FUTURE EDUCATORS' EXPLAINING VOICES

Janaina Minelli de Oliveira[1], Pablo Buenestado Caballero[2] and Mar Camacho[1]
[1]Universitat Rovira i Virgili
[2]Universitat Politècnica de Catalunya

ABSTRACT

Teacher education programs must offer pre-service students innovative technology-supported learning environments, guiding them in the revision of their preconceptions on literacy and technology. This present paper presents a case study that uses podcast to inquiry into future educators' views on technology and the digital age. Results show future educators present rather conservative views on technology use and few of them relate to the theme from their future professional identity. Courses aimed at preparing future educators to make pedagogical use of technology should explicitly address students' preconceptions so as to favor the educational approaches required for the development of the twentieth century skills.

KEYWORDS

Technology, podcast, professional identity, education.

1. INTRODUCTION

The widespread use of Information Communication Technologies (ICT) in all areas has a direct effect upon the way in which the world is perceived. That bears profound consequences to communication and education, forcing researchers and educators to rethink social relations and knowledge construction processes under the new conditions of the digital age (Jewitt and Kress, 2003; Balagué and Zayas, 2007; Cases and Torrescana, 2007). Teacher education programs must offer pre-service students innovative technology-supported learning environments, guiding them in the revision of their preconceptions on literacy and technology. Many of such perceptions may relate "literacy" to learning how to write, "writing" to the medium of paper and "being a teacher" to the transmission of knowledge. So their higher education can effectively guide future educators in the revision of such preconceptions, professors must be able to Teacher education programs must offer pre-service students innovative technology-supported learning environments, guiding them in the revision of their preconceptions on literacy and technology. Podcasts have been shown to be a good tool for that means (Dale, 2007; Heilesen, 2010). They allow future educators' to develop an "explaining voice", a voice that performs understanding, according to Cambell (2005). Such an understanding, I believe, is essential not only for the students themselves, but also, and possibly most importantly, to their educators.

2. HIGHER EDUCATION FOR FUTURE EDUCATORS

Some literature on technology and education has developed assumption like that today's students are more familiar with ICTs than previous generations. Different scholars have made reference to this phenomenon, using labels such as "Digital natives" (Prensky, 2001a, 2001b), "Net generation (N-Gen)" and the "Generation Y" (Weiler, 2005), to quote just a few. However, there are numerous claims about the technological capabilities of these students. In fact, most of the academic research (Brown & Czerniewicz, 2010, Li & Ranieri, 2010, Romero & de Oliveira, 2011) shows such assumptions should be taken with caution. It is undeniable that a growing number of higher education students use technologies in their everyday life, however, it has been shown that student teachers undertaking higher education programs may go through pedagogical technological courses, perceive an enhancement of their technology literacy and of their frequency of technology use without experiencing any revision of their perceptions of what a good

teacher knows or does (de Oliveira et al., 2011). This is something courses aimed at preparing student teachers to make pedagogical use of technology should explicitly address. Developing technology literacy and/or incrementing the frequency of technology use is not enough to change student teachers enduring perceptions of the role of a teacher. Student teachers should be guided in elaborating new appreciations of the role of teachers and the purposes of education as they are prepared to educate the citizens of the digital age.

2.1 Case Methodology

In order to give rise to students' perceptions towards technology and the digital age, we developed this present case study. After an introductory class which required some previous theoretical reading, the case participants were asked to work in groups, develop and record a podcast. The 80 students (6 males, 74 females; 35,7% aged 20 years, 51,8%, aged 21–25, 8,3% aged 26-30 years and 2,2% over 30 years of age) are future educators (teachers, pedagogues and social educators), enrolled in a 12 ECTs course called Communicative Abilities. They are in the first year of their higher education studies. They have been chosen as participants in this case study because one of the objectives of this course is precisely to make students critically reflect on conceptualizations of literacy in a digital world.

The students worked in the groups of up to 5 participants, previously formed to develop a blog as part of the activities in the course. All classes' blogs can be found in our course blog *Més que Paraules* (http://mesqueparaules-urv.blogspot.com.es/). The groups were instructed to use their mobiles and to upload podcasts up to two minutes to Sound Cloud (http://soundcloud.com/) and post their podcasts in their class blogs. In their podcasts, students were invited to expose their views on the changes experienced in our society in the digital age. Having read some bibliography and listened to the theoretical class, the students could develop themes they thought were relevant, something which they agreed with or not, or maybe something they thought had not been satisfactorily developed.

The students' podcasts were then analyzed under a socio-cognitive perspective of Critical Discourse Analysis. We drew a list of semantic macro structures, that is, statements, topics of themes present in the students' semiotic production. According to van Dijk (2009), semantic macro structures are what discourses are globally about: "They are mostly intentional and consciously controlled by the speaker; they embody the subjectively most important information of a discourse, express the 'overall' content of mental models of events(…)" (van Dijk, 2009: 68). Podcasts have been chosen to elicit students preconceptions because they have been said to allow the production of an "explaining voice", a voice that performs understanding, according to Cambell (2005). From a pedagogical perspective, the students are invited to structure their perceptions on technology so they can reach a deeper understanding of what they think of the themes studied in the course. From a research perspective, the podcasts produced offer discourse data that allows understanding the semantic macro structures characteristic of the semiotic objects produced by the participants.

2.2 Results: Future Educators' Podcasts on Technology and the Digital Age

Table 1 presents a brief abstract of the semantic macro structures present in each podcast produced analyzed in this present case study.

Table 1. Semantic macro structures of the podcasts of 16 future educators' groups on their views on technology and the digital age

Group Name	Podcast abstract
Minds	There are changes in the way of relating and thinking brought about by new technologies. These changes have come to the classroom, but teachers still do not successfully exploit them. Teachers are poorly trained. They should be guides on the highways of knowledge and motivate students to think critically.
Let's favor good habits!	There are three negative aspects on ICT in the classroom: first, the Spanish project which aimed at offering one computer for every kid in classroom (1X1 Project); secondly, mobile phones distract students and hinder the learning process; thirdly ICT can create dependency and impoverish personal relations.

Educational frontiers	The world we live in is in constant change. ICT is a driver of this change. Technological determinism and social determinism are paradigms, different forms of understandings this reality. It is necessary to find a point of interpretation in-between.
The values	There are advantages and disadvantages of technology and technological changes for our society. Among the advantages, they mention the speed of communication, the ability to find information and use social networks. As disadvantages, they believe that we now have more contact to people through technology than without it, and that children do not play as before.
Eating healthily	The agricultural revolution, the industrial revolution and finally the digital revolution are stages of a social dynamics. Nowadays society encourages communication and fast transmission of information. It is important to be careful with the information on Internet, as it is easily manipulated.
A world of color	The agricultural revolution, the industrial revolution and the digital revolution are historical milestones that have produced social and economic changes. The group explains some features of the information society and express concern about addiction and dependence on technology.
Children's emotions	Changes caused by technology happen really fast in the lives of the people. The students explicitly say they are not against technology, but emphasize possible negative consequences of its use. They express preoccupation for technology replacing face to face meetings. The students acknowledge the benefits of the new forms of communication, but highlight we need to know to make a good use of them.
Beyond the door	Technology (internet, computers and software) has changed our lives. The students warn technology may make people lose some humanity. They also think although there is a lot of information on Internet, it does not mean that everything is good or right.
Are we solidary?	This group decides to discuss the negative effects of new technologies, focusing on Internet abuse, which may influence negatively our everyday reality. Internet, they think, presents a lot of information that may have been manipulated and is potentially false. The group thinks we must learn to select information and contrast it. The students worry about a growing neglect of social relations. They also highlight the danger of exposing kids to information which is not appropriate for their age.
Imagine all the students	For many years, the grandparents, encyclopedias and books were the sources of information people used to learn. Then, people had to meet face to face to meet and talk. But things are different now. Google, they say, has greatly facilitated our lives. The students use an ironic tone and some laughing to say Google sometimes may lie and make up data. Google is sarcastically presented as both a friend and enemy whose cousin is Facebook. The students defend a combination of traditional and new methods of communication. They express concern for people who forget that there is a life beyond the computer.
Do you love yourself?	This group presents a debate with participants expressing different opinions for and against new technologies and their use in education. In the debate they fail to reach a shared conclusion and believe that everyone has the right to think differently.
A world to educate	Technologies have a great impact on children now. Educators need to learn to use them to reduce the communicative gap between teachers and students. More than knowing how to use technologies, teachers should be able to adapt them to their students' educational needs. Educators can turn cold technologies in warm social relations media, helpful to educators' objectives. We can find positive things in the past, in the present and in the future. It is important to know humanize this increasingly virtualized world.
Cartoons again	Technologies evolve quickly, having as a direct consequence, the rise of an increasingly globalized world. There are pros cons of the rapid pace of the new technologies evolution. Among the pros, students claim that ICTs make communication easier, favor interaction, and promote multiculturalism. Amongst cons students say technologies can create dependence, reduce freedom and remove people from the world of real warm relationships. The group is highly concerned about making a respectful use of ICT.
Social Abilities	Schools face difficulties to adapt to students being connected to ICT on a daily basis. Even small changes that schools and teachers can do to integrate technology in their educational approaches are important. Schools have to promote creative leadership and teacher training. Teachers must be willing to share their knowledge and be flexible. Schools should adopt innovative and adaptive management.
Learning from nature	Society has always evolved using all available resources in different periods of its history to make life easier. Today's digital technologies are part of the daily lives of people and spaces are interactive, explorable, mobile and changeable.
Playing and learning!	Since the beginning, mankind has adapted through new technologies. Technology is intrinsic to human development. ICT has a positive and negative side: it all depends on the use we make of it. As positive aspects of ICT, the students mention the socialization of culture and knowledge, as well as the possibility of instant communication. As negative aspects, students say ICT can be impersonal and that sometimes the information is doubtful.

2.1.1 Discussion

An analysis of the macro semantic structures present in the podcasts produced by the future educators shows their views on technology and the digital age can be said to fall under four broad blocks of themes:

First block – Neutral statements regarding technology and society: Technologies create an increasingly globalized world; Technologies bring about changes in the ways of relating and thinking; ICTs promote speed of communication, availability of information and the use social networks; and finally, ICT favor culture and knowledge socialization. Though most of the groups which have mentioned these topics mention them as positive aspects, I have preferred to refer to them as "neutral" because they state an acknowledgment that technology is part of our lives now. 13 out of the 16 podcasts make reference to these statements.

Second block – Statements of caution: There should be balance in the combination of traditional and new methods of communication; It is important to make a respectful use of ICT. 7 out of the 16 podcasts make reference to these statements.

Third block – Negative statements: Technologies can impoverish personal relations, dehumanizing them; ICTs can create addiction and dependency; Information available on Internet may be false and manipulative. 10 out of the 16 podcasts make reference to these statements.

Fourth block – Statements regarding technology and education: Teachers should motivate students to think critically; Teachers still do not successfully exploit technologies; Teachers need to be trained to use technology for pedagogical purposes; Educators can turn cold technologies in warm social relation media, helpful to educators' objectives. 3 out of the 16 podcasts make reference to these statements.

It is interesting to notice how conservative the students participating in this study show themselves regarding technology and the digital age. Most of them express concerns which have to be explicitly addressed by their educators in order to open their minds to models of education which will promote the required skills of the twentieth first century. For example, students should be guided in the understanding that television, radio and books and even face to face encounters may convey manipulative false information too. Besides, only 3 out of the 16 groups expressed some form of educational preoccupation, which indicates their reflections are elaborated from a very initial, still to be formed professional identity.

3. CONCLUSION

So that future educators are able to elaborate a professional identity which encompasses the pedagogical uses of technology among their range of ordinary duties, their educators should provide them with an environment that favors enough flexibility to self expression and serve as a meta-exercise, through which future educators can elaborate new appreciations of the role of teachers and the purposes of education in the digital age. Guiding students in the identification of semantic macro structures in their semiotic production, so they realize a deeper understanding of their own voices, can be an exercise that leads to the development of a more critical and reflexive professional identity.

Higher education professionals and researchers should not take for granted that as students live surrounded by technology, using them on a daily basis, they should have favorable perceptions on their educational use. Whatever level of familiarity future educators have with technology when they come to the university, they also bring some preconceptions and misconceptions on what literacy means and on what are the means of literacy. It is important to bridge students' previous knowledge, which is both technical but also philosophical, regarding technologies to richer levels of understanding of the role of twentieth first century educators. Podcasts seem to offer a tool just as good to build such a bridge.

REFERENCES

Balagué, F.& Zayas, F. 2008. *Usos educatius dels blogs. Recursos, orientacions i experiències per a docents*. Editorial UOC: Barcelona.

Bodorik P. et al, 1991. Deciding to Correct Distributed Query Processing. *In IEEE Transactions on Data and Knowledge Engineering*, Vol. 4, No. 3,pp 253-265.

Cases, J. & Torrescasana, R. 2007. *Les TIC a l'Educació Infantil.* Editorial UOC: Barcelona.

Campbell, G. 2005. There's something in the air: podcasting in education. *EDUCAUSE Review*, 40(6), 32–47.

Dale, C. 2007. Strategies for using podcasting to support student learning. J*ournal of Hospitality, Leisure, Sport & Tourism Education*, 6(1), 49–57.

De Oliveira, J. M. et al. Student teachers' changing and enduring perceptions on teachers' knowledge. *Romanian Journal of Social Informatics. 15(8), 26-35. 2011.*

Heilesen, S. B. 2010. What is the academic efficacy of podcasting? *Computers & Education*, 55(3), 1063–1068.

Li, Y. & Ranieri, M. 2010. Are 'digital natives' really digitally competent? A study on Chinese teenagers. *British Journal of Educational Technology*, 41(6).

Jewitt, C. & Kress, G. 2003. *Multimodal Literacy*. Peter Lang: New York/Oxford.

Prensky, M. (2001a). Digital natives, digital immigrants, Part 1. *On the Horizon, 9*(5), 1–6.

Prensky, M. (2001b). Digital natives, digital immigrants, Part II: Do they really think differently? *On the Horizon,* 9(6), 1-9.

Romero, M. & de Oliveira, J. M. La generación net se tambalea: percepción del dominio de las TIC de estudiantes de magisterio. *TESI*, 12(3), 2011, pp. 265-283.

Van Dijk, Teun. (2009) Critical Discourse Studies: A socialcognitive Approach. 62-86. In: *Methods of Critical Discourse Analysis*. Sage, Los Ageles/London. Edited by Wodak, Ruth & Meyer, Michael.

Weiler, A. (2005) Information-seeking behavior in generation-Y students: motivation, critical thinking and learning theory. *The Journal of Academic Librarianship,* 31, 46–53.