing controversy about the negative impact of digital technologies in learning<sup>3</sup>.

The ethnographic research we are presenting in this paper draws on empirically based knowledge concerning the constant connection students generate between formal and informal learning contexts, by using different media. The results show that every day, young people have access to an unprecedented amount of information, tools and environments that are shaping the way they learn and their life-experiences in social and academic contexts (Ito, Baumer, Bittanti, boyd, et al., 2010; boyd, 2014, inter alia). However, this does not mean either young people or adults have or can easily acquire the intellectual and emotional resources needed to interpret an ever growing amount of information and use the available devices (whether digital or not) to communicate, express themselves and learn. In this sense, one of the greatest challenges in current educational systems lies in the need to take into account the new modes of knowledge production, representation, communication and access to information that are frequently neglected, and seldom included in formal education (Vivancos, 2008; Gillen & Barton, 2010). This constitutes a challenge inasmuch as it deeply questions the traditional 'grammar' of schooling (Tyack & Tobin, 1994), and especially the role of teachers. Taking into account what we know about how people learn (Sawyer, 2006; Carey, 2014) and the opportunities provided by digital media (Järvelä, 2006), as researchers and teachers we need to start thinking about moving from the idea of *teaching the subject to teaching to subjects*. This is to say, *to promoting and guiding students' learning*. A shift is required from the idea of representing teachers as the *ones who know* and students as passive *empty vessels*, to the notion of learning while teaching in collaboration.

For authors like Marc Prensky (2012, p. 69) "the single biggest problem facing education today is that *our Digital Immigrant instructors, who speak an outdated language (that of the pre-digital age), are struggling to teach a population that speaks an entirely new language.*"<sup>4</sup> If this is the case, the second biggest challenge will be that of transforming teachers who are so focused on teaching that they often forget to keep on learning, into active learners who are willing to learn while they teach.

In the light of this situation, we have developed the RTD project "Living and learning with new literacies inside and outside school: contributions for reducing school drop-out, exclusion and disaffection among youth"<sup>5</sup>. Our main goal was to explore how young people learn by using digital media in and outside school. We focussed on the perceived lack of connection between what is considered as learning in the formal curriculum (mainly listening, doing exercises and performing in exams and how young people learn outside school through multiple literacies (Cope & Kalantzis, 2000; Hull & Schultz, 2001a, 2001b, 2002; Alvermann, 2002; Patel Stevens, 2005).

With a view to the exploration of this hypothesis and being in a position to offer suggestions and recommendations to secondary education educators, we produced empirical data on the subject of young people's learning culture in formal, informal and non-formal contexts. And this was carried out *with* them rather than *on* them (Hernández, 2011), in order to better understand the

elements shaping the way young people learn and how they perceive and experience their own learning networks and environments.

During the 2012-2013 school year, we carried out research *with* students from five secondary schools. These participants were taking part in the study with their teachers and our university team. Five multi-sited ethnographies (Marcus, 1995; Faizon, 2009) moving through school and home (Anderson, 1989; Denzin, 1997; Troman and Waldorf, 2005) and virtual environments (Hine, 2000, 2005; Jhons, Shin-Ling & Hall, 2004), were developed by five groups of 5 to 11 students (Hernández, Fendler, Sancho, 2013).

This paper reports on one of the ethnographic cases carried out in a public and semi-rural secondary school of Catalonia. Eleven students, aged between 16 and 18, took part. They were working in an extracurricular environment at the school. Their own words will help to convey their learning experiences, specifically the ones about how they connect and constantly handle through online and offline contexts. Finally, we challenge the current role of the school and invite teachers and policy-makers to consider the results of our investigation, the aim of which was to provide students with a more meaningful and authentic learning experiences.

## **2. Methodological approach**

This paper draws on an ethnographic case that took place in the Els Alfacs secondary school. Every Tuesday from September 2012 to April 2013, the university researcher, eleven students aged between 16 and 18 and their Art teacher researched together. The young people were very interested in participating in the project for two main reasons. Firstly, because they had a very good relationship with their teacher, and felt always engaged with his innovative proposals, and secondly, because the school allowed them to present the results of their study as their final Research Project. According to the curriculum guidelines, this project consisted of “a set of discovery activities performed by students around a chosen topic, selected partly by themselves, under the guidance of teachers” (Departament d’Educació, 2010: 251).

Twenty-eight meetings, based on workshops and discussions, allowed us to explore their ideas of learning both inside and outside school. The participatory research process prompted us to work on eleven ethnographic stories based on their observations, experiences and field diaries. They expressed themselves in written texts; talking in front of the camera; conveying their experiences through images, drawings, pictures; and organizing their ideas through maps.

Even though the research took place in the school, in the Arts classroom, in particular, we considered the research field to be *In-Between*. We were able to recognise some typical pedagogical attitudes and practices during our meetings. However, interestingly, the young people were constantly questioning school rules. This allowed us to discuss what would had happen if the same research had been carried out within the regular school timetable or in a totally out-of-school context.

Once we had started fieldwork, it became clear that we would not be able to impose our rules as adults and professionals on the students. Since we wanted the young participants to be the real authors of the ethnography, we provided them with some tools, global topics and frameworks. However, after some weeks, they raised new questions to develop their own narratives, thereby demonstrating a certain degree of autonomy and agency, but at the same time, turning to us for help and advice. We shared the decision-making process with them as well as the responsibility for carrying out a participative and

ethnographic learning process (Siry & Zawatski, 2011, McCartan, Schubotz & Murphy, 2012). Thus to some extent we were co-producers and co-researchers. They wrote their texts, brought in their images and reached their own conclusions, guided by us when they asked for support.

After several workshops and discussions about what learning meant and how we learn inside and outside school, we realised that shifting from inside to outside the school premises was necessary, even if not easy. The participants showed us that they were learning every minute; that learning was “happening all around us, everywhere, and it is powerful” (Thomas & Brown, 2011, p. 17).

On the other hand, they did not know how to explore and describe their outside-of-school experiences. It was much easier for them to talk about schooling, because their discourses were rather homogeneous and dichotomous –“do we like or not like school”. Therefore, we considered the convenience and value of focusing on their informal learning environments, which ranged from ballet to computing, travelling, photography, cooking or drawing (image 1).

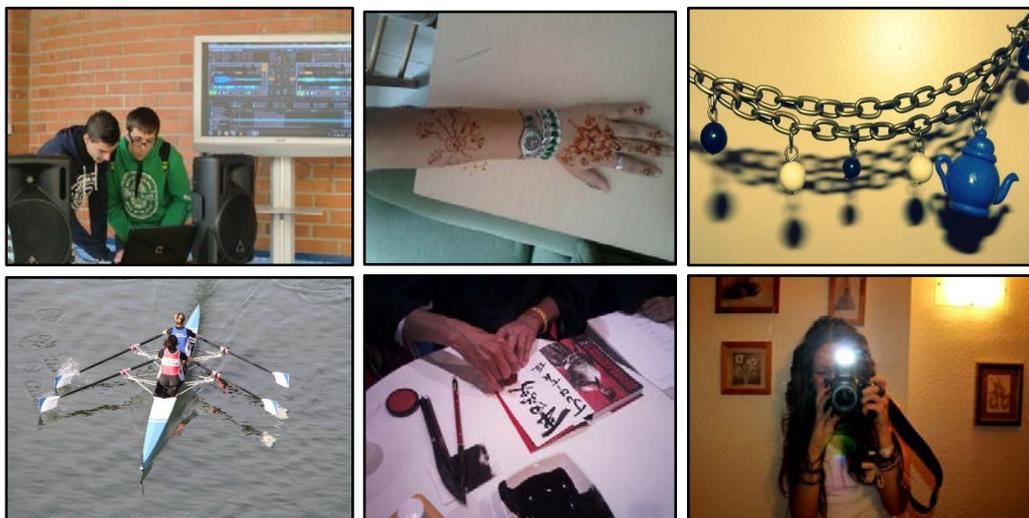


Image 1. Young people's pictures about their learning experiences outside school.

We invited them to ask their own questions, to explore and find their own answers and to understand their learning cultures and perceptions without restricting the range of their descriptions. We would not have been able to develop this process without respecting their interests, literacies and modes of expression and communication. It soon became clear to us that the most frequently used forms of communication between students were not just written texts. They were used to communicating and interacting with friends – and sometimes family- through images, videos, symbols, emoticons, music and web links. Why should we try to explore *learning* only through text, when they were communicating and learning using such a variety of means to communicate, through extensive online and offline communities and formal and informal environments?

This virtual and image-based ethnography allowed young participants to express themselves through images, videos, paintings, web pages, maps, etc. Firstly, this requires the use of a virtual space to share all those evidences. The group was familiar with *Google Drive*, so we kept on with this environment. In

any case, it was not a smooth and quick process but a rather slow and difficult one. The problems were not in the mastering of the digital platform, but in their lack of experience of working in groups, being critical, analysing their own work and taking decisions independently and responsibly. One of our first discoveries (for both students and us) was that the competences they needed to be ethnographers and storytellers had to be carefully developed.

We implemented didactic and creative strategies to guide them in the process of narrating their experience visually and textually. A writing and virtual example was the group interview that took place through *Google Drive*. After reading the eleven individual texts about their learning experiences in *Google Drive*, they interviewed each other virtually, by asking questions in the document. Another visual and oral example was the discussion that took place when they brought pictures to represent visually their out-of-school experiences. As can be appreciated in image 2, we discussed why they had brought in the images and how we could organise 'everything'. The process of creating visual maps itself was even more interesting and engaging for the students than the collage itself (image 3).



Image 2. Discussing with the group.



Image 3. Collage of the group's images.

When they finished the research and presented it to the school, they decided to call the ethnographic narratives compilation "a slice of our life", referring to the methodological allusion described by Connelly & Clandinin (2006, p. 479). "Story, in the current idiom, is a portal through which a person enters the world and by which their experience of the world is interpreted and made personally meaningful". As these authors claimed, storytelling allowed us to think about the learning process as individual, special and unique experiences.

### 3. Analysis and results

We are currently involved in the analyses of the huge amount of data generated by both the young participants and us through field diaries, observations and interviews. This analytical process of the ethnographical results, based on the Grounded Theory (Corbin & Strauss, 2008), allowed us to offer a preliminary microanalysis by organizing the key codes the participants selected from their own narratives (table 1).

Story title, selected by young	Learning interests	Key codes
An experience in the water	Swimming	Effort, achievement, pride
Between oar strokes the current carries me along	Rowing	Sacrifice, satisfaction, self-confidence
Drawing my life	Drawing	Pressure, website creation, understanding
From the twirling to the gloves	Twirling and gymnastics	Pressure, evolution, learning with others
The travelling balls	Travelling	Emotions, cultures, coexistence
Feelings with quavers and crotchets	Compose and perform music	Youtube, discover, fun, express
One world, everything different	Learning languages	Friendship, motivation, values, communication
Manufacturing my life	Arts and crafts	Express, interpret, self-learning
The moment machine	Photography	Relax, feelings, metaphors
The videos, my life	Video editing and computing	Fun, videos, volunteer, Internet

Table 1. Learning interests and key codes from young people's ethnographic narratives

Afterwards, axial coding (Corbin & Strauss, 2008) allowed in-depth analysis of the stories and identify five central codes: *learning; engaging; media and literacy; diversity; and transitions between learning contexts*. In what follows, we discuss three of the topics that emerged from the codification. The discussion is based on the young people's voices, both from the stories they created and the report they presented to the school to be assessed as their research project.

#### a) Connecting learning inside and outside school.

Yassine was one of the participants who did not feel involved in the school. Every time we talked about learning and developing the skills needed for today's society, he refused to recognize that school was important for him. He was totally immersed in the topics and information sources he considered to be significant for his own life and interests. However, the subjects in question in no way corresponded to school subjects. When the teacher started talking,

Yassine stopped listening and navigated Internet to learn how to produce and edit videos, create a webpage or modify an image with *Photoshop*. As he explains in the following quote, every day he considered himself more professional in this field, but at the school, he was not seen as a successful student because of his low marks.

I started making videos four years ago, and the truth is that I am good at it. Little by little, I search for information about videos, how to make and edit videos, then a bit more professional, even more professional; to get more practice in this area (...) I also make pictures. I have done an on-line course to learn more (Yassine's story, *Videos, my life*).

Paradoxically, when he showed us his pictures and channel in *Youtube*, we realized that most of his videos were made *in* school (image 4), with other students and teachers. However, every time we asked him about this, he did not consider it to belong to school. That was because he created and shared these videos in extracurricular time and his knowledge was irrelevant to the school subjects. On the other hand, when two teachers suggested different informal activities to him, he valued the offer and collaborated willingly.

I had the chance to have two teachers who helped me a lot. One of them is Alfred and the other is Carles. For example, with Carles we put some music or videos together during the break-time and did activities for children [of the school] just for fun, like at the end of school year celebration... Things like that (Yassine's story, *Videos, my life*).



Image 4. Picture from Yassine's story

This idea of *engaging with an activity* inside and outside school was present in most ethnographic stories. We selected some of the key codes with the young people and they came up with definitions or examples for each concept, exploring the same notion inside and outside school. Table 2 shows how they related the idea of *striving* inside school and *having a good job* and *striving* outside school and *getting better at what they liked to do*.

	IN	OUT
EFFORT	We do not like the effort in the classroom very much, but we have to do it if <b>we want to get a good job and good marks</b> . The majority considered the effort required by school to an obligation.	We also make an effort in our hobbies other activities. However, the difference is that when we are at school, it is a duty. When it is a hobby, we make an effort because we <b>want to do something we like and</b>

		would like to improve what we do.
--	--	-----------------------------------

Table 2. Effort notion, inside and outside school.

### b) Shifting from *offline to online* environments

Maria was considered an excellent student by the school. Her marks were quite high, but at the same time, she was quite critical of the school ‘grammar’ (Tyack & Tobin, 1994). The experience that Maria wanted to share with us was based on composing, recording and sharing music through the Internet. The most remarkable aspect of her story was that despite her success at school, the subject she most disliked was Music. The reason was that the means and strategies she put into practice to learn songs outside the school were different from those used at school.

To improve on a song, I write it down in a notebook and listen to it many times on my mobile phone. I read the lyrics and little by little, I learn it. If it is in English, I check the words I don’t know, listening and practicing them carefully. Usually I can learn the song in two days (Maria’s story. *Feelings with quavers and crotchets*).

In this quotation, Maria referred to the knowledge she put into practice to learn a song. In addition, it is impressive that she emphasised, “Usually I can learn the song in two days”. This showed that in this case, the informal learning culture implies having a very systematic, personal and well-organised learning method. First, she writes the lyrics down; then she listens to the music and memorises the lyrics; and finally she practises the English pronunciation, if required. What we highlight here is that at the same time, she was learning how to search for the lyrics on the Internet; download the song in her mobile phone; search for the translation into Spanish; create a *Youtube* channel and avatar and get visits from other users (image 5). She was taking for granted all the abilities she needed to carry this out.

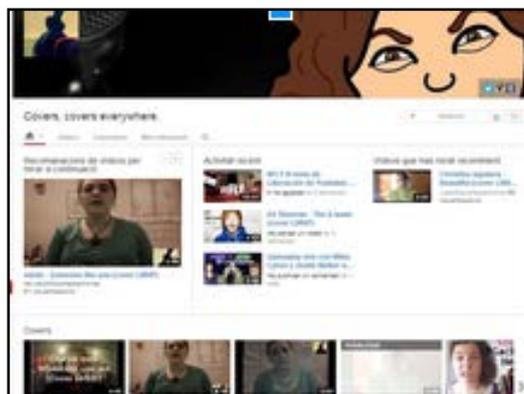


Image 5. Picture from Maria’s storytelling

As we can see in the following quotation, she also talked quite naturally about how she constantly shifted from one environment to another, learning instinctively and incorporating new skills, competences and even expressions into her language.

Nowadays, I have a *Youtube* channel where I upload covers of songs. I have a few subscribers and not many viewers, but I am doing okay. After practising the songs with my notebook a few times, I record myself singing, edit the video a little bit and publish it. The channel also made me discover my passion for videos and now I usually record different

videos to upload them on another channel. I just hope that someone likes them (Maria's story. *Feelings with quavers and crotchets*).

As shown in table 3, students came up with a definition of learning music inside and outside school. In their free time, they were able to choose what kind of music they want to listen to and which instruments they want to play. Meanwhile, in the classroom they cannot choose because the teachers structured the whole curriculum without consulting them or taking into account their knowledge, skills and interest. The emerging idea in this table is the *student's agency* in a learning context.

	IN	OUT
MUSIC	In school, we study music as history and as a way of hearing, <b>but [teachers] always pick the songs they think will be more suitable for us.</b>	Outside, you can learn different languages listening to songs in another language, such as English, Japanese, French, etc. While <b>you're listening to it, you mentally translate and understand the language better.</b>  You learn music more deeply in a particular field, <b>if you go to extra classes.</b>

Table 3. Learning music, inside and outside school.

### c) Relating to others in virtual and face-to-face sites

Judith was an excellent student who had little time at home to do what she really enjoyed: painting and drawing. An important element from her learning process out of school was the relationships with others who shared this passion allowing her to improve as an artist – not only face-to-face, but virtually. The main goal was to share her creations and learning with others; but again, she was not aware of her transition between online and offline environments.

She mentioned her godfather as an important *face-to-face mentor*, because he started painting at home when he was young and ended up doing it professionally. At the same time, she discovered a webpage where people shared their drawings in forums and commented on other people's creations. In this quote, she explains that it was not just a matter of entertainment, but also the possibility of finding *virtual mentors* who gave her advice to improve her own work (image 6).

I meet new people in Internet forums, where people from other places upload their drawings and comment on how they did them and where they found the inspiration... I read their opinions and apply them to my daily life as an artist, improving my drawing technique and style (Judith's story. *Drawing my life*).



Image 6. Image from Judith's storytelling

Table 4 shows how young people defined *friendship* inside and outside school. They could learn languages in both scenarios with friends who spoke French or English, but at school, they were only able to do it during the break, not in class. Out of school, they shared moments and interests they had in common, “things [that] are not usually taught by teachers from the school”.

	IN	OUT
FRIENDSHIP	<p>In the classroom, friendship can help us <b>if we do not understand a concept or task</b>, if the friend understands it.</p> <p>If you have a friend of another nationality, you <b>can practice your language</b> with them, such as English or French (the most common).</p>	<p>Sometimes you have colleagues with whom you <b>share good times or interests</b> you have in common.</p> <p>Teachers do not usually teach these things, but you want to learn them because you enjoy.</p>

Table 4. Friendship notion, inside and outside school.

## 4. Conclusions

In this paper, we have analysed the ethnographic narratives created by young people participating in our research project to represent how they connect with the wide array of environments -both *real* and virtual, where they interact, communicate and learn. As Hine (2000) suggested, virtual ethnography allowed us to explore young people's relationships with technology. We have focused on their learning cultures through online environments and using digital media. The results showed how they are constantly shifting from one context to another, developing skills and abilities highly important for the 21st century without being aware of the learning process. Below we highlight the most crucial results in relation to our research objectives.

### a) School disaffection

Yassine's story illustrates the phenomena of school disaffection that is typical worldwide. His case challenges some of the assumptions about dropping-out and school failure, exemplifying how young people can show a huge capacity to engage and to carry out hard work to accomplish his goals. On the other hand, his knowledge was not considered as curricular, that is to say as legitimate

school knowledge. If Yassine did not drop out from school, it was not because of his marks or his concern about the traditional subjects. It was because some teachers suggested that he engage in extracurricular activities that made him reconsider the possibility of continuing studying.

### **b) Learning and agency**

The difference young people found between learning music inside and outside school cannot be generalised. We need to take into account the fact that these ethnographic results relate to their contexts. However, Maria's case shows that learning music in her leisure time is also based on systematic, personal and well-organised methods. What made a difference between her experiences in the class was that school does not take into account students' agency; by integrating their knowledge, skills and interest into the curriculum.

### **c) Virtual and face-to-face mentors**

Judith's case continues the work started by Ito et al. (2010) about young people's participation in the new media ecology. They concluded that young people engage in friendship-driven and interest-driven relationships online to share their creations and receive feedback from others. Through our results, we emphasise that this phenomenon is not only happening through online contexts, but that they are also learning with face-to-face mentors. We believe it is of crucial importance to keep on researching into this subject, as it provides us with important keys to explore what young people define as "things [that] are not usually taught by teachers."

### **d) How does it help us rethink the inner world of classroom?**

We found tensions between school narratives and the ways young people moves from face-to-face to virtual learning environments, especially in social networks. It is clear from our research evidence that some secondary school students showed a high degree of autonomy and agency in their outside-of-school learning processes. While they learn independently how to modify pictures, create a channel in *Youtube* or share their pictures and drawings, they are often faced with very narrow patterns for learning in the classroom. One of the participants concluded as follows:

After participating in many discussions, an interesting idea emerged: everything is much too regulated in secondary schools. Previously I thought that adolescents did not have any initiative to learn and to discover by themselves (Final report, written by the participants).

Their final considerations demanded changes in secondary school rules, structures, relationships with teachers and peers, and student agency.

Often there is little cooperation between teachers and students, because the teacher works alone and doesn't want to solve the students' queries, or because the student does not listen to the teacher and does not allow other students to be attentive in class. We reached the conclusion that teacher and student should work together to achieve the same goal: improving teaching and classroom experiences, helping students to overcome educational barriers and making the teacher's job more pleasant (Final report, written by the participants).

To sum up, their words prompted us to consider young people's learning cultures in order to rethink secondary education. If they believe that activities like producing videos, singing, composing music or programming a web page are an essential part of their out-of-school learning, we should take their

agency and knowledge into account when we review the school curriculum, making it more participatory and meaningful.

## 5. From conclusions to actions

In this final part of the paper, we summarise a set of suggestions and recommendations for all those involved in compulsory education, from teachers to policy-makers, and including teacher educators and families.

Our research envisages formidable challenges for compulsory secondary education but also ways of dealing with them.

Both teachers and students recognised the time and effort needed to master learning. The key question here would be how to convert schools into real learning environments (OECD, 2013). However, to convert schools into genuine innovative learning environments we should guarantee that:

- Students and teachers engage in genuine and authentic learning processes (Laur, 2013) which enable young people's knowledge, skills and interest to be linked with the knowledge and skills relevant to 21<sup>st</sup> century citizenship.
- It is recognised that schools cannot go on considering themselves as the only information and knowledge providers. Schools still play a hugely responsible role in certifying students' achievements, but they should certainly question the pervasive organisational metaphor that breaks down and compartmentalises time, space, knowledge, skill, resources and people.
- The collaborative dimension of learning should be taken into account not only at the students' level, but also at teachers' and teachers-students' level.
- The complex dimensions of the digital society, with its threats and opportunities, should be acknowledged and teaching and learning processes should not look into the past but into the future.

## Acknowledgment

This paper has been written with the support of the Faculty of Education and the Department of Didactics and Educational Management. University of Barcelona.

## 6. References

- Alvermann, D. (2002). *Adolescents and Literacies in a Digital World*. New York: Peter Lang.
- Anderson, G. L. (1989). Critical ethnography in education: Origins, current status, and new directions. *Review of Educational Research*, 59, 249-270.
- Banks, J. A., Au, K. H., Ball, A. F., Bell, P., Gordon, E. W., Gutiérrez, K., Heath, S.B., Lee, C.D., Lee, Y., Mahiri, J., Nasir, N.S., Valdes, G. I., & Zhou, M. (2007). *Learning in and out of school in diverse environments. Life-long, life-wide, life-deep*. The LIFE Center for Multicultural Education.
- Bauman, Z. (2005). *Liquid Life*. Cambridge: Polity.
- Bauman, Z. (2006). *Liquid Fear*. Cambridge: Polity.
- Bernstein B. (1970). Education cannot compensate for society. *New Society*, 15(387), 344-347.

- Boltanski, L., & Chiapello, E. (2005). *The New Spirit of Capitalism*. London-New York: Verso.
- Boschma, J., & Groen, I. (2006). *Generation Einstein: smart, social and superfast. Communicating with Young People in the 21st Century*. Pearson Education Benelux, Schiedam.
- boyd, d. (2014). *It's Difficult. The social lives of networked teens*. Yale University Press.
- Carey, B. (2014). *How we learn: the surprising truth about when, where, and why it happens*. New York: Random House.
- Carr, N. (2010). *The Shallows: What the Internet Is Doing to Our Brains*. New York/London: W. W. Norton & Company.
- Carstens, A., & Beck, J. (2005). Get Ready for the Gamer Generation. *TechTrends*, 49(3), 22-25.
- Castells, M. (1996). *The Rise of the Network Society. The Information Age: Economy, Society and Culture Vol. I*. Malden, MA; Oxford, UK: Blackwell.
- Castells, M. (2012). *Networks of outrage and hope: social movements in the Internet age*. Cambridge, UK; Malden, MA: Polity Press.
- Christinson, S. L., Reschy, A., & Wylie, C. L. (Eds.) (2012). *Handbook of Research on Students Engagement*. London: Springer.
- Connelly, F.M., & Clandinin, D.J. (2006). Narrative inquiry. In J.L. Green, G. Camilli, P. Elmore (Eds.), *Handbook of complementary methods in education research* (3rd ed., 447 - 487). Mahwah, NJ: Lawrence Erlbaum.
- Cope, B., & Kalantzis, M. (Eds.). (2000). *Multiliteracies: Literacy Learning and the Design of Social Futures*. New York: Routledge.
- Corbin, J. & Strauss, A. (2008). *Basis of qualitative research*. Sage: California.
- Denzin, N. (1997). *Interpretative Ethnography. Ethnographic Practices for the 21st Century*. London: Sage.
- Departament d'Educació (2010). *Curriculum d'Educació Secundària Obligatòria*. Barcelona: Generalitat de Catalunya.
- Douse, M. (2005, September). Learning and Laughter – and let the Livelihood Come Later. *8th UKFIET International Conference on Education and Development*. University of Oxford.
- Duncan, N. (2013). 'If you tolerate this, then your children will be next.' Compulsion, compression, control, and competition in secondary schooling. *International Journal on School Disaffection*, 10(1), 29-45.
- Falzon, M-A. (2009). Introduction. Multi-sited Ethnography: Theory, Praxis and Locality in Contemporary Research. In M. A. Falzon (ed.), *Multi-sited Ethnography: Theory, Praxis and Locality in Contemporary Research* (1-23). Farham: Ashgate.
- Gillen, J., & Barton, D. (2010). Digital literacies. A research briefing by the technology enhanced learning phase of the teaching and learning research programme. *Technology Enhanced Learning Programme*. <http://www.tlrp.org/docs/DigitalLiteracies.pdf> (19/05/2014).
- Graham, L. J., Van Bergen, P., & Sweller, N. (2015). 'To educate you to be smart': disaffected students and the purpose of school in the (not so clever) 'lucky country'. *Journal of Education Policy*, 30(2), 237-257.

- Grubb, W. N. (1987). Responding to the Constancy of Change: New Technologies and Future Demands on US. In G. Burke & R.W. Rumberger (Eds.), *The Future of Technology on Work and Education* (118-140). The Falmer Press.
- Harber, C. (2008). Perpetrating disaffection: Schooling as an international problem. *Educational Studies*, 34(5), 457-467.
- Hernández-Hernández, F. (ed.) (2011). *Investigar con los jóvenes: cuestiones temáticas, metodológicas, éticas y educativas*. Barcelona: Depósito digital de la Universidad de Barcelona. <http://diposit.ub.edu/dspace/handle/2445/17362> (05-02-2013).
- Hernández-Hernández, F., Fendler, R., & Sancho, J. M. (2013). Framing multi-sited ethnography as an approach for coping with the complexity of young people's ways of learning, communicating and expressing themselves in and outside secondary schools. In P. Landri, A. Maccarini & R. De Rosa (eds.), *Networked Together: Designing Participatory Research in Online Ethnography* (97- 106). Roma: Istituto di ricerche sulla popolazione e le politiche social.
- Hine, C. (2000). *Virtual Ethnography*. London. Sage.
- Hine, C. (ed.) (2005). *Virtual Methods. Issues in Social Research on the Internet*. Oxford, New York: Berg.
- Howe, N., & Strauss, W. (2000). *Millennials Rising: The Next Great Generation*. New York: Vintage Original.
- Hull, G. & Schultz, K. (2001a). Literacy and learning out of school: A review of theory and research. *Review of Educational Research*, 71(4), 575-611.
- Hull, G. & Schultz, K. (2001b). *School's Out: Bridging Out-of-School Literacies with Classroom Practice*. New York: Teachers College Press.
- Hull, G. & Schultz, K. (2002). Negotiating Boundaries between School and Non-School Literacies. In G. Hull & K. Schultz (ed.), *Schools Out! Bridging Out-of-School Literacies with Classroom Practice* (1–10). New York: Teachers College Press.
- Ito, M., Baumer, S., Bittanti, M., boyd, d., Cody, R., Herr-Stephenson, B., Horst, H.A., Lange, P.G., Mahendran, D., Martínez, K.Z., Pascoe, C. J., Perkel, D., Robinson, L., Sims, C., & Tripp, L. (2010). *Hanging Out, Messing Around and Geeking Out: Kids Learning and Living in New Media*. Cambridge, MA.: The MIT Press.
- Jackson, B. J. (ed.) (2011). *Learning for a Complex World. A Lifewide Concept of Learning, Education and Personal Development*. AuthorHouse Publishing.
- Järvelä, S. (2006). Personalised Learning? New Insights into Fostering LearningCapacity. In OECD/CERI (Eds.), *Personalising Education* (31-46). Paris: OECD/CERI.
- Jhons, M., Shin-Ling, S. Ch., & Hall, G. J. (2004). *Online Social Research: Methods, Issues, and Ethics*. New York: Peter Lang Publishers.
- Lankshear, C., & Knobel, M. (2011). *New literacies: Everyday practices and social learning*. Maidenhead: Open University Press.
- Laur, D. (2013). *Authentic Learning Experiences: A Real-World Approach to Project-Based Learning*. New York: Routledge.
- Leitch, R. (2008). Creatively researching children's narratives through images and drawings. In P. Thomson (ed.), *Doing visual research with children and Young people* (37-58). London: Routledge.
- Marcus, G. E. (1995). Ethnography in/of the world system: The emergence of multi-sited ethnography. *Annual Review of Anthropology*, 24, 95–117.

- McCartan, C., Schubotz, D., & Murphy, J. (2012). The Self-Conscious Researcher— Post-Modern Perspectives of Participatory Research with Young People. *Forum Qualitative Social Research*, 13(1), Art. 9 – January. <http://www.qualitative-research.net/index.php/fqs/article/view/1798/3320#gref> (23/09/2011).
- Nair, I., Norman, M., Tucker, G. R., & Burkert, A. (2012). The Challenge of Global Literacy: An Ideal Opportunity for Liberal Professional Education. *Liberal Education*, 98(1), 56-61.
- Oblinger, D., & Oblinger, J. L. (eds.). (2005). *Educating the Net Generation*. Washington, DC: Educause.
- OECD (2003). Student engagement at school - a sense of belonging and participation: Results from PISA 2000. Paris: OECD.
- OECD. (2013). *Innovative Learning Environments*. Paris: OECD.
- Patel Stevens, L. (2005). Youth, Adults, and Literacies: Texting Subjectivities Within and Outside Schooling. In J.A. Vadeboncoeur & L. Patel Stevens (eds.), *Re/constructing 'the adolescent': sign, symbol, and body* (49-68). New York: Peter Lang Publishing Inc.
- Phillips, D. C. (2014). Research in the Hard Sciences, and in Very Hard “Softer” Domains. *Educational Researcher*, 43(1), 9-11. DOI: 10.3102/0013189X13520293.
- Prensky, M. (2012). *From Digital Natives to Digital Wisdom*. Thousand Oaks, Calif.: Corwin
- Robertson, R. (1995). Glocalization: Time-Space and Homogeneity-Heterogeneity. In M. Featherstone, S. Lash, & R. Robertson (Eds.), *Global Modernities* (25-44). London: Sage Publications.
- Sancho, J. M. (2010). Digital Technologies and Educational Change. In A. Hargreaves, A. Lieberman, M. Fullan, & D. Hopkins (eds.), *Second International Handbook of Educational Change* (433-444). Springer International Handbooks of Education.
- Sennett, R. (1998). *The corrosion of character: the personal consequences of work in the new capitalism*. New York: Norton.
- Sennett, R. (2012). *Together: The Rituals, Pleasures, and Politics of Cooperation*. London: Penguin Books.
- Siry, C., & Zawatski, E. (2011). “Working with” as a methodological stance: Collaborating with students in teaching, writing, and research. Invited contribution to *The International Journal of Qualitative Studies in Education*, 24 (3), 343-361.
- Skinner, E., & Furrer, C. (2008). Engagement and Disaffection in the Classroom: Part of a Larger Motivational Dynamic? *Journal of Educational Psychology*, 100(4), 765–781.
- Sawyer, R.K. (ed.) (2006). *Cambridge Handbook of the Learning Sciences*. Cambridge University Press, New York.
- Taylor, L. & Parsons, J. (2011). Improving Student Engagement. *Current Issues in Education*, 14(1). <http://cie.asu.edu/> (15/12/2014).
- Thomas, D. & Brown, J. S. (2011). *A new culture of learning: Cultivating the imagination for a world of constant change*. CreateSpace.
- Troman, G., Jeffrey, B., & Walford, G. (2005). *Methodological issues and practices in ethnography. Studies in educational ethnography*. Amsterdam: Elsevier JAI.

- Tyack, D., & Tobin, W. (1994). The “grammar” of schooling: Why has it been so hard to change? *American Educational Research Journal*, 31(3), 453-480.
- Twenge, J. (2006). *Generation Me*. New York: Free Press.
- Veen, W., & Vrakking, B. (2006). *Homo zappiens: Growing up in a digital age*. London: Continuum International Publishing Group.
- Vivancos, J. (2008). *Tratamiento de la información y competencia digital*. Madrid: Alianza.
- Yan, F., & Jament, J. (2008). Integrated but not included: exploring quiet disaffection in mainstream schools in China and India. *The International Journal on School Disaffection*, 6(1), 12 -18.

### About the authors

Raquel Miño-Puigcercós. PhD student and associate professor of Educational Technologies. Department of Didactics and Educational Management. University of Barcelona. Member of the Quality research group ESBRINA – Contemporary Subjectivities, Visualities and Educational Environments (2014SGR 632): <http://esbrina.eu> and REUNI+D -University Network for Educational Research and Innovation (EDU2010-12194-E) <http://reunid.eu>.

Dr. Juana M. Sancho-Gil. Full Professor of Educational Technologies. Department of Didactics and Educational Management University of Barcelona. Co-coordinator of the Quality Research Group ESBRINA-Cotemporary Subjectivities, Visualities and Educational Environments (2014SGR 0632) <http://esbrina.eu>; she also coordinates REUNI+D - University Network for Educational Research and Innovation (EDU2010-12194-E) <http://reunid.eu>.

Postal address  
P. Vall d’Hebron, 171  
08035 Barcelona  
Spain

---

<sup>1</sup> In 2013 the EU average rate of early leavers from education and training was 11.9%, surpassing 15% in 5 countries. Source: Eurostat (LFS).

<sup>2</sup> <http://www.theatlantic.com/magazine/archive/2008/07/is-google-making-us-stupid/306868/>

<sup>3</sup> <http://www.igi-global.com/newsroom/archive/digital-technology-new-wave-stupid/1464/>

<sup>4</sup> The author’s emphasis.

<sup>5</sup> Spanish Ministry of Economy and Competitiveness. EDU2011-24122.