MOBILE PHONES AT SCHOOL: BAD STUDENT BEHAVIOUR OR AN INNOVATIVE RESOURCE?

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Abstract

This article seeks to contribute to the debate on the role of mobile phones in Italian schools. The first part describes the legal framework regulating the use of mobile phones in Italian schools, while the second part presents the results of a qualitative research project carried out in selected Piedmont schools. This study, which involved observing sessions and conducting in-depth interviews in five schools in the Piedmont region, led to wide ranging results. In particular, it revealed the differences between the most technologically advanced schools and the more traditional ones. In the former, mobile phones have become an integral tool for teaching, while in the latter, they tend to be seen as an alien instruments. These contrasting attitudes towards mobile phones can be explained by economic, geographical, and technological factors.
This research is experimental and embryonic and should be integrated into other approaches in the future. Nevertheless, it has highlighted the need to promote a culture of media education in schools, while making adults aware of the educational and didactic uses of mobile technologies.

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Keywords

Mobile phone, digital school, media education

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1. Introduction. Italian schools and the mobile phone: a complicated relationship

To analyse the role of mobile phones in schools is a complicated task for several reasons. Numerous scholars have demonstrated the centrality of mobile phones in everyday life. According to the Marshall McLuhan's theory, the mobile phone can be defined as a prosthesis, and an extension of the human body (McLuhan, 1966; Caron and Caronia, 2007). At the same time, mobile phones are often relegated to a ludic dimension that seems far removed from the world of traditional learning (Selwyn, 2003; Ito et al., 2010).

Italian schools have always had a special, contradictory relationship with technological tools, including mobile devices and the larger media landscape. On the one hand, the Italian Ministry of Education regularly announces - but rarely actually develops - initiatives designed to bring about a widespread and systematic diffusion of technology in schools. Except in the cases of the Program of Development of Educational Technology (1996/2000) and the more recent Digital School project (2008/11)[1], the systematic investment in new technologies generally encounters cultural resistance in Italy. Norberto Bottani, author of an interesting book about the crisis in Italian schools, has claimed that

> «the world of new technology certainly has offered, until now, open learning spaces and multiple modes of access to knowledge that break from scholastic practises. The world of the network is different from that of the traditional school; it is a world that stimulates mental wanderings, fantastic discoveries, construction of imaginary spaces, with daring and sometimes dangerous explorations that worry educationalists and teachers-educators. [...] The gap between the academic world and the computer world is huge»[2] (Bottani, 2013, p. 40).

This gap occurs because the school system has always focused on preserving humanist cultural tradition, shielded from the conditioning and the vulgarisation of technology: «Teachers are used to defending the humanities from digital media. What they fear is the loss of books and, with them, of what they have always represented» (Rivoltella, 2013, p. 5).

It is clear that Italy lacks the grounded and institutionalised media education curriculum necessary for training people to think critically and to consistently create meaningful media content (Tirocchi, 2013).

Some teachers almost demonise the technologies that children use in their leisure time; these include television, videogames, PCs, and, specifically, mobile phones. Teachers have thus created a deep division between formal institutional and educational content, and informal

[1] http://hubmiur.pubblica.istruzione.it/web/istruzione/piano_scuola_digitale
[2] Translated by the author of this article.

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information, linked to communications and the world of cultural consumption. However, as several academic studies have demonstrated, learning in informal settings goes hand in hand with media use in everyday life, especially in a 'convergence culture' (Jenkins, 2006; Pachler, Cook and Bachmair, 2010; boyd, 2014).

In addition, the recent document *The good school* (La buona scuola)[3], which illustrates the main features of the package of school reforms announced by Prime Minister Matteo Renzi, refers to digital skills such as coding and the development of computational thinking at primary schools and the use of a Digital Makers Plan in high schools. At the same time, the document makes no explicit reference to the communication devices that teachers will use during the coming years, nor to the introduction of mobile technology (or other so-called 'light' technologies) to the teaching and learning processes. *The good school* concept became law on 8 July 2015, approved with a smaller majority than the government had expected.

In Italy (as well as in many other countries) the use of mobile phones at school has been linked to the growth of cyber bullying (Tirocchi, 2013; 2015). Students have used smartphones to persecute and threaten violence against schoolmates and sometimes even teachers. New forms of bullying, such as sexting and happy slapping, include offensive videos that sometimes contain pornography; these can be circulated through websites or instant messaging groups. One 2014 episode involved a girl in Northern Italy who was harassed for a long time by classmates, and eventually decided to move to another school. Although this overview may seem rather discouraging, in recent years there have been signs of a gradual domestication of mobile and other technologies in Italian schools (European Schoolnet, 2013; Rivoltella, 2014).

2. Theoretical framework

According to several scholars, mobile phones have significantly contributed to the colonisation of young people's everyday lives by the mass media and, more recently, by the digital media (Fortunati, 2002; Fortunati and Magnanelli, 2002; Goggin, 2006). Mobiles have become among the most used devices, allowing adolescents to experience a continuous exchange between their online and offline, public and private lives, while guaranteeing permanent access to networking and representing an efficient form of identity expression (Castells et al., 2007). The rise of Web 2.0, with its innovative 'user generating' social media practices (provided by social networking sites such as Facebook and

[3] Retrieved July 2015 from https://labuonascuola.gov.it/index_en.

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Twitter), together with apps such as WhatsApp and Snapchat, has radically changed the communication landscape in informal settings (boyd, 2014). Young people spend many hours in the digital media environment, which informs and shapes socialisation and identity construction.

A review of the academic literature clearly shows that children and adolescents have been defined in many, many ways, which are too often marked by technological determinism (Ranieri, 2011). One of the most recent definitions, based on the ubiquity of mobile devices, is the notion of a 'generation app'. According to Howard Gardner and Katie Davies, the younger generations are distinguished by their use of 'apps', pleasant procedures that attain a quick result (Gardner and Davies, 2013). Gardner and Davis claim that apps are becoming more pervasively influential and harmful, producing an 'app-world view' and an 'app conscience'. However, we must remember that technologies alone do not determine either cognitive changes or changes in the social environment. The notion of a 'mobile complex', which emphasises the continuous interaction between social structures, the agency of users, and their cultural practices seems very useful because it treats the mobile phone as a cultural object, essential for accessing cultural resources (Pachler, Bachmair and Cook, 2010; Pachler, Cook and Bachmair, 2010; Cook, Pachler and Bachmair, 2011).

In analysing the diffusion of this technology, the statistical data shows that the use of smartphones in Italy continues to increase dramatically (+ 12.9 %): over half of Italians (52.8 %) and 85.7 % of young people use these devices regularly (Censis, UCSI, 2015). According to the recent findings of the international program Netchildren go mobile directed by Sonia Livingstone (Mascheroni and Cuman 2014), 42% of Italian 9–16 year olds use smartphones everyday, although socio-economic factors seem an important limitation in determining who is able to purchase this technology. In addition, children use mobile phones in their bedrooms more often than they use them out of doors. This briefly described scenario makes us wonder how Italian schools approach mobile technology, given that it is essential to the younger generations for their daily communications.

The Directive n. 104/2007 issued by the Italian Education Ministry[4] states that general rules about privacy can be applied in the context of school communities. According to the Directive, students, teachers, and other school visitors and employees who wish to take pictures or audio or video recordings with their mobile phones or other devices in school (or

[4] For more information, see: *Circular n. 362—25 August 1998 'Using mobile phones in schools'; Directive n. 104/2007; Guidelines and instructions regarding the use of mobile phones and other electronic devices during teaching activities, disciplinary sanctions, and supervisory duties, as well as the co-responsibility of parents and teachers*.

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who wish to use, disclose, or send personal information), should:

A - Inform the person concerned of the following:

The purposes and methods of treatment that will be applied in relation to the data;

His or her rights, including, for example, the right to delete or anonymise data;

The identification of the person using the mobile phone or other devices to collect other people's data.

B—Obtain the consent of the person involved. If sensitive data is involved, it is necessary to obtain written consent, subject to the non-disclosure of health data.

Another Italian Data Protection Authority[5] document, *Privacy in the classroom* (La privacy tra i banchi di scuola), establishes that the use of camera phones (devices for recording sounds and images) is generally permitted in schools only for personal use; users are required to respect the rights and fundamental freedoms of every person involved, particularly in relation to image and dignity. In any case, schools have the autonomy to regulate or restrict the use of audio-video recorders, including mobile phones, both in classroom lessons and in school buildings; Italy adopted a policy of school autonomy in 1997 (Act No. 59, 15th March 1997)[6]. It is never permitted to broadcast or systematically communicate other people's personal data (such as images or audio/video footage) without having adequately informed the people involved and obtained their explicit consent.

3. Research design

The research discussed in this article—predominantly qualitative and exploratory fieldwork—aims to identify some significant elements or clues related to the following questions: what is the role of the mobile phone in Italian classes? Does the school system tend to consider it an upsetting intruder or harmful tool that can distract students? Do teachers and school

[5] The Italian Data Protection Authority (Garante per la protezione dei dati personali) is an independent authority set up to protect fundamental rights and freedoms in connection with the processing of personal data, and to ensure respect for the dignity of individuals. The DPA was set up in 1997, when the former Data Protection Act came into force (http://www.garanteprivacy.it/web/guest/home_en).

[6] In 2001, some general measures completed the specific legislative framework for school autonomy: Article 117 of the Constitution itself recognised the autonomy of school establishments. Article 117 gave the state power to determine general education standards, fundamental principles, and basic levels of service across the whole country. Regions are responsible for legislating on teaching matters 'subject to the provisions of school autonomy'.

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administrators consider it a resource for teaching and learning?

This study uses the research techniques of in-depth interview and direct observation. These techniques have been used separately and adapted to different scholastic contexts. In less technologically advanced classroom settings, for example, we carried out participant observations to discover whether mobile phones were present in any way during the course of the lesson.

The schools were selected using purposive sampling, based (in this case) on characteristics such as the presence (or absence) of specific digital technology projects, and the physical location of the schools (in cities or small towns). The research involved five schools, all located in Piedmont, (Northern Italy):

1. An upper secondary school (School A) located in the centre of Turin and constantly engaged in projects on workplace safety, road safety, and e-safety[7]. In this school, we interviewed the head teacher and a technology teacher who had been temporarily appointed by the Italian Ministry of Education (Ufficio Scolastico Regionale) to carry out specific projects.
2. A lower secondary school (School B) located on the outskirts of Turin. This school has participated in the Cl@ssroms 2.0 project[8] and continues to implement the 'web 2.0 philosophy'. We interviewed a teacher of Italian, history and geography with a leading position in a 2.0 classroom;
3. A lower secondary school (School C) situated in a hamlet of the town of Rivalta, in the metropolitan area of Turin (19,500 inhabitants). This school has participated in the Classrooms 2.0 project. In this school, too, we interviewed a teacher of Italian, history, and geography.
4. A lower secondary school (School D) located in a small town in the province of Cuneo (3400 inhabitants). Four observation sessions were conducted in two classes, as well as interviews with the head teacher, three teachers, and four students.
5. A lower secondary school (School E) located in a small town in the province of Biella (2600 inhabitants).

Four classroom observation sessions, one teacher interview, and one student interview were carried out.

An observation grid was used for direct observations in Schools D and

[7] E-*safety* refers to the risks faced by children and adolescents and to the policies that protect them.

[8] The 'Cl@ssi 2.0' programme is part of a broader programme, based on the 'Digital Classroom of Tomorrow' (DCOT) concept. The goal of 'Cl@ssi 2.0' is to check whether and how technologies have been integrated into the learning environment, and whether they have changed teaching practices or the learning environment. In Italy, this project began in 2009 in 156 Italian lower secondary schools; it was then extended to primary and upper secondary schools. In Piedmont, 20 classrooms in Turin and other parts of the region have taken part in the project.

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E. This tool enabled the researcher to record the structural characteristics of the class, including the following four dimensions:

- The first dimension involved the physical structure of the learning environment (the arrangement of desks and presence of LIM, PC or other fixed technologies in the class);
- The second dimension involved lesson content: the topic of the lesson and the teacher's teaching style (e.g. frontal or dialogic);
- The third dimension related to the use of technology or other tools during the lesson (including PowerPoint, LIM, textbooks, and handouts);
- The final dimension analysed whether and how phones were being used, either in class or during free time.

These classroom observations were conducted with 'the observer as participant' - the main role of the researcher was to observe and collect data. The observer recorded behaviours, including actions, conversations, and descriptions of the environment. Class teachers were not told the specific subject of the research. The interview guide focused on ways of using mobile phones, analysing attitudes towards this technology.

4. Findings and discussion

Analysing the heterogeneous materials collected in schools has revealed a range of different situations and attitudes affecting the use of mobile phones in the classroom. The intersection of interview transcripts and field data observations shows a polarisation of positions. For schools that are less technologically equipped, the mobile phone is an element that interferes with lessons, while for the more advanced classrooms, mobile technology is fully embedded and integrated into daily school life. According to a teacher at School A,

> «The mobile phone is a personal extension. For the students, it may also be important to keep the phone on while they are at school, to safeguard their 'freedom of communication'. It is important that they respect the rules and avoid using phones during lessons. Some schools have adopted restrictive measures, but I think those could limit the children's personal freedom. In these 'stiff' schools, students keep their mobile phones turned on [...]. The student's freedom is limited only by shared, unwritten rules: during lessons, mobile phones must be put on silent» [A (male), 50 years].

According to this teacher, banning mobile phones from the classroom is not a good solution, because they are «like a table laden with sweets ... and you cannot say to a child or a boy 'don't touch them'».

School A has always been very engaged in implementing projects about safety, and so the headmaster is very open-minded about this issue. The

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school has chosen to liberalise the use of Wi-Fi, which can be accessed without registering personal data on the platform. Since school A is a polytechnic, information relating to machine tools, as well as being printed on paper, is digitalised and detectable through a QR Code. Precisely for this reason, and recognising the utility of many apps for the teaching of science, «the battle against mobile phones has been absolutely lost» [T (male) 58 years]. On the rare occasion when a crisis occurs, the school tries to solve the problem without involving parents, by making students conscious of the consequences of their actions.

School B participated in the Classrooms 2.0 project. The 2.0 classroom (now evolving into the 3.0 classroom) has a completely different configuration from a traditional classroom. School B, for example, provides LIM, which uses Chromecast technology, a media-streaming device that can be connected to the TV's HDMI port. It can be used with a mobile phone or a tablet, as well as with a laptop to transmit app and contents directly onto the HDTV. In this way, it is possible to display the contents of any digital device, making the technology useful for the whole class.

In such classrooms, the mobile phone is perceived as a useful teaching tool (although students generally use tablets for learning) and as an additional resource for group work. The mobile phone is not perceived as a dangerous tool; children can choose to bring mobiles to class, although the school does not provide a free Wi-Fi connection. Lessons are dialogic and participatory, because technologies have changed the spatial configuration of the classroom, with desks arranged in small islands. The 2.0 lesson incorporates user generated teaching objects and user generated learning objects (Taddeo and Tirocchi, 2012a; Taddeo and Tirocchi, 2012b).

In School C,

> «mobile phones are allowed only on silent mode (or turned off and kept in the pocket), because school regulations prohibit pupils from carrying mobile phones. Students often check their phones, using the excuse that they need to watch the time; they certainly check them while they are in the toilet» [G (female), 35 years].

Phones are also allowed for educational purposes, as in the 2.0 classroom. For example, in cooperative learning activities, children use their phones to take still pictures, putting these into Apple software to create e-books.

The use of WhatsApp and other instant messaging apps for smartphones seems very significant: at the beginning of the academic year, younger groups of students (those born earlier) share information and collaborate on homework; soon the apps begin to provide another kind of support, encouraging them to express their playful, natural personalities.

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The teachers in School D seem not to be completely aware of the importance of mobile phones for adolescents. Students must keep their phones turned off or give them to the janitor before entering the classroom. In this school, teachers do not use mobile phones for learning purposes. No classrooms are equipped with technology; in classrooms, such as PC labs, where ICT is available, teachers do not take advantage of it. In explaining the danger of electromagnetic waves, one teacher said, during a lesson, «I hope you normally use the phone just to send messages» (G (female), 58 years].

Another teacher at School D described incidents that had occurred in previous years, before the school had policies to manage the use of mobile phones. One girl videotaped part of a lesson and was, as a consequence, suspended with compulsory attendance. On another occasion, some boys took photos on the last day of school. One student phone was seized and kept until the boy's mother came to pick it up.

«And we are very careful with phones because they can be used to hurt people (…) suddenly they can shoot a video , upload it to Facebook and we risk a complaint» [D (female) 42 years).

The head teacher of School D expressed a negative view of technology in education, wondering whether it was necessary for the teaching process. She believes that technology is a resource that needs to be controlled, especially with reference to social networks, which she defined as a real student 'hangup'. The use of mobile phones should be closely monitored, and 'hetero-directed' by the teacher, to prevent 'improper use'. Finally, the students of School D are denied permission to bring their phones on school trips.

In School 'E' the use of mobile phones at school during teaching activities is strictly forbidden; mobile phones and other electronic devices are considered a dangerous distraction. Only a few teachers (for example, the one interviewed) use technologies, such as LIM, as a teaching tool in mainly traditional lessons. In this school, technologies are the subject of debates and discussions; teachers try to explain their use but without using them at school!

5. Conclusion

It is not easy to draw definitive conclusions about such a complex and well articulated subject as the presence of mobile phones in Italian classrooms. This issue has become particularly sensitive during a historical phase in which adult behaviours are getting closer to those of young people. Children and adolescents are gradually 'migrating' from social environments such as Facebook, preferring to use WhatsApp or Instagram. Mobile phones have become an important part of their lives,

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tools that accompany them all day long, and are definitely embedded in their spaces and times.

However, this fact has not been consistently acknowledged or accepted by Italian schools; in fact, there seem to be two different worlds. Some schools are 'technologically advanced', while others are traditional, particularly those situated in small centres. In the schools of the first type, (whether high schools or middle schools) the abundance of technology promotes a reorganisation of spaces and work in the classroom, encouraging an open-minded attitude among teachers and staff. In these classes, phones are 'normalised', through a process of integration and appropriation. Phones are generally allowed and may be used as an inclusive tool, including by students with special needs. In these contexts, the awareness and empowerment of children and adolescents is valued.

Less 'well equipped' classrooms risk becoming 'conceptually and critically weak': they choose to implement a policy of zero tolerance that totally excludes the phone from learning practices. Such policies exacerbate digital gaps and are not conducive to the maturation of the mobile learning experience.

Many factors contribute to determining the relationship between schools and the mobile phone. First we must consider the decisions of the head teacher, who establishes whether teachers or students are allowed to use phones in the classroom and how the phones can be used.

A second important factor (linked to the first) involves the economic resources available in each school; schools that have received funding for purchasing technology are able to develop projects that integrate mobile phones into classroom teaching. In some cases, the presence of digital technologies for teaching and learning creates a different climate within the school environment.

Research has shown that mobile phones are useful for connecting formal and informal settings (Hug, 2012), such as the school environment with the domestic sphere, and leisure time with the world of social relations. One example of a successful model involves the social networking groups that students create to share pictures of homework. Schools that have chosen to ban the use of mobile phones don't seem to realise the importance of the cultural change that is taking place. At the same time, as has been the case with earlier technologies, a solid model of mobile learning cannot succeed without the implementation of a serious program of media education, which should be geared more towards social media education (Ranieri and Manca, 2013; Ranieri and Pieri, 2014). It is therefore important to ask what kind of 'social media literacy' can be implemented in school and extra-curricular contexts?

The research discussed in this article is still at an experimental and embryonic stage. This project could usefully be enriched through the incorporation of new perspectives, such as the sociomaterial approach

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(Fenwick, Edwards and Sawchuk, 2011). This approach recognises that education and its various components (including classrooms, worksites, and virtual spaces) have a material nature; it attempts to reveal elements that are taken for granted in educational events.

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