

The First Steps of Distance Learning in Italy: From Radio to Television and E-Learning

Delio DE MARTINO

Università di Foggia, Italy

delio.demartino@unifg.it

ORCID ID: 0000-0003-3107-1816

Ezio DEL GOTTARDO

Università di Foggia, Italy

ezio.delgottardo@unifg.it

ORCID ID: 0000-0002-5214-7755

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ABSTRACT

In the history of distance learning in Italy a crucial time is represented by the pre-history. After the mail-based learning an excursus relative to the second phase of distance learning in Italy corresponds to the development of radio and television and their pedagogical use to defeat the invasive illiteracy.

Radio rurale, the first experiment of distance learning promoted by fascism (1920), *Non è mai troppo tardi* (1960), the first Tv program for adult learning and the birth of Raitre (1979), the first mainstream cultural channel with the *Dipartimento Scuola Educazione*, are a milestone that prepares the ground for the birth of the actual e-learning. Afterwards, the transition from Tv-based distance learning to e-learning is embodied by consortium Uninettuno (1990), the first televisual and telematic University in Europe.

Even nowadays the radio and tv distance learning experience with its cultural heritage represents a model for the modern e-learning and could be a key for its future evolution.

FROM RADIO TO TELEVISION AND E-LEARNING

Italy has been the first Country in 2020, namely the second after China, that was compelled to adopt distance learning (Dad) as an emergency measure due to the pandemic coronavirus, thus being the first to drastically subvert its teaching models. Moreover, this kind of forced distance learning took place in educational contexts such as schools and Universities where the cultural tradition of lecturing was, and still is, very strong. In this unique phase of e-learning in Italy and in the entire world, when the health emergency has urged to the widest e-learning experiment ever made, it can be useful looking at the past in order to retrace the first steps of Fad (distance learning) history in the Bel Paese. This history sees technological improvements joining new pedagogical models and the cultural and social politics in a nation that gave birth to many of the most ancient Academic Institutions in Europe. The first step of distance learning was learning by mail. This is a type of education where learning objects were sent by mail to the learner, that then had to prove to have understood the lesson by passing a test sent by mail. Thus, the learner passed the valuation test and got the attestation, as certification of minimum quality. This was a unidirectional modality of transmission of knowledge from teacher to learner, different from that one from many-to-many in the pedagogical communicational models of actual third generation of distance learning, i. e. of e-learning mediated by computer and ICT.

The postal distance learning was diffused since the '800 and continued until all the entire '900 and exists nowadays as educational modality.

Due to the material corruptibility, there are not many evidences of these trainings.

There is that one on stenography by mail of Isaac Pitman of the of early '800, followed by the first languages course by mail of Charles Toussaint and Gustav Langenscheid in Germany and the advanced course by mail of Illinois Wesleyan University (Bontempelli, n. d., p. 2).

THE SECOND STEP OF DISTANCE LEARNING

Between the end of '800 and early '900 the new technological progresses revolutionized the educational setting and opened new opportunities for distance learning through the invention of telephone, radio and television (Galliani, 2015).

In particular these two last media, an absolute novelty at that time, enabled new ways of distance learning in Italy too, in accordance with the one-to-many model reaching lots of localities left behind by formal education because

of their remoteness from the big centres. This way they opened the second step of distance learning, based on audio and audio-visual technologies, before the digital revolution of the last century.

In the radiophonic sector we could cite among the first international cases the integrative lessons, that began in early '900, and the lessons for farmers of Radio Canada as well as the telephonic courses for disables of University of Iowa.

From the Anglo-American area and the North of Europe this educational way gradually spread in the rest of Europe and in some cases in a much later time. An example is Radio ECCA, the first Spanish educational radio for adults, that started its broadcasting in 1965 (González Pérez, 2013).

RADIO RURALE

In Italy, the Uri (Unione Radiofonica Italiana), the first radiophonic company, began broadcasting on the 26th of October 1926 with a high pedagogical vocation. The radio was considered a medium for the cultural and moral listeners' elevation. Fascism early understood the big potential of this medium for obtaining social control.

In the educational sector, the most important project was the Ente Nazionale Radio Rurale. This organism was founded in 1933 by the Communication Ministry with the partnership of Ministry of National Education and Agriculture (Ortoleva & Scaramucci, 2003, p. 279, s.v. "Ente Radio Rurale", p. 279; Cannistraro, 1972). It was aimed radio for teaching purposes in particular for the population living in the most faraway places of Italy where the new medium was hardly spreading due to technological and economic problems. It was a fascist organism handled by Achille Starace and headed by Enrico Marchesi that, as the time passed, became more and more a politic tool. The audience was represented by the most vulnerable members of society: children and adult population of rural areas in Italy (Figure 1). Pedagogy was involved by the ruralisation policy of fascism (Monteleone, 2005, p. 60; Biondi, 2007, pp. 41-42).

The law that, on 15th June 1933 established the Ente Radio Rurale, claimed the interweaving between pedagogy and politics as first aim of the new institution: "educare la nuova generazione fin dalla più tenera infanzia secondo i dettami della dottrina fascista, completare e illustrare le lezioni impartite dall'insegnante e far partecipare i fanciulli, anche quelli dei più remoti villaggi, alla vita della Nazione".

The broadcasting started on 10th March 1934 with the program *Il duce e i bimbi*, where all the myths of the "fascist pedagogy" were allegorically illustrated (Ortoleva & Scaramucci, 2003).

The institution also funded the schools so that they could buy a specific cheap radiophonic device. In addition to the radio there were support materials for students such as vinyl records for sing learning. Radio Rurale operated till 1940 (Scalfaro, 2008).



Figure 1. Image from Radiorurale.it

TELESCUOLA

Later, high profile pedagogical programs comparable to those of Ente Radio Rurale were developed with the birth a new medium that would dominate the mediatic panorama until late century: the television. The television allowed for the first time a higher involvement thanks to moving images and the chance to show at distance the teaching staff (a fundamental element as testified by the embodiment theories) but also boards, schemes and images, creating a first type of multimedia teaching ante litteram.

Italian broadcasting of Rai (Radiotelevisione italiana) began in Italy on the 3rd of January 1954. The television too, as the Radio before, was born with an explicit pedagogical vocation and was perceived by the State the Italian citizen's moral and cultural elevation. So, no wonder that in 1958, only 4 years after the regular Tv broadcast started, the most ambitious pedagogical tv program took place: Telescuola.

The name of the program of the new-born Italian Radiotelevisione claimed the intention of realizing a distance schooling project using the tv medium. *Telescuola* began on the 25th of November 1968, two years before *Non è mai troppo tardi* (cfr. below) and lasted 8 years. The transmission covers the entire “scuola media professionale” (Mid school and vocational school) time and was designed for peripheric areas without educational institutions such as villages, far from big centres, and little islands. It was an audio-visual evolution of Radio Rurale that, besides having the innovative characteristic of moving pictures was also not controlled by fascist party; on the contrary, it was the result of a democratic vision on education as a source of development for the country. *Telescuola* represents an Italian model of distance learning because it was the first tele-didactic course that allowed to get a Mid- school certification (diploma di scuola media). The students who attended *Telescuola* in isolation and were able to get the desired certification were more than 5000, despite the difficulties of individual learning and audience, a remarkable result to which the support of scholastic manuals published by the Rai and written by the video-teacher as well the correction of the homework contributed. Moreover, we must add other 12000 students spread over the entire peninsula who had followed the lessons grouped in PAT (Punti di ascolto di Telescuola) and were able to get the degree.

Telescuola was preceded by a tv inquiry titled *Un domani per i nostri figli* from which emerged the lack of schools in little mountain villages and in cities with less of 3000 residents, which constituted a reason for many students’ dropouts. They organized all over the Italy 1646 PAT, each one with a coordinator, equivalent to the actual tutor in telematic universities. At the end of the course it was possible to get the degree, a sort of certification of the new learning method, in this case also a type of quality assessment.

Although, to avoid confusion, the sophisticated technical tools of television were not adopted, the simple fact of learning by the tv screen made automatically spectacular the tele-lessons at the time.

The concern of mitigating the novelty of distance learning and the difference from traditional school, suggested to assimilate as much as possible the new lessons to those of normal school. From 1961 to 1963 the courses of the new Scuola Media Unificata took place from 8.30 am to 2.45 pm, a very similar time to that one of a traditional course and with the help of a textbook meant for target classes but at the same time useful for educating teachers in a lifelong learning modern perspective.

Moreover, it is in this period that the prejudice regarding distance education as makeshift solution for those who can’t take a normal course is rooted, a stigma that lasted until the end of the past century. An evidence can be found in a video published by the archive Teche Rai titled *Telescuola anno quinto, un’inchiesta di Ugo Zatterin* (9-10-1963), where it is presented the program *Telescuola*. In the audiovisual pictures of places far from big centres (as Castelluccio superiore in the Basilicata region) that attended *Telescuola* are introduced and commented while the voice-over presents the distance learning as a solution that not a single student of a big city would take into consideration (<http://www.teche.rai.it/2015/03/telescuola-anno-quinto/>):

A Roma, a Milano, nelle grandi città, nei centri dove chiunque lo desidera può mandare a scuola senza grandi disagi i propri figli, nessuno penserebbe di seguire assiduamente quei corsi televisivi, di cui forse ha scoperto l’esistenza girando fuori orario la manopola del televisore, ma in quest’isoletta bella e primitiva solo frequentando *Telescuola* i ragazzi possono andare avanti negli studi e seguire i corsi della più moderna, più attrezzata, dotata e curata scuola media italiana.

By the middle of ‘900 distance learning became a new tool and was useful in some particular cases but was not considered at the same level of traditional education.

Also, in the academic field the distance learning was an educational way that presented more difficulties. For instance, Maria Grazia Puglisi (1967) noted that both young and adult students that had been away from school had issues learning with a new and medium such as television. That is why they decided to make the lessons as much as possible like the traditional ones instead of focusing on the specific characteristics of the new medium. The tele-teacher of *Telescuola* used very little new specific television features to avoid confusion.

NON È MAI TROPPO TARDI (IT IS NEVER TOO LATE)

In 1960, two years after the birth of *Telescuola*, the most reputed distance learning broadcasted program in Italian history was launched: that one most immovable in collective imagination as the icon of adult distance learning “Non è mai troppo tardi” (Grasso 2000²; Grasso 2008³ sub voce “Non è mai troppo tardi”; Farné, 2008, 2011, 2012; Rossi, 2007).

The program was transmitted with some interruptions and recoveries until 1968 and allowed to many Italians to learn to read and write and to get the “licenza elementare” (primary school degree). The protagonist was the famous master Alberto Manzi (Figure 2), pupil of the pedagogist Luigi Volpicelli, that in every chapter lectured for student

that were distant and half-literate using some learning instrument very innovative at that time as the overhead projector (Garavaglia & Rivoltella, p. 262).

The program, edited by Oreste Gasperini, Alberto Manzi and Carlo Piantoni and directed by Gigliola Rosmino, represents a very early example of distance learning of second generation, halfway between the mailing and the actual e-learning.

For the first time in fact the tv medium made it possible to teach through moving pictures targeting the so called “third age” and “at distance”.

It was not – it is true – possible to watch the lessons in asynchronous mode, on demand as feasible nowadays but that’s why they were transmitted in early evening time, the time when people would come home from work. But, despite this limit, for that time it was a real revolution, through which the new medium was able to eradicate ignorance and illiteracy at the time still widespread in age groups until then neglected in the normal educational process. Even the strategy of *Non è mai troppo tardi*, as for the cases already mentioned, perfectly matched the paleo-television conception of the early noble television that aimed to the audience education, to cultural and moral elevation, that paid state fee in return of the service they received.

Alberto Manzi died in 1997, but his legacy has never been forgotten. Even after the end of *Non è mai troppo tardi* in 1968, his legacy has been not completely lost. In 1991 an almost parodic program was created on Raitre conducted by Gianni Ippoliti, in which the conductor interrogated a class of Italians of the 90s to verify their literacy level. From the wrong and absurd answers that were given he would start with checking the correct meaning and correct writing.

Subsequently, in 2004, Rai produced the *Non è m@i troppo tardi* Tv series, a program for the digital literacy for disadvantaged classes transmitted through the Rai-educational channel.

Alberto Manzi's proactive experiment in distance learning has also affected the history of cinema because in 2014 a television film was produced by Rai. Its name was just *Non è mai troppo tardi*, directed by Giacomo Campiotti, and retraced his life, an exemplary life, worth of a biographical film, of a biopic as it is called: graduated in Biology and Pedagogy, fighter in the I world war, teacher at the beginning in a juvenile prison, teacher in the Andes and author of the famous novel *Orzowey* (1955), that was adapted to television series directed by the Frenchman Yves Allégret in 1976. Manzi ended his career with *Insieme* (1990), another program in which he taught Italian to non-EU citizens, an early example of Italian for foreigners, and with a radio broadcast (1996) for Italians living abroad. A whole life dedicated to the 'distant people'.

Manzi's example shows that TV - with its cultural programs and its biopics - can, if well employed, become a 'good teacher'.



Figure 2. Alberto Manzi in *Non è mai troppo tardi* (from Wikipedia Commons)

FROM DSE TO PRESENT TIMES: THE DISTANCE LEARNING RAI CHANNELS

In the television field, a turning point was the birth of the third Italian public tv channel, Raitre, on the 15th of December 1979, also commonly called “terza rete”. Raitre was the television version of the radio channel Terzo

programma and had been conceived as the channel specifically dedicated to culture and therefore more closely linked to pedagogy and the didactic use of the television medium.

So, it is not surprising that the same law n. 103 of 1975, which introduced the creation of Raitre, established the birth of the Dipartimento Scuola Educazione (DSE) which operated from 1975 until 1994, that then evolved into Rai Educational. The Dipartimento Scuola Educazione was the specific department of Rai dedicated to cultural divulgation and was meant in particular for scholar programs for adults to be included in the television schedule of radio and tv channels.

Four point constitute the editorial policy:

- 1) Cultural and scientific divulgation opened to all audience.
- 2) Teachers' Updating with presentation of didactic and pedagogic issues.
- 3) Information regarding the working world and guidance on occupation prospective.
- 4) Professional updating for specific categories.

Among the programs of the Department we can recall: *Lezioni di Astrofisica*, *Un mondo da scoprire*, *Invito a teatro*, *Sport: le regole del gioco*, *Crescere* (medicine for adolescence), *Ambiente vivo*, *Telestoria*, *Il circolo delle 12*, *Campus: filosofia e attualità*, *Passaporto per l'Europa*, *Scuola aperta*, *Caramella* (for children).

Another workhorse of the DSE was the language course (English, French, German, Spanish), together with the *Enciclopedia multimediale delle scienze filosofiche*. That one was “una raccolta di circa 1500 registrazioni televisive di interviste didattiche a filosofi, storici, psicologi, sociologi, antropologi, scienziati curate dalla RAI e riportate integralmente o ascoltabili nella modalità multimediale” (<http://www.federica.unina.it/livinglibrary/lettere-e-filosofia/24/>), (a record of about 1500 television records of educational interviews with philosophers, historians, psychologists, sociologists, anthropologists, scientists developed by RAI and integrally proposed and audible in multimedia channel).

Just these software were a milestone in the direction of third generation distance learning, i. e. e-learning and testify the continuity between the television and web-based distance learning.

DSE changed its name into Videosapere from 1995 to 1997 and later into Rai educational from 1997 to 2014 and finally into Rai Cultura.

The same law of 1975, as mentioned before, marked the birth of Raitre, the “terza rete” (De Martino, 2009). This was the most didactic channel, a sort of third page of television dedicated to high culture and the audience training. Just on Raitre they were transmitted lots of DSE programs as testify the schedule of that time.

The first day of operations of the new-born Rai channel was, not surprisingly, defined “the first day of school” by the broadcaster, Fabiana Udenio, a very young girl with whom the entire student population of that time could easily identify itself. The third channel was born with the explicit aim of transferring on tv screen the high culture, that one with C capital letter, first the scholastic and academic one.

At this extent regional planning institutions were enhanced very much and became the ranking of scholastic and academic community of the different regions which, until that time, had no space in national office structure of Rai. In Raitre instead, twice a week regional programs produced by different structured situated in capitals of regions were regularly broadcasted.

During the first period of Giuseppe Rossini's direction, the regional programs became a real cultural cross section of different regions. In 1987, after the first surveys of Auditel, it turned out that Raitre did not attract a high number of people and the federal-regional structure was partially weakened. Regional news and some sections lasted but were cancelled regional programs that gave voice to local realities.

Anyways, among the tv three main Rai channels Raitre remains till now the most cultural and pedagogic one. With the multiplication of the tv offers, other channels with pedagogic vocation were subsequently added.

It should be noted that Rai Educational, the Rai group linked to didactic and pedagogical programs first broadcasted by satellite and then arrived on terrestrial digital and on internet.

In 1997 they started Raiset3 Educational, the educational channel on the satellite Tv. Then in 1999 they added RaiEdu Cultura, dedicated to books and Rai Edi Lab on the work world. Raieducational realized programs for the other two Rai Channels.

UNINETTUNO

In the last decades of new millennium Tv technology has been used for distance learning in academic field too. In fact, before the technological development of internet allowed to download video lessons, Tv has been the principal tool to convey professors' lessons in the Universities at a distance.

Uninettuno (NETwork per l'UNiversità Ovunque), born in 1992, is the first televisual and telematic University in Europe and uses the satellite-web for streaming of the video-lessons and the blended way because includes Tv lessons, online practice, support by telephone, fax, email, but also meetings and practice in presence of teachers and tutors.

Between the founding members there are Rai itself, and the telephone company Telecom Italia and between the ordinary members there are some universities of southern Italy, in particular Puglia (Politecnico di Bari and Università di Lecce).

Uninettuno collects the legacy of public television as educational medium in pan-Mediterranean context and merges it with the new digital technologies.

The University Uninettuno embodies the transition between distance learning of second generation to that one of third generation because it is based on "modello di insegnamento e apprendimento per televisione e internet" (Garito, 2012, p. 5) (teaching and learning model for television and internet) and was created starting by the European project Med Net U (Mediterranean Network of University) coordinated by Nettuno Consortium composed of 43 Italian and foreigner Universities and with Maria Amata Garito as founder (Garito, 2012, p. 4). In 1992 web internet has not yet achieved the sufficient speed to transmit a classic video-lesson and the Tv technology was crucial for the success of this initiative.

In addition to the use of internet it is reported the use of the tv channel from 1997 to 1999 that transmitted academic lessons in different languages such as Arab, English, French, and Italian of a lots of university teachers.

The tv channel changed its name several times -for a short time he had been renamed Rai Sat Nettuno Lezioni Universitarie – and today his name is UniNettuno University Tv and it's transmitted not only by satellite but in steaming on the web.

On the internet website of the WebTV Uninettuno.tv it is expressed the mission of this academic television and more in general of the Uninettuno University:

La televisione può diventare uno strumento utile per sviluppare conoscenza e competenze. Con la televisione satellitare prima e con la web tv di UNINETTUNO Università Telematica Internazionale UNINETTUNO ora, perseguiamo la mission di UNINETTUNO: democratizzare l'accesso al sapere.

In the ambit of Uninettuno diverse partnerships with governments of the Mediterranean area were agreed, that have brought to the development of initiatives for developing countries that remind to the Italian experiences of distance learning as *Non è mai troppo tardi*. An example is the course *Imparo l'arabo, il Tesoro delle Lettere*, a tv videocourse aimed to the learning of reading and writing arab language financed by the foreign Ministry and by the sub-secretary for the fight of illiteracy of the Reign of Morocco.

In the new millennium Uninettuno changed into a telematic university. International telematic university Uninettuno was born in April 2005 as a result of the decree of the 17th of April 2003 of the Ministro dell'Istruzione, dell'Università e della Ricerca Letizia Moratti, that institutionalized telematic universities and was initially based on tv lessons.

Between the universities that used the satellite technology – typical of the tv – for the synchronous communication and the broadcasts of conferences and lessons in Italy should be mentioned the Università del Salento for its Campus Satellitare del Salento, opened in 2006.

FOR.COM

In the academic field in early new millennium it is remarkable the use of tv technology for For.Com.

For.Com (Form.com.it) is a consortium instituted in 1997 by the Università di Roma La Sapienza and by the Bournemouth Polytechnik (UK) to which other foreign universities joined (Liverpool, Malta, Tirana) and above all from Italy: Cassino, Macerata, Salerno, Sassari, Torino, Molise, Udine, Foggia, Bari, Camerino.

As we could read on the website the network began using tools of distance learning of second generation such television and multimedial CD-roms (<https://www.forcom.it/it/chi-siamo>):

I programmi formativi del FOR.COM. si rivolgono in particolare agli studenti che, per i loro impegni e per la loro situazione (studenti lavoratori, diversamente abili, etc.), hanno difficoltà a seguire le attività formative in presenza presso strutture tradizionali. L'offerta didattica del FOR.COM., articolata in attività di e-learning, in modalità basate soprattutto attraverso rete Internet (Web Based), TV interattiva, Cd multimediali, riguarda programmi di formazione continua e di aggiornamento professionale nei segmenti post-diploma e post-lauream.

CONCLUSIONS: TOWARD THE NEW MILLENNIUM FROM TELEVISION TO THE THIRD GENERATION DISTANCE LEARNING

With the technological development starting at the first decade of new millennium the tv technology and satellite gave way to new models of distance learning based on the streaming via internet.

With the increase of the connection speed, the web was considered the best technology to convey the didactic objects in asynchronous use according to a model more learner centred and letting the learner decide when to study, when to watch the lessons and allowing pause and re-watch the audiovideo stream. A milestone in the Distance learning story is the developing of semantic web at the end of the millennium. This allowed a new personalization of web-based learning and a more flexible and interoperable use of web resources and learning objects to enhance e-learning and e-learners goals (Ouf et al., 2017).

Despite the coming of the third phase of distance learning and the development of online platforms and the trend to the digital convergence, the television remains a teacher, sometimes good other times bad, whose model is fundamental not only for the realization of class videoleasons of actual telematic universities and of e-learning but more in general for every form of learning trough an audio visual streaming.

After the radio, the television remains, for the better or the worse, the mother of every educational pattern trough moving picture and the knowledge of his history (in Italy about over 70 years) and of its long tradition could offer a significant contribute nowadays too in the digital time for the design, experimentation and evolution of the pedagogical models.

Moreover, rediscovering the first phase of Fad history in Italy as historical and didactical heritage during the pandemic coronavirus can be useful to support the acceptance of Dad models by the side of those teachers less open to innovation and that consider Dad a novelty too far away from the pedagogical tradition.

REFERENCES

- Biondi, G. (2007). *La scuola dopo le nuove tecnologie*. Milano, IT: Apogeo.
- Bontempelli, S. (n. d.) *Dall'istruzione per corrispondenza all'e-learning. Le tre generazioni della formazione a distanza*, Università di Bergamo, [On-line]. Available: <https://dinamico2.unibg.it/lazzari/0506idu/distanza.pdf>
- Cannistraro, P.V. (1972). The Radio in Fascist Italy. *Journal of European Studies*, 2, 127-154.
- De Martino, D. (2009). *Per una storia di Raitre*. Bari, IT: Levante.
- Farné, R. (2003). *Buona maestra Tv. La Rai e l'educazione da Non è mai troppo tardi a Quark*. Milano, IT: Carocci.
- Farné, R. (2008). La mostra: "Non è mai troppo tardi. Alberto Manzi". *Ricerche di Pedagogia e Didattica. Journal of Theories and Research in Education*, 3(1).
- Farné, R. (2011). *Alberto Manzi: l'avventura di un maestro*. Bologna, IT: Bononia University Press.
- Farné, R. (2012). Alberto Manzi. *Il Mulino. Rivista bimestrale di cultura e di politica*, July-August 4, 721-727.
- Galliani, L. (2002). Open Distance Learning e qualità dell'istruzione universitaria. In L. Galliani (Ed.), *L'Università aperta e virtuale*. Lecce, IT: Pensa Multimedia, 58-59.
- Galliani, L. (2015). Da Edison a Berlinguer. Cinema, Radio, Televisione, Computer, Internet: la traiettoria parabolica educativa del Novecento, "secolo dei media" e "secolo della scuola". *Formazione & Insegnamento*, XIII(3), 97-118.
- Garavaglia, A. & Rivoltella P. C. (2017). Insegnare e apprendere con le tecnologie. In P. C. Rivoltella & P. G. Rossi (Eds.), *L'agire didattico. Manuale per l'insegnante* (pp. 259-271). Brescia, IT: Editrice Morcelliana.

- Garito, M. A. (2012). L'Università Telematica Internazionale UNINETTUNO. Un modo di cooperative & Work integrated Education (CWIE) tramite le Nuove Tecnologie. *Wace's 9th Symposium on cooperative & work- integrated Education, Atalanta, 14-16 Novembre 2012*.
- González Pérez, T. (2013). La radio educativa: un'altra forma dell'apprendere. *Formazione & insegnamento*, *XI*(1), 289-303.
- Grasso, G. (2000²). *Storia della televisione italiana. I 50 anni della televisione*. Milano, IT: Garzanti,
- Grasso, A. (2008³). *Enciclopedia della Televisione*. Milano, IT: Garzanti.
- Monteleone, F. (2005). *Storia della radio e della televisione. Costume, società, politica*. Venezia, IT: Marsilio (1995¹).
- Ortoleva, P. (2003). Scaramucci, B. (a cura di), *Enciclopedia della radio*. Milano, IT: Garzanti.
- Ouf, S., Ellatif, M. A., Salama, S. E., & Helmy, Y. (2017). A proposed paradigm for smart learning environment based on semantic web. *Computers in Human Behavior*, *72*, 796-818.
- Puglisi, M. G. (1967). Telescuola. *International Review of Education*, March, *13*(1), 70-74.
- Rossi, L. (2007-2008). *Televisione e scuola: l'impegno della Rai nel processo di alfabetizzazione degli italiani (1954-1968)* [On-line]. [Graduate thesis, Università degli studi di Milano, Facoltà di Lettere e filosofia]. Available: <https://www.tesionline.it/tesi/televisione-e-scuola-l-impegno-della-rai-nel-processo-di-alfabetizzazione-degli-italiani--1954-1968-/25127>
- Scalfaro, A. (2008). La divulgazione della musica d'arte in Rai-Tv negli anni sessanta. *Musica Docta. Rivista digitale di Pedagogia e Didattica della Musica*, *VIII*, 43-61.

SITOGRAPHY

- <http://www.federica.unina.it/livinglibrary/lettere-e-filosofia/24/>
- <https://www.forcom.it/it/chi-siamo>
- <http://www.teche.rai.it/2015/03/telescuola-anno-quinto/>
- <https://www.youtube.com/watch?v=CdlxLpdYf0E> -Gabusi D. L. (2020) Non è mai troppo tardi: la trasmissione TV del maestro Manzi alle origini della didattica a distanza. Videolesson. Benevento: Unifortunato.