

L'ESPERIENZA DIDATTICA «FILOSOFIA & STORIA BYOD»: COME UTILIZZARE CON SUCCESSO LO SMARTPHONE A SCUOLA

THE DIDACTIC EXPERIENCE «BYOD PHILOSOPHY & HISTORY»: HOW TO USE SUCCESSFULLY THE SMARTPHONE AT SCHOOL

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ABSTRACT

The article presents the didactic experience carried out in the third, fourth and fifth classes BU of High School «G. Bianchi Dottula» of Bari during the last three school years (2016-2017; 2017-2018; 2018-2019). The path, based on the combination of the methods of the research-action and of the heuristic teaching, consisted in addressing philosophical and historical themes from transversal and interdisciplinary perspective and through a targeted BYOD approach. At a time when the discussion of digital citizenship education is extremely topical, and the use of smartphone (even at school) seems too problematic, the narrative of these good practices could contribute to the sharing of didactically effective experiences.

KEYWORDS

BYOD approach, philosophy and history, interdisciplinary, action-research, laboratory teaching

SOMMARIO

Questo articolo presenta l'esperienza didattica condotta nelle classi terza, quarta e quinta BU del Liceo «G. Bianchi Dottula» di Bari negli ultimi tre anni scolastici (2016-2017; 2017-2018; 2018-2019). Il percorso, basato sulla combinazione dei metodi della ricerca-azione e dell'insegnamento euristico, è consistito nella trattazione di tematiche filosofiche e storiche in un'ottica trasversale e interdisciplinare attraverso un mirato approccio BYOD. In un momento storico in cui la discussione sull'educazione alla cittadinanza digitale è di estrema attualità, e l'uso dello *smartphone* (anche a scuola) sembra troppo problematico, la narrazione di tali buone pratiche potrebbe contribuire alla condivisione di esperienze didatticamente efficaci.

PAROLE-CHIAVE

Approccio BYOD, filosofia e storia, interdisciplinarietà, ricerca-azione, didattica laboratoriale

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SPACE: High School «G. Bianchi Dottula» of Bari
USERS: 62 students (3rd, 4th and 5th classes BU *Human sciences*)
PROJECT DURATION: last three school years (2016-2017; 2017-2018; 2018-2019)
MATERIALS AND TECHNOLOGIES: laptops, tablets, smartphones, wireless network, printer, LIM, scanners, cloud environments, cross-platform *Nearpod*, software for LIM *Openboard*, *Padlet* application
PRODUCT MADE: Dossier of all works carried out on *Padlet* platform

1 The National Digital School Plan, the BYOD and the reduction of the social-divide

The PNSD proposes new actions to stimulate the Italian schools to a serious planning and to the organized construction of learning environments and didactic innovation; and again, to help schools to think in terms of sustainability, replicability and flexibility, in favour of connectivity and, not least, of BYOD (Bring Your Own Device).

Precisely the action #6 of the Plan transforms the «old» classes into environments for the integrated digital didactics, after the presence of an adequate connection and personal devices of the students (and not only of the school): «The Digital School, in collaboration with the families and local authorities, has to open up to the so-called BYOD, i.e. policies whereby the use of personal electronic devices during educational activities is possible and efficiently integrated».¹

Continuing with the actions expected by the PNSD, the MIUR introduced the *curriculum* of digital civic education. The digital agenda provides, in fact, accompanying interventions for the construction of the policy and a vertical *curriculum*, for the promotion of media education and information, as well as digital culture and creativity.

2 The didactic experience «BYOD Philosophy & History»

Exactly in this perspective, the didactic experience «BYOD Philosophy & History» has been planned for the students of third, fourth and fifth classes BU (Human sciences) of High school «G. Bianchi Dottula» of Bari. This (continuing) path of work has started a true and proper thinking and dialogue community on the most urgent themes of philosophical and historical research in an interdisciplinary and integrated view.

¹ See http://hubmiur.pubblica.istruzione.it/web/istruzione/piano_scuola_digitale; <http://www.agenda-digitale.it/>; <http://www.scuola-digitale.it/> (accessed 16 April 2019).

Therefore, the class groups have been introduced to a research and reflection process (supported by the heuristic-participatory method and aimed at the action-research procedure) on certain philosophical and historical joints, considered fundamental for the preparation of students, through the use and application of a targeted BYOD approach. This approach has proved to be effective taking into account the very different catchment area because of the very uneven family, social and cultural backgrounds of the students. Equally different are the incoming student profiles both in terms of knowledge and skills/competences; for this reason the heterogeneity of the student population has always been an educational and training challenge.

3 The setting workpoints

3.1 General aims and specific learning objectives

The didactic experience in the subject intended to achieve the following general aims:

- training students through a critical-problematic approach;
- thinking over the different forms of knowledge (in particular, the philosophical and the historical ones);
- exerting a critical control of multimedia technologies.

The specific learning objectives have been so modulated (see Table 1).

TABLE 1
Specific learning objectives

Knowledge/Topics	Skills	Competences
Introduction to philosophy Study dossier, deepening and recovery	How to use vocabulary and specific categories of discipline.	How to decode and understand the content of texts. To be able to exhibit clearly and logically coherently.
Philosophize for comparisons ASL & Multimedia	How to identify the links with the historical-cultural context and between disciplines.	How to identify the relationships between philosophy, history and other knowledge.
Teaching & «Social»	How to identify the key points, conducting insights, analysis and comparisons.	How to identify problems, propose a personal reflection and rework the topics critically.

3.2 Work phases, times and spaces

It's just the case to present some of the project activities implemented, over the last three years, via the BYOD approach in class with the students. It is therefore necessary to proceed with the specific explanation of the works done (see Table 2).

TABLE 2
Explanation of the works done

No.	Work	Description
1	Introduction to philosophy	<p>This activity was carried out, in a first approach to the study of philosophy, like a work of research and study of «playful» matrix, in order to arouse curiosity in the students. The students were divided into groups. Each group had to search by the smartphone material useful to answer the following questions: 1. What is philosophy?; 2. Research the names of four important philosophers and their death and birth dates; 3. Search three quotations of some important philosophers to comment on; 4. Search five key words of philosophy with their explanations.</p> <p>For each answer, a score of 20 points was assigned, to be transformed into a decimal valuation, according to this scan: 1. 0-2 points; 2. 0-2 points; 3. 0-6 points; 4. 0-10 points. The criteria used to assigning the score were: correctness of the knowledge; autonomous research; personal reprocessing; logical-reasoned exposure capability.</p> <p>During this activity, the teacher marked on the blackboard/LIM the key words emerged and around them he/she organized the explanation of the introduction to philosophy.</p>
2	Study dossier, deepening and recovery	<p>Three examples of work done by students in the class:</p> <ul style="list-style-type: none"> - The conception of time in philosophy; - From the Carolingian Empire to Frederick II; - Who is afraid of the Thousand year? <p>These are specific cases of study, of possible insights and of recovery of knowledge, as well as of the relative competences. It was therefore created for each issue a study and research dossier of documents on <i>Padlet</i> platform, explained by the teacher to stimulate students' self-study.</p>
3	Philosophize for comparisons	<p>This path of work has inaugurated the establishment of a real thinking and dialogue community on the most urgent themes of interdisciplinary research. Therefore, the working-team has started a reflection process (supported by the heuristic-participatory method and aimed at the documented reconstruction of the action-research procedure) on certain philosophical joints, considered fundamental for the preparation of state examination, via the BYOD approach.</p> <p>The disciplines involved were first of all philosophy and consequently Italian and foreign language and culture, art, history, humanities (psychology, pedagogy, sociology, anthropology). Topics examined: family, society, relationship between man and nature, West and East in comparison, relationship between man and God, unconscious, love. It was created a dossier of documents on <i>Padlet</i> platform.</p>
4	ASL & Multimedia	<p>Besides the activity of School-Work project (so-called ASL), introduced by the last School Reform, can foresee multimedia applications. A specific case is reported: in this school year, two classes carried out their activities in kindergarten and primary school to experience in person the role of the teacher. Contextually they followed a training meeting with an association operating to raise public awareness on firecrackers during Christmas time. In a following step, they presented their knowledge to the class of the kindergarten and primary school that hosted them, during the activity of ASL.</p> <p>For the realization of this material (in this case, posters, postcards and Facebook posts) they used their smartphones, tablets and PCs in the classroom.</p>

5	Teaching & «Social»	<p>Multimedia can obviously be used in the didactic field with the purpose of promoting awareness on the project's activities and disseminating results.</p> <p>This objective can achieve considerable effects thanks to the use of social media, which act as a «sounding board» to amplify the effects.</p> <p>Some students worked on the topic of immigration in the Mediterranean area and created a Facebook post with texts by the writer Erri De Luca, who had been previously invited to take a lecture in our school; while other students made two posters for awareness campaign. The students of another class attended, as speakers, the conference 2017 «Ethics is secular», held at the University of Bari, and created postcards to raise awareness on ethics of human and animal rights. This material was then printed and delivered to the public during the same conference.</p> <p>Moreover, materials of dissemination have been produced in relation to meetings with authors of essays and novels.</p>
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The work was carried out according to a precise organization, planned at the outset, under the constant supervision of the teacher, who gave a methodological guidance about the research of materials, their selection and re-elaboration (see Table 3).

Fundamental was the multimedia support, through the setting of the working platforms.

3.3 Teaching procedures, methods and tools

The teaching procedures used have been integrated into a well-structured setting; as a matter of fact it is not possible to implement a BYOD model in an approximate form. An interesting example to which we were inspired, was the mixed mobile classes: where the devices of the school have been integrated with the devices of the students, becoming environments for the integrated digital didactics. Thus, it seems decisive the concept of mindtool, because mindtools are knowledge construction tools that learners learn with, not from (Jonassen, 2010).

But what does it really take to be able to structure a precise BYOD-teaching setting at school?

The technical tools were varied by number and by type: laptops, tablets, smartphones, wireless network, printer, LIM, scanners, cloud environments, cross-platform *Nearpod*, software for LIM *Openboard*, *Padlet* application. Specifically, it is interesting to highlight the enormous potential of the latest applications listed: *Nearpod* is a web service, a free multi-platform that allows students to share contents and the preparation of interactive lessons; *Openboard* is a free multi-platform software for interactive multimedia whiteboards (LIM) compatible with any projector or pointing device; *Padlet* is literally «web paper» and «virtual wall», which is an app for PCs, tablets and smartphones that only needs a quick and easy recording to be used.

Futhermore, it was appropriate to prepare the students for responsible management of the devices in the class; also, to train students (and teachers) to change the educational approach.

TABLE 3
Research, selection and re-elaboration of materials

No.	Work	Class	Students	School year	Phases	Times	Spaces
1	Introduction to philosophy	3rd BU	24	2018-2019	<p>Presentation and brainstorming. Definition of the game teams. Starting the team game. Identification-selection-research of the most appropriate topics. Answer the questions. Socialization-comparison of results. Assigning score.</p>	4 hours	Classroom
2	Study dossier, deepening and recovery	3rd BU, 5th BU	62	2017-2018 2018-...	<p>Creation of a dossier of documents on <i>Padlet</i> platform. Explanation in class of the subject matter through <i>Padlet</i> platform. Students' self-study of documents. Socialization-check of results.</p>	18 hours	Classroom
3	Philosophize for comparisons	5th BU	16	2016-2017	<p>Organization of the work in groups. Choice of the final products (PPT, essays, etc.). Identification of the disciplines involved. Research of the material useful to the creation of the final products. Selection of the material researched. Multimedia development of the programmed end-products. Creation of a dossier of works on <i>Padlet</i> platform.</p>	15 hours	Classroom
4	ASL & Multimedia	3rd BU, 4th BU	38	2018-2019	<p>Training meeting <i>Firecrackers</i> No. Organization of work in groups. Choice of the final products (poster, postcards, etc.). Creation of a dossier of material for awareness campaign. Socialization-comparison of results.</p>	10 hours	Classroom
5	Teaching & «Social»	3rd BU, 4th BU, 5th BU	62	2016-2017 2017-2018 2018-...	<p>Participation in study seminars, conferences, etc. Deepening of the relative issues. Organization of individual and/or group works. Elaboration of «social» multimedia material for dissemination (poster, Facebook post, postcards).</p>	15 hours	Classroom

The students were involved in various workshops that saw them as definitely protagonists of the school world. In this context, didactic methodologies related to cooperative learning and learning by doing were adopted, through an experiential learning process in a media education perspective characterized by a dynamic and creative approach (Buckingham, 2006).

3.4 *Experience results*

The experience has undoubtedly shown that it's possible (if not necessary) to implement new ways of inter-active and cross-learning between subjects and knowledge.

New technologies foster teaching strategies based on the constructivistic approach, therefore the teacher's lesson is not passively listened to, but the students must collaborate actively with teachers and pairs, using the several tools to allow the reduction of the social divide (Jonassen et al., 2012).

In this didactic model, the role of the teacher is profoundly modified. Teacher is not only the main source of information but is more and more a «facilitator», an organizer of the work of others. Using their device, students are even more protagonists of their own educational process. It can be a flywheel for independent learning, once provided the proper know-how.

Finally, the students realized the following conclusive products (see Table 4).

TABLE 4
Conclusive products

No.	Work	Link
1	Introduction to philosophy	https://padlet.com/didattica_demarco/fx6grwdbv060
2	Study dossier, deepening and recovery – The conception of time in philosophy – From the Carolingian Empire to Frederick II – Who is afraid of the Thousand year?	https://padlet.com/lia_demarco72/ivpffqoz68xj https://padlet.com/lia_demarco72/a9evm7xbv92r https://padlet.com/lia_demarco72/3q8phf0go8ti
3	Philosophize for comparisons	https://padlet.com/lia_demarco72/xqt81sbsj1y6
4	ASL & Multimedia	https://it.padlet.com/didattica_demarco/srcckua9ucxj
5	Teaching & «Social»	https://it.padlet.com/didattica_demarco/876o6t0dolpl

3.5 *Challenges faced in the course of experience*

Multimedia is the methodological tool of innovative didactics. This work is very useful, it's a heuristic challenge. Working at school on the cultural contents conveyed by telematic networks and/or multimedia systems means to understand which didactic tools aim at changing learning and knowledge, in the direction of the «hyperschool». It's a process of radical transformation, character-

ized by the spirit of interaction in the «virtual didactic laboratory», a place of re-problematization of knowledge, including the «humanistic» one. This means overcoming traditional disciplinary fields and organizing teaching-learning according to relationships between aggregated knowledge for cross-cutting topics, such as integrated multi- and inter-disciplinary approach for the resolution of complex problems. This is the challenge we have been accepting.

So we experienced the «taste of discovery», also because the Internet allows to analyse spoken, written, verbal language, that directly stimulate the user.

Technologies aren't so far from the human being. The advent of the media civilization, and primarily the availability of technology of reproduction, storage, treatment, transmission of sound and images, has provided a basis of legitimacy and a space of cultural elaboration (Vincent & Haddon, 2017).

According to these considerations, it's structurally useful to highlight in an equal way the strengths and the critical points that have manifested themselves in the different work steps (see Table 5).

TABLE 5
Strengths and critical points

No.	Work	Strengths	Critical points
1	Introduction to philosophy	Most students immediately showed interest and curiosity about the BYOD research approach.	No student has made any doubts about the BYOD research approach.
		The organization of the work in small groups was corresponding to the relational dynamics of the class.	It could be probably interesting to check the results of the work of groups between students not friends.
2	Study dossier, deepening and recovery	The organization of the work in small groups corresponded to the relational dynamics of the class.	It could be probably interesting to check the results of the work of groups between students not friends.
		The Padlet platform is intuitive and easy to use.	Sometimes the problem of switching files from one device to another caused the transformation or the loss of data and files.
3	Philosophize for comparisons	The students' choice of the final products to be produced was spontaneous.	It should be verified what could happen if the final products being assigned by teacher.
		The research of the material useful to the realization of the final products was done in a fairly autonomous way.	There was no problem.
		The selection of the material sought has been constructively valid.	There was no problem.
4	ASL & Multimedia	The students were able to share the work in a responsible manner.	There was no problem.
		The multimedia development of the planned end products has been well realized.	Sometimes the problem of switching files from one device to another caused the transformation or the loss of data and files.

5	Teaching & «Social»	Creating a dossier of works on <i>Padlet</i> platform was smooth.	There was no problem.
		The multimedia development of the planned works has been well realized.	Sometimes the problem of switching files from one device to another caused the transformation or the loss of data and files.

3.6 Process documentation methodology

The learning/teaching process, developed by the BYOD approach, has been documented in a regular way through the methodological tool of the «log on board». The actions carried out were reported on it as: the topics, the instruments used, the daily results achieved and any critical issues encountered, in order to re-construct the various project steps. In support of this, we have compiled simple observation grids, but still complete of the necessary indicators, to verify the relational climate of the working group, the degree of cooperative learning, scaffolding and problem solving achieved (Table 6.1), the digital competences (Table 6.2) and the methodological research/study (Table 6.3).

TABLE 6.1

Grid of observation of relational skills

A Advanced – B Intermediate – C Basic level – D Initial level				
Student name	He/she is able to collaborate with the peers of the working group.	He/she is able to collaborate with the teachers.	He/she is able to cope with problems and find suitable solutions.	He/she is able to support/help the peers in distress.
1				
...				

TABLE 6.2

Digital Skills Observation Grid

A Advanced – B Intermediate – C Basic level – D Initial level			
Student name	He/she uses communication technologies with awareness to research and analyse data and information.	He/she distinguishes reliable information from those that need deepening, checking and verification.	He/she interacts with different subjects in the world.
1			
...			

TABLE 6.3
Observation grid of methodological research/study skills

A Advanced – B Intermediate – C Basic level – D Initial level				
Student name	He/she includes the assigned task and identifies the goals to be achieved.	He/she knows how to manage time and school commitments.	He/she directs his/her re-elaborative choices in a conscious way, taking into account potentialities and limits.	He/she engages in new learnings also independently.
1				
...				

3.7 *Evaluation levels and tools*

The evaluation of the process took place on different levels. First of all, the degree of satisfaction of the students, their well-being tested in the workplace, the capacity for collaboration and integration has been taken into great consideration, in order to promote inclusive didactics (Haddon & Vincent, 2015). Evaluation tools were, in the different phases, the brainstorming activities, the short shared debriefing at the end of each meeting, the written and/or multimedia production of the students, the grids for observing the relational competences, digital and methodological research/study.

The instruments of systematic observations have referred to specific aspects which have characterised the performance (indicators of competence) such as: autonomy, relationship, participation, accountability, flexibility, awareness.

Finally, the assessment of competences cannot be separated from the self-assessment process of the students, through which they learn to know themselves, their limits and abilities, in a sort of cognitive biography.

This overall assessment of competences (Table 6.4) has necessarily turned into a vote (expressed in tenths), which has contributed to the elaboration of the year-end school average.

TABLE 6.4
Overall Skills Assessment Form

A Advanced – B Intermediate – C Basic level – D Initial level				
Student name	He/she has mastered the Italian language to understand and express his/her ideas, to adopt an appropriate linguistic register.	He/she uses communication technologies with the awareness to search/analyse information, to select trusted ones.	He/she possesses a basic knowledge and is at the same time able to engage in new learnings.	He/she directs his/her choices in a conscious way. He/she undertakes to complete the work started alone or with others.
1				
...				

3.8 *Transferability of the experience*

The evaluation showed positive results, as the students felt free to use their technological skills even at school, in their classroom, without necessarily having to move to the laboratory. The smartphones, the technology and multimedia tools have therefore become remarkable instruments for the implementation of human sensitivity and intelligibility. Useful tools for the immediate search of the sources, for their consequent selection and evaluation, as well as personal reprocessing, which also provide a strong graphic impact aimed at enhancing the work done, guaranteeing an added value to the final product. It proved to be a great experience, already replicated in the following years and enlarged to other classes.

4 **Beyond the frontal lesson**

The media are not only vehicles, but environments of knowledge, of knowing how to be, of being, of feeling; therefore agents of a cultural, social and existential sensibility (Mascheroni & Olafsson, 2018).

New technologies do not make students lazy at all but are able to engage them in a situational learning process. It's important that media are part of the students' world, they represent their basic knowledge. How couldn't school know what technology offers to the development of the knowledge today? And how could the school of today not be part of this new innovation society?

Multimedia didactics can allow school to accept this change and to activate through it a forward-looking prospect of stimulus and protection of students' intelligence.

The new technologies are in perfect harmony with the multiple intelligences²: they allow, in fact, to manage the study material according to different points of view. In this dimension multitasking and multilevel, multimedia didactics come into play. Thus it becomes possible to understand and direct the students' intelligences and to personalize in a specific way the path of study of the researched documents. The same Gardner introduces the use of multimedia as an instrument capable of differentiating the teaching, for the identification of the *curriculum*, of the materials, of the subjects for the students, and for the ability to study and master the material in different ways (Gardner, 2016).

² The standard definition of intelligence defines essentially two intelligences: the linguistic one and the logical one. But there are at least six other intelligences, as Gardner says following his extensive research, including the musical, the spatial, the kinesthetic, personal, interpersonal and recently also naturalistic. All of us are endowed with these different intelligences so that there are no people who have exactly the same combination of intelligences. Someone is stronger in linguistic intelligence, someone in that space. The way in which we combine intelligences or do not combine them is also different between people. See Gardner, H. (2005). *Education and development of the mind. Multiple intelligences and learning*. Trento: Erickson.

So the new digital technologies are very effective tools to enhance any shortcomings related to one of the eight multiple intelligences. In this sense, they can guarantee, in fact, a personalized education (Gardner, 2007), which in the current perspective of post-truth seems to be an unavoidable need.

The web in general, as well as social media, can give rise to a manipulation of information (like fake news), that students are sometimes unable to grasp in an adequate manner, so it is appropriate to provide them with apposite tools to be able to select, evaluate, weigh and discern the cultural (and not) information they find.

It is a «immanentization of the truth»³ which must be fair to itself and must never be reduced to be other by itself, therefore able to pose at the centre of the training process the student, considered in his/her biopsychological, socio-cultural and ethical aspects.

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³ The philosopher Eric Voegelin on several occasions supported the idea of «immanentization of the truth», that is a truth descended from its transcendent plan and made itself worldly. See Voegelin, E. (1987). *The new science of politics: an introduction*. Chicago: University of Chicago Press.

Sitography

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