

Hospital and Home School Education: A Potential Crucible for “2.0 teachers”

Draft of:

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Abstract

The body of individual experiences deriving from sometimes “extreme” didactic needs, such as those of students who are unable to attend normal education regularly (if at all), has provided and continues to provide school and research worlds with useful specific material for reflection and for the experimentation of new forms of teaching.

An example may be found in hospital and/or home teaching, that is to say an “open” type of teaching which ignores the usual physical perimeter of the class (understood as an aggregation of individuals with the respective roles of students and teachers), while guaranteeing the same social and communicative dimension which must be allowed to develop within a class.

Paradoxically these situations have shown themselves to be ideal for the development of a teaching style aimed at stimulating the active role of the student, at fostering a learning process based more on doing than on listening, hence in line with so-called “2.0 pedagogy”. And, as will be argued in this chapter, it is in this sense that special pedagogy can and must be considered as a potential crucible for “2.0 teachers”. But how can the transition from “potential” to “actual” crucible be effected?

In answering this question, we will begin with some considerations on the current relationship between technology and pedagogy, then attempt to understand if and how it is possible to capitalize on the numerous individual experiences of hospital and home teachers, in order to achieve a didactic innovation which is supported by the new technologies and which can be extended to the whole school system.

Introduction

Looking back, we can identify at least three stages in the long (and slow) process of the penetration of information and communication technologies (ICTs) into the school world (Trentin, 2013).

Stage 1 (mid-‘80s - mid-‘90s) – ICTs are installed and used inside a classroom which has been organized for this specific purpose (the computer room), where students go now and then specifically to learn to use the computer and sometimes to use it in the study of other school subjects.

Stage 2 (late ‘90s - early ‘naughtiest) - With technologies, particularly communication technologies, learning extends beyond classroom walls. The computer is no longer seen only as a tool to be programmed or for running educational software, but also as a powerful means both for accessing information and digital repertoires, and for coming into contact with other realities: distant classes, other students, etc. For most students and teachers, the school online connection however remains the only means to access Internet.

Stage 3 (from the early ‘naughtiest to the present day) – The classroom is extended into virtual space, fostering so-called “extended/expanded learning” (Faberman, 2005; Rocha, 2007; Silva, 2007). With the diffusion of Internet, both at home and in mobile forms (wi-fi technology, netbooks, tablets, smartphones, etc.), the computer room becomes obsolete, since the learning activities supported by the network can be developed anywhere: at school, at home, on a park bench.

First consideration. As long as students and teachers could use Internet and ICTs only (or mainly) at school (Stages 1 and 2), the deep divide (except for some particularly privileged situations) between study activities with technologies which could be carried out inside school and outside, it was understandable and justifiable.

Second consideration. In a scenario like this (Stages 1 and 2), if we exclude those teachers who already had a marked interest in both didactic innovation and ICTs, technology at school was (and still is) in most cases perceived as an encumbrance, an extra. It is used because someone has brought it into the school or because someone else has asked to use it for projects. And when it is used, what a fag it is: managing a whole class in the lab, using machines which are hyper-protected by the technical assistants for fear of the students’ tampering with them or contaminating them with computer viruses. And the list of complications could go on and on.

So, an almost forced use of technology and thus almost never a creative one, based on “conventional” teaching methods and practices rooted in old teaching/learning schemes. But the introduction of new technologies calls for the conception and introduction of new methodological proposals inspired by so-called e-pedagogy (Elliot, 2008), proposals which are able fully to exploit ICTs potential both for collaborative study and for individual access to knowledge.

In this context, Mary Thorpe (2012) argues that one of the main reasons for the lack of success in trying to innovate educational processes through the use of new technologies is the obstinacy in adopting pedagogical approaches which are now obsolete and which are limited to simply re-proposing old practices with modern tools.

Likewise, Norris and Soloway (2012) add that the didactic use of technology practiced exclusively at school, moreover with inadequate pedagogical approaches, has caused the

school world to miss out on both the “desktop revolution”, the “Internet revolution” and finally the “laptop revolution”.

A third and final consideration. Unlike in Stages 1 and 2, today the most up-to-date and used ICTs are not those made available by schools, but rather those that students and already many teachers use daily, devices they carry in their pockets, bags or rucksacks. In this radical change of scenario, with technology pervading daily life, it would be unjustifiable for school to miss out on the “mobile revolution” too (Norris and Soloway, 2012).

Alas, many alarm bells can already be heard ringing. For example, the gap between the personal/daily/informal use that students and many teachers make of the new network and mobile technologies (NMTs) and the way in which, instead, these same means are used/proposed in so-called “formal” teaching (Trentin and Repetto, 2013), is constantly widening. What can clearly be perceived is a kind of “backstage use” (the stage being the classroom) of technology, a parallel use to that in the school-space context, and a much faster one:

- on the one hand the students, assiduous users of social networks also for interacting with classmates (mostly activating somewhat unorthodox mechanisms of sharing/passing assignments), or for accessing informational resources for research projects, often consisting of haphazard copy-and-paste operations;
- on the other hand the teachers, who are also increasingly often technology and online resource consumers, but who however limit themselves to using them in the preparation stage of the classroom activity, rather than in fostering learning processes which promote the indistinguishability and interchangeability of study inside and outside the school area.

In this sense, this gap may well in large part derive from the inadequate way institutions organize the spaces for generating new teaching-learning processes which are truly able to integrate the use of technologies.

Again, it is evident that NMTs were not developed with a specific context of application in mind, least of all the educational one, and it is hence natural that they cannot be integrated into the school system just as they are, since they would risk being rejected first and foremost by the teaching community:

“... if a foreign body is getting implemented in a system, either it adapts and will not be regarded as alien or it will continuously be identified as a foreign body and be eventually rejected from the system.” (Euler and Wilbers, 2002)

In this regard, Roth and Erstad (2013) suggest carefully studying the ways in which students and teachers use the media in their free time, because this might provide a guide as to how to adapt to the new 21st-century students’ needs and ways of learning, rather than persevering in the normal practices of school teaching which are unstimulating and boring for the new generations.

Thus for those operating in the school context the need arises to understand more and more fully the existing and increasing interconnection between these two apparently (or perhaps really) parallel contexts: school and extra-school.

We must however tread very carefully here since, as we have said above, NMTs are based on general purpose functional-models, not necessarily oriented to educational uses; hence, all those initiatives which tend to impose them without any specific pedagogical choices or any precise analyses of the real underlying didactic needs, are bound to fail. Two scenarios seem currently to favor our purpose:

- the need for a didactic-pedagogical innovation which is centered more on doing than listening, and is more in line with the habits, pace of life and communicative styles of the new generations and with the informational resources which these generations have literally within hand's reach throughout the day;
- the need to exploit the potential of technology in the management of teaching/learning processes in difficult, sometimes extreme, situations (e.g. social/educational inclusion of those who have difficulty in regularly attending normal study courses).

The teacher's role

In the scenario hypothesized in this chapter, the teacher must logically play a crucial role, not only in his/her guise of subject area expert, but also in that of researcher (teaching implies a process of constant research) and educator. This is possible only if the teachers are willing to (Trentin, 2010):

- enter the communicative dimension of the new generations, using the students' own virtual spaces (i.e. "going to visit" the students where they normally interact among themselves);
- indicate study methods which exploit the above dimension;
- educate students to use the potential of the network and mobile technologies which are at their daily disposal in a discerning, intelligent way;
- educate students to digital citizenship.

In all this, we cannot ignore the urgent need for a systematic initial training programme for educators, and for their continuous updating. They must be made aware of the need for change, and this can only begin from within and from the conviction that this is the only way to achieve an alignment between the ways of communicating at school and in everyday environments (Zimmerman, 2007).

It is easily said: "begin from within". But what incentive can produce a strong enough impulse in teachers to make them change their usual way of teaching, when school organization itself is so alien to the demands of a 2.0 teaching method? In other words, if the teacher is mainly asked to respect the curricula indicated by the Ministry of Education, why bother to make extra work (which in any case is usually not even acknowledged). Why run the additional risk of being seen as someone who wants to destroy the well-established (or rather "crystallized") schemes which suit more or less everyone?

Two possible favorable situations can be hypothesized here:

- a) Teachers really desire to renew their teaching and bring it up to date, guiding their students towards the discovery of discipline-specific knowledge by exploiting their technological aptitudes and habits (what Norris and Soloway call the “artisan teacher”). Thus, teachers do not limit themselves to acting as a didactic mediator, passing on discipline-specific knowledge to their students, but also (above all) help them to become citizens of the future. Citizens who are able not only to read, write and do arithmetic, but also to master methods and strategies for the effective and efficient use of communication technologies in accessing knowledge and in continuous learning (Trentin and Repetto, 2013).
- b) Teachers up against a didactic problem whose complexity cannot be tackled using conventional methods and tools (hence even more “artisan” than the previous one). For example, teachers operating in contact with those difficult situations which prevent students from attending lessons and/or normal educational courses regularly, e.g. hospital and home teaching.

Experience has taught us that (Trentin and Benigno, 1998):

- a) in the first case innovation rarely catches on, since it has to appeal mainly to the teacher’s “intrinsic” motivation to innovate and create ad hoc spaces in “canonical” school life;
- b) conversely in the second case there is a clear, prevailing “extrinsic” motivation; this derives from the particular operational situation, which paradoxically often presents an ideal context for the application of tools and methods (especially online ones) aimed at technology-centered didactic innovation.

Extrinsic motivation due to a problematic situation

In order to explain more clearly the extrinsic type of motivation which may induce a teacher to radically rethink his/her way of teaching, it could be useful to compare the features of the two different situations presented above (Table 1).

Table 1. Technological integration, “normal” teaching and teaching in the presence of problematic situations.

a) “Normal” teaching	b) Teaching in the presence of problematic situations
School space and didactic organisation inadequate for the development of pedagogical approaches exploiting the potential of the new technologies.	The school space is anywhere where study is possible (home, hospital), preferably offering the chance to do it in collaboration with other, even remote, students, and with teachers’ support even if they are not always present.
Teachers hesitant in considering teaching activity which extends outside school time.	Most (sometimes all) teaching activity is developed outside the school spaces.
Teachers generally unmotivated to change their teaching style when they perceive no real need for them to do so.	Teachers’ strong motivation to seek solutions which allow the disadvantaged student to take part in class lessons, helping their study through personalised paths potentiated

	by technologies and making them actively participate in collaborative study activities in class as well as in extramural ones.
From one hand, strong perception of students' need to acquire soft skills in using technologies to enhance their scholastic and lifetime learning process. On the other hand, since these skills are not "assessable" for school credits (except for ECDL ¹ courses), technologies at school are seen as cumbersome and their use is often a forced one, sometimes not understood by students' families (a teacher who uses Facebook? Pure heresy!).	Awareness that only through a systematic and programmed didactical use of NMTs a disadvantaged students can enjoy both equal opportunities in following educational courses and total autonomy also in the future in tackling their lifetime knowledge needs. It does not matter that these skills are not recognized in scholastic assessment. It is a non-problem, since those skills are not an extra but a fundamental. And their fundamental nature is recognized and requested by students' families themselves.
The above circumstances lead to great difficulty in involving the whole of a class teaching board in the re-planning the teaching process in order to integrate NMTs.	It is often precisely these problematic situations which convince even the most sceptical teachers to give it a go and which thus unite the various members of a class teaching board.

The last point in the table is particularly interesting, since the author has had the opportunity to witness how problematic situations (Trentin and Benigno, 1998; Trentin, 2012) turn out to be a kind of Trojan horse for wider reflection on the introduction of NMTs into teaching (Mitchell, 2010).

Undoubtedly the proposal even to partially re-programme teaching activities in order to facilitate a remote student's normal school attendance always provokes much perplexity within the board of class teachers, even more so if this implies the introduction/"intrusion" of technologies. This perplexity is even more marked when the disproportionate overall effort required for managing what actually amounts to a single case is taken into account.

These resistances can often be broken down if teachers can be made to take a positive view of what is certainly not a positive situation (especially for the disadvantaged student). That is to say, if it can be demonstrated to them that the management of that problematic situation may become an opportunity for acquiring knowledge and skills on the NMTs educational use, which can then be extended to the whole class (and more generally to the whole school) also for other purposes at a future time. So, not only for solving a (hopefully occasional) emergency situation, but also for innovating and potentiating the learning/teaching process throughout the class/school.

These situations, in which teachers', head teachers', parents' and classmates' interest in finding solutions to include disadvantaged learners are evident, have often turned out to be true incubators of educational innovation for that class/school, fostering exemplary experimentations in the didactic use of NMTs which can be used as models also for "normal" teaching.

So, we are looking at a teaching style which is forced to develop in unrestricted spaces, and which may act as an example and a guide to the opening up of the day-to-day spaces of the school system, a system that is still much too strongly anchored to schemes which do little to meet its users' expectations and demands for renewal.

1. European Computer Drive Licence.

From teacher to “2.0 teacher”

As we have said above, the fact of operating in a dimension which is more “open” than that of classroom teaching alone, places the “special” (e.g. hospital or home) teacher in a situation which is, from some points of view, ideal for experimenting a new interpretation of their role of mediator in the students’ learning process, even though they have to do without the normal, day-to-day, face-to-face interaction which the classroom situation would guarantee. Interest is generated in experimenting the use of technologies in order to create the necessary continuity in the relationship with the student confined to hospital or home, an element which is in any case fundamental for any teaching/learning process.

This is why the study and observation of the solutions, which hospital and home teachers have worked out to meet their teaching needs, is particularly useful for realizing how even, in a “normal” situation, the teacher’s role can/should change to create a teaching/learning process which exploits the potential of the new communication channels and students’ new ways of interacting (Roth and Erstad, 2013).

This study and observation could generate both the most suitable teacher training courses (preferably at an early stage of their training), as well as indications as to what norms should be instituted to create a type of school organization which can promote a true didactic innovation based on the considerations expressed above.

This is why for some time now the context of hospital and home teaching has been considered as an incubator for teaching innovation centering on the use of new technologies, and consequently as a potential crucible for 2.0 teachers.

In this regard, it should be specified that the term “2.0. teacher” is used here to indicate the function that teachers perform not only in the context strictly connected to the use of technologies, but also in a more general sense, when they organize and manage learning paths where 2.0 resources can take on differing roles according to the different didactic methodologies which are being adopted, i.e. ranging from being essential to being more modestly a simple support which is useful but not necessarily indispensable (Trentin, 2010).

At the present moment however, the knowledge and skills for performing this function efficiently are not widespread among teachers. One element of sustainability for 2.0 teaching is thus closely related to teacher training, both in the instrumental use of 2.0 resources and in the various teaching/educational approaches connected to their use.

But what kind of training? Given the affinity between 2.0 teacher and online training tutor/teacher, and drawing on the experience acquired in the training of the latter figure, it may be concluded that if we wish to spread knowledge, skills and culture related to the didactic/educational use of 2.0 resources, we must use teacher training tools and approaches based on the same resources and methods by which they can then be proposed to students (Trentin and Repetto, 2013).

Hence no longer (or at least not only) formal training (i.e. participation in classroom or distance-learning courses), but interventions focused above all on informal (or non-formal) learning processes (Cross, 2005), which exploit the potential of the NMTs for accessing and sharing information, knowledge and good practices, by means of direct consultation of the online sources and social interaction in networked communities of practices (Wenger, 1998; Trentin, 2005).

In order to understand what direction must be taken in the professional development of a teacher who intends to adopt NMTs in his/her teaching, we first need to define the abilities, knowledge and competencies required for effective implementation of e-pedagogy (Elliot, 2008) or 2.0 pedagogy (McLoughlin and Lee, 2011). In this case too it may help to observe the methods of those “special” teachers who are habitual users of the new technologies for supporting their teaching.

What competencies does an 2.0 teacher require?

Given the newness of the role, there are actually still no generally-recognized standards for defining the competencies of the 2.0 teacher. However, some international bodies have made proposals in this direction, although these are more linked to the e-learning context than to the 2.0-based school teaching one. One of these bodies is the International Society for Technology in Education², which states that the e-teacher should:

- use social software competently;
- understand the characteristics of the “e-learner”;
- understand approaches and strategies for effective e-teaching;
- be fully aware of the pros and cons of computer mediated communication (CMC);
- understand the dynamics of online group interaction and how to manage them;
- be capable of evaluating online activities (e-tivities);
- understand the legal (copyright) and ethical implications of online education;
- be aware of accessibility issues affecting disabled participants in online learning;
- understand strategies for effective integration of online activities into classroom learning.

Clearly, in the case of teachers of disadvantaged students, further knowledge and skills need to be added which are strictly related to the specific situations in which they have to operate. These include awareness of: the context (e.g. hospital, home school); the behavioral and relational (with parents, social/health workers, volunteers) dynamics; their own psycho-physical wellbeing (e.g. management of the stress from dealing with a suffering student); how to draw support for all this from the NMTs; which criteria to use in planning a course tailored to the specific demands and status of the individual disadvantaged student.

Besides defining the general guidelines for what the 2.0 teacher’s skills should be, another key aspect has to be considered a, i.e. their continuous professional development. Although this is a concern which is common to all professional categories, it is undoubtedly particularly important for those professions based on continuous knowledge flows (Trentin, 2011), experimentation and intensive use of technologies.

In this case too, technological resources can play a significant role, encouraging teachers’ continuous self-learning and the continuous updating of their knowledge and professional practices.

2. ISTE – <http://www.iste.org/>

Conclusions

The NMTs are increasingly being used as habitual tools of communication and expression, above all by the new generations.

Schools cannot remain indifferent to such huge changes which urge them emphatically to rethink their teaching/learning models and didactic management/organization (spaces, times, roles).

It is now quite clear that these changes cannot be implemented simply by equipping schools with technology. In many situations, even today, the technologies used by students and teachers daily on a personal level (often more up-to-date than those installed in schools), could be exploited, and indeed often already are.

And in this scenario, it is the teachers themselves who must be actively responsible for initiating a process of didactic innovation, which takes into account the multiplicity of information and interaction channels which students have daily at their disposal.

It is certainly not an easy process, but it has good chances of success, above all if teachers are willing to invest time in a professional development which aims to tune them into the new communication channels habitually used by their direct user base, learning to exploit their potential as teaching and study aids.

In the overall view however it must be pointed out that current school organization is far from providing fertile ground for a didactic innovation based on the new technologies. This is the reason why in this chapter we have spoken of teachers' intrinsic and extrinsic motivations. For different reasons, these motivations have so far produced a type of innovation which still seems to be based on individual choice and professionalism rather than on an organizational development of the school institution which is specifically targeted at fostering such an innovation.

In this scenario, the body of individual experiences deriving from sometimes "extreme" didactic needs, such as those of students who are unable to attend normal education regularly (if at all), has provided and continues to provide school and research worlds with useful material for reflecting on and experimenting new forms of teaching. We are talking about an "open" type of teaching which ignores the physical perimeter in which the class (understood as the aggregation of individuals with the respective roles of students and teachers) usually operates, while guaranteeing the same social and communicative dimension that must be allowed to develop within a class.

Studying these "extreme" experiences may undoubtedly help us to correctly dose moments of face-to-face interaction with moments of individual and/or collaborative study potentiated by technology-mediated interaction, also in a so-called "normal" teaching situation. And also to understand what role and functions a teacher must perform in order to successfully oil the new learning mechanisms which are increasingly centered on students' active role (learning by doing) and the individual, knowledgeable and informed use of the information and knowledge sources which can be accessed with the technologies they have daily within hand's reach.

And it is in this sense that experts are becoming more and more convinced that special teaching, particularly hospital and home teaching, is a potential crucible for what we have called "2.0 teaching".

References

- Cross, J. (2005). *Informal Learning*. Hoboken, NJ: Wiley Publications.
- Elliot, B. (2008). *E-pedagogy: does e-learning require a new approach to teaching and learning?* <http://d.scribd.com/docs/22rc8wz72z067xrb1fpk.pdf>.
- Euler, D. and Wilbers, K. (2002). Selbstlernen mit neuen Medien didaktisch gestalten. In D. Euler D. and Metzger C. (Eds.) *Hochschuldidaktische Schriften*, Chapter 1. St.Gallen: Institut für Wirtschaftspädagogik.
- Faberman, D. and Kaplan, C. (2005) *Time for a change: the promise of extended-time schools for promoting student achievement*. Boston: Massachusetts 2020.
- McLoughlin, C. and Lee, J.W. (Eds.) (2011). *Web 2.0-based e-learning: applying social informatics for tertiary teaching*. Hershey, PA: Information Science Reference.
- Mitchel, D. (2010). Inclusive Education. In Mitchel D. (Ed.) *Education that fits: Review of international trends in the education of students with special educational needs*, Chapter 11. Education Counts Publications. http://www.educationcounts.govt.nz/publications/special_education/education-that-fits-review-of-international-trends-in-the-education-of-students-with-special-educational-needs/chapter-eleven-inclusive-education.
- Norris, C.A. and Soloway, E. (2012). The opportunity to change education is, literally, at hand. *Educational Technology*, Special Issue on “Educational Technology in Europe”, 52(2), 60-63.
- Rocha, E. (2007). *Choosing more time for students: the what, why, and how of expanded-learning*. Center for American Progress. http://www.americanprogress.org/issues/2007/08/pdf/expanded_learning.pdf.
- Roth, S. and Erstad, O. (2013). Networked lives for learning: digital media and young people across formal and informal contexts. In Trentin G. and Repetto M. (Eds.) *Using Network and Mobile Technology to Bridge Formal and Informal Learning*, Chapter 5 (pp. 119-152). Oxford, UK: Woodhead/Chandos Publishing Limited.
- Silva, E. (2007) *On the clock: rethinking the way schools use time*. Washington, D.C.: Education Sector. http://www.educationsector.org/usr_doc/OntheClock.pdf.
- Thorpe, M. (2012). Educational Technology: does pedagogy still matter? *Educational Technology*, Special Issue on “Educational Technology in Europe”, 52(2), 10-14.
- Trentin, G. (2005). From “formal” to “informal” e-Learning through knowledge management and sharing. *Journal of e-Learning and Knowledge Society*, 1(2), 209-217.
- Trentin, G. (2010). *Network Collaborative Learning: social interaction and active learning*. Oxford, UK: Chandos Publishing Limited.
- Trentin, G. (Ed.) (2011). *Technology and Knowledge Flow: the Power of Networks*. Oxford, UK: Chandos Publishing Limited.
- Trentin, G. (Ed.) (2012). *Reti e inclusione socio-educativa*. Milano, Italy: Franco Angeli.
- Trentin, G. (2013). Network and mobile technologies in education: a call for e-teachers. In Trentin G. and Repetto M. (Eds.) *Using Network and Mobile Technology to Bridge Formal and Informal Learning*, Chapter 6 (pp. 153-182). Oxford, UK: Woodhead/Chandos Publishing Limited.
- Trentin, G. and Benigno, V. (1998). Telematics for the Schooling of Hospitalised Children: An Italian Survey. *International Journal of Online Learning*, 9(4), 17-21.

- Trentin, G. and Repetto, M. (Eds.) (2013). *Using Network and Mobile Technology to Bridge Formal and Informal Learning*. Oxford, UK: Woodhead/Chandos Publishing Limited.
- Wenger, E. (1998). *Communities of practice: learning, meaning and identity*. Cambridge University Press.
- Zimmerman, L. and Trekes Milligan, A. (2007). Perspectives on communicating with the net generation. *Innovate*, 4(2).
<http://www.innovateonline.info/index.php?view=article&id=338>.