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Philosophy via Distance Learning: theories and educational strategies

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Introduction

According to the philosopher of information Luciano Floridi human beings are fully experiencing a fourth revolution, no less profound and radical than those initiated by Copernicus, Darwin and Freud. The philosopher wrote that the information and communication technologies are changing the conception people have of themselves, of the way humans socialize with others and the approach towards a shared and collaboratively built knowledge.

People begin to realize that every man or woman is not an independent entity, but rather an interconnected information-carrying agent, sharing with other biological agents and intelligent artifacts a global environment made essentially of information.

Luciano Floridi introduced the term infosphere meaning the globality of the information space that includes both cyberspace (Internet, digital telecommunications) and the classic mass media. This infosphere has also had a "heavy" impact on the concept of education for any educational institution and for people of all ages. The sense of e-learning discussed in this work is grafted into this context, also emphasized by the Covid-19 pandemic that has just passed. Such pandemic has led many public and private institutions to activate online forms of work, education and educational training.

In the academic world and above all in the world of primary, middle and secondary schools (and even in childhood) a process of digitization of education has been launched which has shown both its technological strength and its pedagogical weakness. Like the whole world of education in all its forms, the teaching of philosophy has also had to know and adopt the formula of distance learning, experimenting, without warning and without hesitation, new forms of communication mediated by computer technology.

This happened, however, without having made a previous reflection on the pedagogical validity of this modality and without an adequate philosophical reflection on the ongoing change in teaching. In fact, teaching in general, and the teaching of philosophy in particular (if only due to the fact that in the collective imagination it has been associated with its practice among the colonnades of Aristotelian Peripatus, in the Epicurean garden, in the Alexandrian museum) it is found to perform

its function no longer in immediate proximity, i.e. without instrumental mediation, but in the distance mediated by a medium that served as a prosthesis, useful, however, to bridge the physical distance. In thesis' *chapter one* I discuss some philosophical and pedagogical aspects of teaching philosophy trying to define the meaning of a new paideia.

A specific topic discussed in this chapter is related to the old epistemological dichotomy between pedagogy and didactics that still today risks recurring in the digital environment when it is experienced and passed through as a learning environment. In other words, I try to unravel a skein full of useless prejudices for teaching and its theoretical and pedagogical support.

Furthermore, starting from Plato, passing through Descartes up to Popper, Gadamer and systems thinking, I trace a path that has analyzed the pedagogical-didactic problems in the light of philosophical references.

I have also briefly described some teaching models of philosophy from various cultural backgrounds with the aim of highlighting the complex problematic nature of teaching this discipline which becomes both subject and object of theoretical-pedagogical investigation. A key to understanding the complexity of teaching in general and of philosophy in particular could be the concept of perspectivism referred to by Nietzsche without, however, falling into relativism or, worse, into pedagogical skepticism.

In the thesis' *second chapter*, through the concept of translation borrowed from Averroes, I clarify that an online digital lesson implies a communication that turns out to be a translation. In other words, the meeting with the other assumes the connotations of a hermeneutic approach for which the online meeting, but also the one in the presence, is never taken for granted but implies a continuous rediscovering of the teacher-student relationship.

In trying to clarify how face-to-face teaching may have been enriched by distance learning, we have resorted to concepts such as translation and the hermeneutical circle, referring to thinkers such as Ricoeur and Gadamer. Ricoeur's thinking underlines an irreducible ambiguity that persists in language, in understanding, in transmission, in the face of the awareness of not being able to suppress

the otherness of the other. Therefore, both in terms of communication and in terms of recognition of the other, distance learning raises questions on which it is necessary to reflect in order to set up a meaningful teaching. From this point of view, Gadamer's hermeneutics on the pedagogical level regarding the "consideration" of the other, especially if it is a learner, comes to our aid.

Moreover, the dialogue between philosophy, pedagogy and psychology allows us to understand in which sense the "I" is not linear but reticular. And precisely the structure of the internet follows the reticular being of the "I", thanks to hyper-textuality and hyper-mediality, an aspect that in our work is presented as an authentic enrichment of knowledge if skillfully managed by educators. In the same chapter I introduce a new concept of philosophy.

After decades of nihilistic, weak or deconstructionist philosophies, when by now the philosophers seemed to have definitively given up on the global gaze on everything, being content to see clearly in some limited field of investigation (philosophy of language, philosophy of mind), here is a philosophy with an ancient appearance.

It appears complete in itself, with *its own ontology*, with a strong idea of becoming and, no less, with its own metaphysics. However, it is fine immediately specified that only the appearances are ancient: the contents of this philosophy are decidedly new, since they belong to the field of innovation par excellence, the technological one, and, more specifically, to the area of *information technologies*.

In fact, the decisive impetus for the constitution of the new framework of reality was provided by the computer, which under this profile presents itself as a true and proper "philosophical machine", capable of suggesting with persuasive force that all the magnitudes of nature are finite and discrete, and can therefore be represented exactly by integer quantities, thus excluding any infinite, infinitesimal, continuous or locally indeterminate variable subject to randomness.

Furthermore, these physical quantities correspond to nothing more than configurations of bits and their temporal evolution is governed by computational processes. Thus, the scenario of digital philosophy opens up, which presents a strong originality not only in terms of the rich heritage of ideas it contains, but even in the configuration of its genesis. In the thesis' *third chapter* I deepen aspects

concerning hermeneutics by taking up the thought of Hans George Gadamer, also with reference to Umberto Eco. Regarding communication in general, with emphasis on the online one, I deal with the theme of the unsaid and the role of communication according to the psychologist and philosopher Paul Watzlawick.

Somehow philosophy and psychology are also intertwined according to the model of neuro-linguistic programming of Bandler and Grinder mentioned in the same chapter. In the light of these reflections, I tackled the theme of redesigning one's own new identity in the virtual world whose dynamics appear complex and still evolving.

Digital tools can be considered extensions of human faculties, almost as if they were prostheses, a topic I address in the *fourth chapter* of the thesis. In this regard, the concept of prosthesis was discussed by the contemporary French thinker Bernard Stiegler. The philosopher worked on a rethinking of the question of technique in an attempt to provide a more adequate declination for understanding some aspects of advanced modernity.

Stiegler argues that technology is the element capable of forming the whole horizon of human existence: every experience that human beings have, in fact, is in some way mediated by technical and technological tools that extend man's capabilities. Despite this, the risk of trivializing the technological use of distance learning is unfortunately just around the corner due to an absent and careful reflection on topics such as communication and relationships.

Even the originality and uniqueness of the learner subject, in the words of Levinas, risked being hypostatized, closed and crystallized in a role considered devoid of his dialectical contribution, in an educational and human sense in general. To understand how important the student-teacher relationship is and how much the student is capable of producing knowledge I focused on reticular learning explained through the theory and practice of connectivism.

The theory of *connectivism* was formulated for the first time by George Siemens, professor of psychology at the University of Texas, on the basis of analyzes of the limits that theories such as behaviorism, cognitivism and constructivism highlight in an attempt to explain the effects of use

of technologies on the way we live, communicate and learn. Connectivism implies that the digital dimension is nourished by collective intelligence, a form of distributed intelligence, baptized by the sociologist Derrick De Kerckhove as connective intelligence. This intelligence can produce knowledge given by the multiplication of individual intelligences interconnected by a network of relationships, and not by mere sum or the average of them.

Furthermore, on a pedagogical and didactic level, the use of digital tools would find in *Stiegler's theses* a theoretical foundation that would allow "justifying" the relationship that students establish with smartphones, tablets, computers and viewers for augmented and virtual reality, foreseen, among other things, in the school of the near immediate future.

Stiegler's thesis is able to support the theory of connectivism according to which the diffusion of knowledge in the 21st century cannot do without the collaborative use of digital tools with which adolescents establish an almost "symbiotic" relationship. In fact, digital tools can be considered a medium in the sense of an extension and enhancement of human faculties, as the Canadian sociologist Herbert Marshall McLuhan had already intuited.

If digital learning involves technical aspects, we might say, in the Heideggerian way, that also it involves a technique whose essence is a real disclosure of the relationship between man and the world and between man and man. In the digital environment, the text becomes hypertext in the sense of a revelation of a plot held together by electronic links whose fruition is called navigation, a sort of multilinear, multi-sequential going back and forth, interactive and polyphonic.

A digital learning environment reproduces and extends itself in an autopoietic dynamic that realizes and creates a new relationality. We are therefore led to think that the web is not a place but a new, extended, potentially infinite relational dynamic. Precisely because of its intrinsically relational essence, the digital communication network becomes a privileged learning and teaching environment, when it creates and establishes a new otherness.

In this sense, in the *last chapter* I provide some operational indications, appropriately reworked, according to steps that underline what students can do online as co-producers of knowledge. After

the conclusion, in the appendix, I transcribed the entire introduction extracted from “The 2016 Manifesto for Teaching Online”. The content is in line with our thesis and our intention is to reinforce some of the content developed in our work. In fact, one of the core ideas driving the manifesto is that good digital education lies in the hands of teachers. Another one core idea is: online can be the privileged mode. Distance is a positive principle, not a deficit.

1. Philosophy in the age of infosphere

The concept of the "infosphere" is introduced by philosopher Luciano Floridi, who argues that the digital revolution is transforming every aspect of our lives at a rapid and unceasing pace, and re-ontologizing our understanding of the world and ourselves.

Floridi believes that digital technologies not only change the way we interact with the world, but also shape and influence the way we understand and relate to the world, and the way we conceive of ourselves and interact with each other. Floridi suggests that philosophy needs to be "rebooted" in order to deal with the radical changes produced by the digital revolution, and that we need philosophy to be practiced at its highest level to make sense of these changes.¹

The digital revolution offers the historic opportunity to rethink what is exceptional about us in terms of our intelligent and free behavior, which has to confront engineering artifacts that adapt ever more effectively to the infosphere, the predictability and manipulability of our choices, and the development of artificial autonomy. That’s why Floridi argues that philosophical questions are open questions that are characterized by informed, rational, and honest disagreement. To answer philosophical questions, one must use noetic resources, which are the complex set of cultural, social, and emotional resources that people draw on in their daily lives.

Floridi also notes that philosophy is interested in improving our understanding of what we already know, rather than discovering new facts about reality. He argues that the resources required to answer

¹ Floridi, L., 2014. *The fourth revolution: How the infosphere is reshaping human reality*. OUP Oxford.

philosophical questions can be studied to better understand the nature of the problems. Philosophy uses conceptual design as a method to identify and clarify open questions and to design, propose, and evaluate convincing answers. Floridi concludes that as the world becomes more complex, the number of philosophical questions has increased.

However, he argues that philosophy is still possible because it is not concerned with verifying or calculating, but with improving our understanding. Ultimately, philosophy is a discipline that focuses on understanding and improving our knowledge of the world around us.

2. Reshaping the identity in the age of infosphere

Reflection on teaching always opens up unsuspected horizons and allows us to glimpse paths that lead to analysis of the processes of construction of the Self and the themes of the emancipation of personal identity. Precisely for this reason, the range of problems that it is useful to examine before designing is really wide teaching paths especially when it comes to teaching online with philosophical content. In this case, in fact, ancient questions on the meaning of philosophical reflection and then also on the identity and position of the man who teaches and the man who learns return.

We intend to refer to the very idea of a person and their possible *identity within a digital universe*. Twenty years ago, in 1998, a collection of essays edited by Terrell W. Bynum and James H. Moor foreshadowed how computers were changing philosophy, meaning with its issues, methods and models referable to the mind, consciousness, experience, reasoning, the concept of truth, ethics and aesthetics.²

At the end of the twentieth century, the main topic of philosophical reflection was based on the awareness that the *digital revolution was changing the world more radically and faster than with the Copernican revolution*.

The digital revolution was irreparably altering the understanding of the nature of man as a social and political animal and, even before that, the understanding of the nature of the universe. In the era of

² Bynum, Terrell Ward, and James H. Moor. "The digital phoenix: How computers are changing philosophy." (1998).

the information revolution, the human being becomes a fundamentally informational entity and, similarly, space-time becomes computational space-time as the ultimate fabric of reality. The hermeneutic horizon that opens up in the digital age is therefore inhabited by the concept of *information* which, like concepts such as being, knowledge, good and evil, is autonomous in its ontological dignity and metaphysics. The same horizon is also inhabited by the *computational bit* which is the new ἀρχή, the ultimate foundation of language and reality.

A more philosophical reading leads us to think that the new hermeneutic horizon is characterized by information which, despite having the characteristics of a Parmenidean Being (as opposed to a non-Being which is nothing but disinformation, absence or denial of any information) it is basically bit computational. In other words, the hermeneutic horizon that opens up in the digital era is a horizon characterized by what the philosopher Luciano Floridi calls *infosphere*.³

With infosphere Floridi refers to a universe of man-informing, or informing, bearer of information, capable of information and capable of changing the environment around with information, just as millennia ago man changed the environment with the use of the thumb. Such a universe is governed by intrinsic ethical laws which tend, essentially, to a moral imperative that Floridi summarizes in an informative well-being that must be promoted by extending (quantity of information), improving (quality of information) and enriching (informative variety) the infosphere.

Now, if it is true that in the digital age man is essentially an information entity,⁴ it is clear that the main condition of his existence, or as Martin Heidegger would say, of Dasein, can only coincide with its ability or possibility to give and receive information and to be in the world (in the world of information, which in this case would coincide with the world tout-court) '.

In talking, Heidegger writes, Dasein expresses itself not because it has, in the first instance, been encapsulated as something 'internal' over something outside, but because as Being-in-the-world it is already 'outside' when it understands .⁵ In the information and in the possibility given to man to

³ Floridi, Luciano. *The fourth revolution: How the infosphere is reshaping human reality*. OUP Oxford, 2014, 25.

⁴ Wiener, Norbert. "The human use of human beings." *New York* (1954), 17.

⁵ Heidegger, Martin, 205.

hand it out, one can therefore glimpse the essence of contemporary man, already identified by the Russian philosopher Mikhail M. Bakhtin for whom "the existence of man (both the exterior and the interior) is a very deep communication. Hence, to be means to communicate. Death (non-being) is the impossibility of being heard, of being recognized, of being remembered."⁶ And this is clearly seen in today's culture, where the consistency of the self is often linked to an image managed and amplified by social networks.

By analyzing the new posture of the human in the infosphere, we come to the awareness that contemporary existence is in fact an *onlife existence*. Online and offline are in fact outdated or perhaps canceled, because they are engulfed by the collective expectation that only one condition will be reserved for individuals.⁷ Contemporary society leads people to feel "alive" only if they are connected to the web, to exchange information, otherwise they appear "dead".

The digital dimension leads man towards forms of collective intelligence,⁸ which redesigns new social and political identities, based not on territorial, geographical or institutional belonging, but on adherence to common interests. The digital dimension is also nourished by *collective intelligence*, that is by forms of distributed intelligence that it is not by chance that the Belgian sociologist Derrick De Kerckhove has baptized as connective intelligence, that can produce knowledge given by the multiplication of individual intelligences interconnected by a network of relationships, and not by mere sum or the average of them.

It corresponds to that *noosphere* theorized by the Soviet mineralogist Vladimir Vernadsky⁹ and the French philosopher Edgar Morin¹⁰ that is a sort of collective consciousness that arises from the interaction of human minds organized in increasingly complex social networks.

In fact, this complexity does not need to be digital, but what is certain is that digital has increased this complexity, making it at the same time rationalizable, penetrable, digitizable. The whole discourse

⁶ Bakhtin, Mikhail M. "Author and hero in aesthetic activity." In *Art and answerability*, pp. 4-256. University of Texas Press, 2021.

⁷ Floridi, Luciano. *The onlife manifesto: Being human in a hyperconnected era*. Springer Nature, 2015.

⁸ Peters, Michael A. "Interview with Pierre A. Lévy, French philosopher of collective intelligence." *Open Review of Educational Research* 2, no. 1 (2015): 259-266.

⁹ Vernadsky, Vladimir I. *The biosphere*. Springer Science & Business Media, 1998.

¹⁰ Morin, Edgar. "Les idées: leur habitat, leur vie, leurs moeurs, leur organization. Vol. 4 of *La méthode*." (1986).

on the infosphere leads us to take note of a conspicuous externalization of intelligence supported and unveiled by the Web. Somehow, we expect to interpret the educational concerns of those involved in training within the digital universe. If for the sociologist and philosopher Herbert Marshall McLuhan the *technical artifact* (of the electric age) was nothing more than an extension of our limbs and our senses,¹¹ for De Kerckhove, a student of McLuhan, the Web (in the digital age) is an extension of thought, a form of extension of intelligence and, together with it, an extension of private memory that manifests itself as collective memory.¹²

Reflecting on these aspects makes us understand that Skinner's linear model had a bad influence on online teaching, despite being initially welcomed. The approach designed by the psychologist Burrhus Frederic Skinner was famous among teachers in the second half of the twentieth century. His approach is coldly mechanical and rigidly sequential and does not take into account the complexity of the mind and of the human being himself.

Despite this aspect, we know that even today there are teachers who prefer a linear approach that "simplifies" above all the evaluation of students' performance. The problem is that there is a risk of oversimplification of the teaching activity, including assessment. There is also a form of visualization of the mind, which becomes a visual phenomenon and an icon. What before it was inside us, writes De Kerckhove, now it is on a screen.

If the Web is the extension of the Nous and is also the extension of the memory linked to it as well as the organ of sight, then the Web is also the repository of a new form of identity. It qualifies and defines the human, an identity that is also collective and connective, primarily digital, which broadens and amplifies the already indefinable boundaries of analogue identity. We find the notion of Nous as an extension of sight already in Plato¹³ but also in Parmenides who speaks of seeing with the mind.¹⁴

¹¹ McLuhan, Marshall. *Understanding media: The extensions of man*. MIT press, 1994.

¹² De Kerckhove, Derrick. *The augmented mind*. 40K, 2010.

¹³ Plato, Republic, 6, 509d-511e.

¹⁴ Sassi, Maria Michela. "Parmenides and Empedocles on *krasis* and knowledge." *Apeiron* 49, no. 4 (2016): 451-469.

3. The original technicality of the human being

Despite the original technicality of the human being is discussed in chapter four of the thesis, for reasons of logical and argumentative continuity we prefer to mention it here. The concept of human-environment interaction addressed by Piaget and Bruner and the McLuhan theory about the technical artifact as an extension of our limbs and our senses¹⁵ are in tune with Bernard Stiegler theory, a contemporary French.

From the work “Gesture and speech” of the French anthropologist and palethnologist André Leroi-Gourhan,¹⁶ Bernard Stiegler borrows the thesis of a co-originality of anthropogenesis and technogenesis, of an original 'technicality' and 'proteticity' of the human being.¹⁷

In particular, the philosopher highlights the thesis of Leroi-Gourhan articulated on the critique of Darwinian evolutionism which identifies in the "ancestor-ape" the image of primitive man. It is the thesis according to which the appearance of man corresponds to a real evolutionary leap, to a radical discontinuity that prevents us from thinking of man's ancestor as the arrival point of the evolution of the great primates.

Rather, André Leroi-Gourhan's thesis identifies this ancestor with an individual, physically similar to us, but with a very small brain, belonging to the Australanthropes group. With this name the palethnologist rebaptizes what until then had been called australopithecids, «improved apes», characterized by a short face, erect position and free hand during the deambulation.

Those three fundamental and closely interrelated elements are associated with the complementary and extremely relevant ability to obtain and use tools. The acquisition of the upright position, and the consequent release of the hand, keep the birth of man as baptism as the *manifestation of a technical disposition*.

Furthermore, Leroi-Gourhan, referring to these first and rudimentary forms of artifacts, speaks of an *anatomical consequence, of secretion of the body*, of the extension of the organic into the inorganic

¹⁵ McLuhan, Marshall. *Understanding media: The extensions of man*. MIT press, 1994.

¹⁶ Leroi-Gourhan, André. *Gesture and speech*. miT Press, 1993.

¹⁷ Howells, Christina, ed. *Stiegler and technics*. Edinburgh University Press, 2013.

not as a secondary or derivative fact, but as an *original fact*.¹⁸ Leroi-Gourhan affirms that man's intelligence is integrated in matter and in function, thus making explicit the theoretical opportunity of the hypothesis that the image of man should be rethought starting from this original expropriation, hybridization, exteriorization in what is not human: “the human hand is human insofar as it detaches itself from it and not in what it is”.¹⁹

Brain evolution is a fact in a certain sense secondary and remains consigned to this condition of integration into matter, which in turn is made possible by the liberation of the hand that the acquisition of an upright position allows.

The development of the brain is strictly dependent in this phase on the inorganic extension in which this ancestor of man projects his own survival and on which the conditions of possibility of his adaptation to the external environment depend.

In the light of these results of palethno-logical research, Stiegler feels authorized to draw a first important conclusion: that man is born outside of himself, already projected into his inorganic prostheses, in the gesture of this exteriorization. Therefore, the appearance of man coincides with that of technique, anthropogenesis with technogenesis.

"Exteriorization " is one of the concepts that Stiegler most profitably reworks in his work: through Leroi-Gourhan's research it is confirmed as a pertinent and productive key to understanding specific logic of technical evolution. Stiegler makes it the pivot around which to articulate the reflection on man's 'who', and on his relationship with technology.

Furthermore, he gets the opportunity to overturn the dynamics and internal balances of the invention process, a strongly ambivalent dynamic that never ceases to redistribute the functions of subject and object, effectively leaving them in full and reciprocal permutation.

This leads Stiegler to the apparently paroxysmal affirmation that in the process of invention *man and technology invent each other*. Therefore, it remains in principle undecidable who invents what and

¹⁸ Leroi-Gourhan André. *Le Geste et la Parole-tome 1: Technique et langage*. Vol. 1. Albin Michel, 2009.

¹⁹ Leroi-Gourhan, 2009.

what invents who. But this is only apparently a hyperbole, in fact precisely the passages of the French palethnologist's argument suggest the perspicuity of a similar decentralization of perspective. Interior and exterior, intellectual activity and technical object constitute each other, according to Stiegler, in the course of a movement that simultaneously invents both: a movement in which they invent each other, in a sort of technological maieutics of what is called man.

The paradox of *exteriorization*, which alludes to the pre-existence and precedence of an interior which, on the other hand, is only given starting from the projection outside itself, repeats itself and is revealed even better in a concept of anticipation which alludes to a “before” that occurs only in the “delay”.

Brain development is unthinkable on this side of this process of mutual invention of man and technique, of the co-determination of cortical development and technical development which orients human evolution in the direction of an «artificial selection».²⁰ In the light of these observations the process of differentiation or individualization of man cannot ignore the *technical support*, the prosthesis.

Technical support is a trace that preserves experience, a record of what has passed, an externalized memory. The phenomenon of the industrialization of memory is considered by Stiegler as the last stage of the evolutionary process of man.

Our age is therefore marked by the technological *evolution of memory supplements* which have always worked to fill the unbridgeable memory deficit of man. The supplementary character of memory, its materiality is original.

Stiegler intends to provide a plausible explanation, but also a genealogy, of perhaps the most characterizing aspect of advanced capitalist societies today. Stiegler refers to the industry defined as "programs" operating on the specific adaptive performance of man by reproducing the patterns in view of their possible optimization. To do this, the program industry increases exponentially (thanks

²⁰ Stiegler, Bernard. "La technique et le temps: 1. La faute d'Epiméthée." (1994),184.

to the development of information technology) the control and programmability of *human retentional mechanisms*. Indeed, this industry makes this very possibility of control its main, if not exclusive, condition of subsistence and expansion.

The industrialization of the mechanisms of retention, selection and forgetting that articulate the function of memory in the work of synthesis of consciousness immediately entails new forms of temporal ecstasy that profoundly affect human consciousness.²¹

Stiegler is obviously thinking of computerized telecommunications technologies and the media regime dissemination of information in 'real time' that they create. The *computerization paradigm* is thought of by Stiegler as an era of writing.

The philosopher obviously refers to the contemporary age, whose specificity is given by the type of technology that determines the conditions of access and transmission of knowledge, as well as the conditions for selecting its contents. Access, transmission, selection and adoption are the procedures that collaborate in the processes of psychic and collective identification.

Furthermore, they characterize both the work of the individual conscience and the stabilization of a community. Collective individuation is made possible above all by the availability of access to accumulated knowledge and *collective memory*.

Tradition is inscribed in the mnemonic prostheses, but it is also determined by the conditions of adoption, internalization of the traces of the un-lived past, yet recorded and preserved, and therefore reactivated. These procedures as a whole today tend more and more to conform and to blend into one another through the massive use of analogue and above all digital reproduction technologies.

4. Phenomenology of students digitally connected

The brief reflection on Bernard Stiegler's thought offers us a solid argument for *rethinking the relationship between man and computers*. We could perhaps talk about a re-evaluation of the

²¹ Bernard, Stiegler. "La Technique et le temps, 2. La désorientation." *Paris, Galilée* (1996),121.

educational value offered to us using digital tools. Certainly, after the various reflections made so far, we can better understand the almost symbiosis relationship between the young people of the 2000s (millennials) and digital devices. We are referring to the complex *relationship between young people and the Web*, especially if the latter is placed in an educational environment.

The phenomenology of the person on the Web manifests itself as multiple and stratified, hardly attributable to a single center of gravity. Yet in this irremediable breadth it offers a look at man who contemplates the complex coexistence and sometimes the superposition of *innumerable experiences* at the same time inherent in the relationship with others and with oneself, with the world and with oneself.

The Web therefore appears to be an *educational agency* alongside the others, precisely because it is a container of narrativity to the point that it can be understood as a place of connection and communication link between the various educational agencies. The Web offers an opportunity for dialogue and therefore for the construction of identity that unfolds in stories and fragments of images, in comments, in short aphorisms and in long digressions.

Even the *emoticons* or emotion icons create (while replacing the face) relationship and emotional interrelation that move from the subject to the community and vice versa. Now, it is true that the volatility and liquidity of the digital message they can make it difficult on the Web to be aware of the difference between public and private as a body is not perceived as a container of the self and of the narrative of the self and therefore not even a sense of modesty is perceived.

On the Web, in fact, the lexicon is both familiar and public, private and extremely accessible, cryptic and eloquent. It is true that this *lack* of differentiation between outside and inside, inside and outside could mean the failure of the Web as an agency educational. The aforementioned differentiation, on the other hand, certainly takes place in the family "body" and in the school "body" understood as traditionally monolithic realities.

Yet from the linguistic and meta-linguistic melting pot on-line inevitably derives *a hermeneutic of the person* on the Web as an extremely complex hermeneutic, but no less concrete and significant.

The digital identity that can be found in the fragments of autobiographical stories on the Web is eminently narrative identity. This *identity* can be traced back to that semantic, linguistic, narrative and poetic universe that is fundamental for the construction of the self on which the educational process and didactic action is based or should be based. The latter in turn are carriers and translators of an eminently pedagogical language.

This language is not only the appropriation and lexical definition of a very precise linguistic-scientific nomenclature. Rather, it is awareness of the need to deconstruct the educational discourse on a daily basis to enhance research paradigms of a hermeneutic / comprehensive and critical / transformative type as opposed to those of a behaviorist and positivist matrix.

This approach implies the advantage of the “if and how” of the pedagogical linguistic gesture which undoubtedly redefines a vocabulary but which creeps into the interstices between the human sciences and between humans, between silences, between lines, among the metaphors.²² It is an *emotional deposit, written from an alphabet algorithmic* but which then ends up transcending it.

We are certainly referring here to psycholinguistics studies and the thesis of Derrick De Kerkhove according to which the alphabet intervenes in the elaboration or downsizing of some and very specific cultural attitudes. For example, the appearance of the Greek-Roman alphabet has favored the emergence, first in the West and then in the rest of the world, of a linear, consecutive, logical and coherent way of thinking about reality, the person and society. This happened for the simple fact that each alphabet, having been created to support the mnemonic load, inevitably gathers and associates signs and concepts.²³

The language described so far must be kept, in the awareness that, even when compressed, zipped and thrown into the whirling and changing speed of digital, it too contributes to the "being in the world" of the person and is not just a *divertissement* or an escape from everyday life. The *digital identity* now coincides with the self (even legally), just as a family lexicon coincides with that family

²² Buccellato, M. "C. Metelli Di Lallo," *Analisi del discorso pedagogico*." *Rivista di Storia Della Filosofia* 22, no. 3 (1967).

²³ De Kerckhove, Derrick. "Dall'alfabeto a internet." *L'homme* (2008).

and alone with that. If, therefore, every educational gesture is an ethical act aimed at interpreting one's own and others' existence as if they were a text, then the task of interpreting and building one authentic identity posture also and above all digital appears today as the great challenge that pedagogy has to face.

This challenge involves the construction of a digital identity which therefore questions and inconveniences a deep space of the person and which would be extremely reductive to refer only to a problem of procedures and algorithms.

The new educational objective to which pedagogy is exposed today it aims in fact at the achievement of a digital wisdom or wisdom which coincides with educational wisdom and an enlarged mind towards the virtual.

5. The western theoretical reflection on teaching

Traditional teaching methods, based on a Western rational and propositional approach, should be supplemented by a more nuanced and culturally sensitive understanding of pedagogy. We would like to emphasize that the limited reference to the West does not correspond to a geographical-anthropological *limes* but to a theoretical reflection.

Despite the historical uniqueness of the *Hellenic period* when a fertile synthesis between Eastern pedagogical soul and Greek rational rigor will be theorized with Clement of Alexandria,²⁴ there is a specific Western educational practice. It is based on the Greek and Latin conceptual and practical universe, modeled on the archetype of the student-person intuited by Boethius. He affirms that the pupil is an individual substance of a reasonable nature.²⁵

Born from a personalism of unequivocally Christian derivation, Western teaching nevertheless reveals itself to be extremely and strongly rational also because it is based on a speculative and propositional method. It is divided into *praelectio*, that is the lesson itself, and the *concertatio*, that is

²⁴ Clement, Saint. *Clementis Alexandrini Paedagogus Clementis Alexandrini Paedagogus*. Vol. 61. Brill, 2002.

²⁵ Schneider, Elisabeth. "Naturae rationalis individua substantia." *Boethius as a Paradigm of Late Ancient Thought* (2014): 245.

the discussion, the subsequent control and the refutation of the theses addressed. Furthermore, the etymology of the term lesson refers to the Latin *lectio-lectionis*, or «lecture» which in the academic *Middle Ages* became «public reading» or «offered to an audience».²⁶ This rational scheme consolidated in the early Middle Ages, perfected throughout the period of the Scholastica, renewed in a Jesuit-derived *Ratio Studiorum*, and lasted almost unchanged until the nineteenth century.

Descartes stated the need for a subdivision of the objects of knowledge that is not casual but respectful of the logical articulations of the various disciplines. The Cartesian master, aware of the logical and methodological necessity of division, therefore, imposes on matter to discipline the rhythms of one's mind. Through this program in finite and well-defined stages, he takes possession of it with the primary purpose of dispensing it. The logical division is therefore functional and explicitly pragmatic and didactic.

Respecting the students' mind rhythms implies that the horizon of knowledge and the educational scene are animated and inhabited by those who teach and those who learn. A further presupposition implies that we can speak of pedagogically founded didactics when it carries with it a universe endowed with meaning since didactics does not mean simple communication of knowledge.

Didactics involves a world animated by knowledge, skills, transferability, decision-making skills and operational responsibilities and, last but not least, relational knowledge. However, there the risk to fall into the trap of the traditional *dichotomy* between pedagogy and didactics in the context of e-learning. Pedagogy, as an area of study, has not been given much importance, for example in the British educational system, unlike other European countries.²⁷

We believe it is important to pay attention to the temptation to rely solely on digital technology as an educational tool without critical evaluation of its effectiveness. Unfortunately, within the dynamics connected to e-learning, the extreme dichotomous scenario falsely sees on the one hand teaching exclusively understood as the science and technique of learning and on the other hand pedagogy as

²⁶ Le Gentil, Pierre. "Jacques Le Goff, Les Intellectuels au Moyen Age, Éditions du Seuil, Paris 1957." *Revue du Nord* 39, no. 156 (1957): 291-293.

²⁷ Murphy, Patricia. "Defining pedagogy." In *Equity in the classroom*, pp. 17-30. Routledge, 2003.

intrinsically connected to a vague general educational dimension. In this way, pedagogy appears erroneously disconnected from the concreteness of the operational and factual life of the transmission of knowledge and also disconnected from any scientific and experimental consciousness. Teaching techniques have often been understood and interpreted as strictly practical processes within which pedagogical and educational skills might not have been contemplated.

One *possible mistake* could be relegating technical management to the whole educational dimension. Therefore, a teaching method can lead, for example, to consider a video on You-tube, perhaps well composed graphically and with the right audio modulation, to be considered an indisputable educational / multimedia product, with the possibility of being visited and revisited.

Moreover, it is not enough to define a multimedia product as an educational tool because in the context of special pedagogy it allows dyslexics to read or dysorthographic to write. Therefore, in the name of the graphic or phenomenal / technological coating, teachers cannot speak of applications of the science of education.²⁸

This fallible expectation is probably due to a greater and increasingly widespread availability of digital devices. We cannot therefore hide the fact that there has been a certain abuse of digital in the use and processing of content.

Despite previous discussion, the *digital scenario* represents an invaluable resource, a mine from which to draw and create a didactic and educational locus. The digital environment becomes a valuable source of resources to the extent that there are theoretical and pedagogical assumptions, appropriately weighted and evaluated by the teacher. And this especially when we ask ourselves about the main nucleus of the didactic path which is the lesson.

The lesson, as the founding theoretical core of the pedagogical and didactic gesture understood as an environment of cohabitation, leads to a goal of mutual recognition, of identification in citizens, professionals and perhaps even as new educators. The *digital* learning environment offers new

²⁸ Mangiatordi, Andrea. "Didattica senza barriere." *Universal Design, Tecnologie e Risorse Sostenibili* (2017),7.

possibilities for dialogue and communication that can transform the traditional mechanics of teaching. The dialogue in this environment can be three-dimensional, ever-changing, and pervasive, creating a dynamic and interactive space where all participants can contribute to the learning process.

The *didactic triangle*, which includes the teacher, the students, and the knowledge, remains stable in this environment, but the epistemological modality shifts towards a *three hermeneutic dimension*. The dialogic and digital narrativity allows for infinite returns to previously discussed topics, changing and permuting the terms of the issues discussed.

This kind of perpetual education and dialogic narrativity was present in Plato's works, where Socrates would often return to exhausted issues to imprint unexpected and unpredictable ways of reasoning and teaching.

However, in the digital learning environment, there is a need for a balance between the potentially *infinite hermeneutic openness* and the need for methods and rules that guarantee procedural order. The lesson must always be constructed with concern for the needs of objectivity, stability, and reliability of transmissibility, while also incorporating the principle of creativity or unpredictability. However, a didactic relationship can be characterized by the teacher's mistakes.

According to a hermeneutic logic, making mistakes means starting again from one's own mistakes or prejudices, becoming more aware of the learner-teacher relationship and interaction, as well as of the knowledge of the subject taught. To be honest, it must be clarified that prejudice does not necessarily connote a negative meaning, Gadamer tells us. Instead, he writes, "Prejudices are not necessarily unjustified and erroneous, so that they inevitably distort the truth.

In fact, the historicity of our existence entails those prejudices, in the literal sense of the word, constitute the initial directness of our ability to experience". Additionally, Gadamer tells us, "Prejudices are biases of our openness to the world. They are simply conditions whereby we experience something."²⁹

²⁹ Pickett, Adrienne, and J. G. York. "Multicultural teacher education: Developing a hermeneutic disposition." *Philosophy of Education Archive* (2011): 68-77.

6. The birth of modern didactic: a short history

The term "didactic" comes from the Greek word "didaskein," meaning "to teach." Didactics is closely related to pedagogical theories, theories of knowledge, and the structures and organizations of schools.

There is an ongoing debate about teaching methodologies in different pedagogical theories, but the preparation of the learning context, methods, and techniques is an important aspect of didactic organization. In the past, schools often used homogeneous and unchanged teaching methodologies, such as classroom lectures with the teacher present.

However, some thinkers, like *Quintilian*, suggested that other activities, such as play, could also be used for learning. During the *Middle Ages*, the teaching methodology was based on reading aloud by the teacher and memorizing by the student.

However, in the *seventeenth century*, with the birth and spread of modern school, these methodologies became more regulated and organized. The organization of modern teaching envisaged a method based on the explanation, questioning, the elaborate exercise, and finally, on the examination, which assumed those characteristics of advertising and rituality that it would have maintained up to the contemporary age.

The organization of modern teaching addressed the changes relating to the representations of childhood and the perception of specificity of the latter. Further, it raised the first timid questions relating to the methodologies commonly used in school and the first considerations on the need to follow the natural stages of development. These questions arose already at the end of the *sixteenth century*, regarding the most effective methods for teaching and learning the Latin languages.

The debate between supporters of teaching based on the explanation and repetition of grammatical rules and between proponents of teaching based on conversation became, at that time, very lively and included among the many voices also of famous exponents of the culture of the time. *Erasmus of Rotterdam*, in this regard affirmed: "At this age one becomes familiar with any vulgar language in a few months. Why shouldn't the same happen with Greek or Latin? The method is feasible, however,

only if the teacher has a small group of students, given the need for constant contact between teacher and student".³⁰ The emergence of empiricist philosophical currents inflicted a heavy blow to those theoretical positions proposing teaching based only on the theoretical lesson of the teacher in front of the students.

For example, *Locke* redefined the gentleman's training curriculum by recalling the centrality of experience, a primary source of knowledge, and methods of teaching and learning capable of arousing interest in students.³¹

Rousseau's *Emilio* eliminated the use of books from methodologies and didactic tools (*Emilio* reads only one book, *Robinson Crusoe*)³² and proposed a method based on the importance of doing. The author re-evaluated the restlessness typical of early childhood and argued the need to foster the natural desire for exploration of the child, who can learn only through the senses.³³

Alongside the importance of direct exploration, the Rousseauian method is defined by the author himself as indirect, that is, based not on explanations or demonstrations, but on concrete experiences that the educator prepares and that allow the student to arrive later at theoretical and conceptual acquisitions.

Finally, the *Enlightenment* debate saw many philosophers and thinkers vigorously condemn the methods usually used in the schools of the time, aimed at the acquisition of abstract and formalist culture. Within this debate, there was also a broader reflection on the training curriculum and a reassessment of practical activities and the arts.

The men of the *Encyclopédie* reiterated how the theoretical-practical knowledge of the world of the material production of goods is an indispensable part for the complete education of a man who is up to that century of enlightenment in which he lives, and therefore capable of giving his contribution to

³⁰ Erasmo da Rotterdam, "De ratione studii," in *E. Becchi and D. Julia, Storia dell'infanzia*, vol. II, Laterza, (Roma-Bari 1996), 207.

³¹ Giuliana Di Biase, "Liberal education in John Locke's some thoughts concerning education", in *Giornale Critico Della Filosofia Italiana*, (September 2015), 573-574.

³² Jean Jacques Rousseau, "Emile or Concerning Education", Extracts Containing the principal elements of pedagogy Found in the first three books with an introduction and notes by Jules Steeg, Depute, Paris, France, translated by Eleanor Worthington, D. C. Heath & Company, Boston, (1889), 147.

³³ Rousseau, "Emile or Concerning Education", 96.

the improvement of the whole society. In the *20th century*, there were significant changes in the way childhood was perceived, and there were many experiments with new educational practices. At this time, childhood was seen as a particularly fragile and precious age, and there were many debates about protecting children.

At the beginning of the 20th century, the *Stanford and Binet Development Scale* was developed, which was the first intelligence test that allowed the measurement of children's physical and mental development.³⁴

The development of *Sigmund Freud's* psychoanalysis also contributed to a different perception of children. Freud revealed an image of the child that was far from the traditional one of an innocent and angelic being, and instead characterized by impulses, including erotic impulses. The image of the child as “polymorphous perverse” scandalized many people at the time.³⁵ New educational practices responded to these changes in the perception of childhood.

The *Froebelian* method inspired many new experiences in early childhood education, as well as new proposals, such as that of the Agazzi sisters. The Froebelian method, which alongside the spontaneous play and active exploration of the child also involved the use of structured materials, was implemented within a particular conception of the relationship between teacher and children, which gave the adult a directing role and the child wide autonomy.³⁶

The *Agazzi* sisters believed that playing was a fundamental activity during the school day, and they incorporated traditional and popular elements, such as recitals and singing, as well as physical activities like dance and gymnastics. They aimed to free teaching from the traditional model of explanation/demonstration.³⁷ *Maria Montessori's* method also became widespread in the kindergarten. Montessori proposed structured materials that would develop a sensorimotor

³⁴ Becker, K. A. (2003). History of the Stanford-Binet intelligence scales: Content and psychometrics. (Stanford-Binet Intelligence Scales, Fifth Edition Assessment Service Bulletin No. 1). Itasca, IL: Riverside Publishing.

³⁵ Freud, S. (1905). Three Essays on the Theory of Sexuality (1905). The Standard Edition of the Complete Psychological Works of Sigmund Freud, Volume VII (1901-1905): A Case of Hysteria, Three Essays on Sexuality and Other Works, 123-246

³⁶ Fröbel, Friedrich, and Gustav Rönsch. *Friedrich Froebel*, (1912), 12.

³⁷ Todaro, Letterio: Between New Education and idealistic vision: Giuseppe Lombardo Radice and the arduous path of l'Educazione Nazionale in Italy (1927-1933) - In: Schweizerische Zeitschrift für Bildungswissenschaften 41 (2019) 2, S. 354-368 - URN: urn:nbn:de:0111-pedocs-203495 - DOI: 10.25656/01:20349

knowledge, which was the basis for subsequent conceptual acquisitions. The Montessori method was based on the importance of experience and manipulation, understood as fundamental moments of knowledge, not only during early childhood but also during elementary school. This method replaced the traditional explanation of the lesson with manipulation and learning through workshops, which promoted socialization and group discussion among children.³⁸

The *activism* movement in education placed the problem of teaching methods at the center of pedagogical reflection. The movement emphasized the need for individualization of the process of teaching and learning, respecting the child's developmental stages, and the importance of motivation. Active schools redesign the role of the teacher and that of the pupil, placing the interests of the child at the center of didactic and educational activities. This movement explicitly connected the quality of the educational relationship with the emotional and cognitive dimension of the child's learning.

The 20th-century didactics focused on *psychological aspects of the teaching and learning process*.

The relationship between teacher and student was considered to be crucial to the process of teaching and learning. Pierluigi Bertolini defined the educational experience as characterized by intentionality and interpersonal communication.³⁹ *Carl Rogers* proposed the teacher to establish a "non-directive" communication based on empathy and listening.⁴⁰

The *systemic* perspective, on the other hand, has revealed how the educational and didactic relationship is fundamentally characterized by a communication gap that causes a change and is defined as a complex event, conditioned by multiple factors. It is the task of the educator or teacher to know to evaluate the intertwining of these factors and take charge of the different levels to present within the relationship (cognitive, emotional/affective, regulatory).

Within this perspective some authors (the *School of Palo Alto*, P. Watzlawick, G. Bateson) have studied the different modalities of communication dynamics, the possibility of the onset of

³⁸ Montessori, Maria. *The Montessori method: the origins of an educational innovation: including an abridged and annotated edition of Maria Montessori's The Montessori method*. Rowman & Littlefield, 2004.

³⁹ Pierluigi Bertolini, "L'esistere pedagogico. Ragioni e limiti di una pedagogia fenomenologicamente fondata come scienza", *La Nuova Italia*, (Firenze 1988), 114-115.

⁴⁰ Rogers, Carl Ransom. *The carl rogers reader*. Houghton Mifflin Harcourt, (1989), 62.

pathologies, and the laws relating to the pragmatics of communication.⁴¹ This perspective, in terms of educational research, has caused attention to be paid to the detection of processes of marginalization or communicative pathology in the relationship between teacher and students.

The birth of *e-learning* started with correspondence training later evolved into courseware, which includes computer-aided learning (CAL), computer-assisted instruction (CAI), computer-based training (CBT), and computer-based instruction (CBI).

The *decade of the 90s* can be defined as the era of Computer Based Training, i.e., courses rich in audio, video, and images usable through a computer thanks to floppy disks first and then to CD-ROMs. The next step to courseware was e-learning at the origin of which we find correspondence training.⁴² The *90s*, in parallel with an increasingly rapid technological development, marked the keystone of the world of e-learning, leading to the formation of the virtual University of California with 1500 online courses in 1997.

In the same year the Courses were born a Management System that allows you to do online tests to verify the users' skills, and to set up a personal training course for each user. Two years later, in 1999, the Learning Management Systems were also born, placing the Web as the undisputed protagonist of *distance learning*. What happens next follows the technological development of the new millennium, leading us to the speed and ease of use of modern e-learning, thanks also to increasingly developed and intuitive e-learning platforms, such as *Skype*, *Google Meet*, *Zoom*, etc.

7. Questions of methods and methodologies. Possible models of teaching philosophy

This paragraph discusses *didactic methodologies and their relationship with philosophy*. It explains that teaching methodologies are the study of teaching/learning processes and should be related to the context in which they are applied. The Didactic Methodology of Philosophy cannot be distinguished from the Didactics of Philosophy, and both theoretical and practical aspects must be present.

⁴¹ Watzlawick, Paul, Janet Beavin Bavelas, and Don D. Jackson. *Pragmatics of human communication: A study of interactional patterns, pathologies, and paradoxes*. WW Norton & Company, (2011), 3.

⁴² Harasim, Linda. "A history of e-learning: Shift happened." *The international handbook of virtual learning environments* (2006): 59-94.

However, we may highlight the importance of methodological reflection, which is the investigation and analysis of different teaching methods, their principles, possibilities, and limitations. There is a difference between the didactic method and the didactic methodology, and the latter is a reflection on the method.

We will also discuss the philosophical teaching methods and the models to which they refer. First, we have to emphasize that a *philosophy teacher has a philosophical pre-understanding*, and it is important to show the multiplicity of methods to make philosophy lessons plural and disciplinarily authentic. It is necessary to explain the methods used in teaching to generate a methodological awareness in students' minds and to teach methodological skills explicitly. There are different models for teaching philosophy through a historical lens:

- The first model is the historical-typological model, which emphasizes the structural similarities between philosophical positions over time.⁴³
- The second model is the historical-dialectical model, which builds on the typological model by showing the possible developments, negations, extensions, and syntheses of each position.⁴⁴
- The third model is the historical-Marxist or historical-cultural model, which explores the social, economic, and cultural structures that influenced different philosophical positions.⁴⁵
- The fourth model is the textual historical model, which focuses on the reading of classic philosophical texts, often in anthologized form.⁴⁶
- The fifth model is the historical-critical-problematic or historical-thematic model, which identifies the fundamental knots of the philosophical tradition and presents them through the study of authors and texts around themes and problems.

⁴³ Hösle, Vittorio. *Forms of Truth and the Unity of Knowledge*. University of Notre Dame Press, 2014.

⁴⁴ Forster, Michael. *Hegel's dialectical method*. na, 1993.

⁴⁵ Sayers, Sean. "Marxism and the dialectical method." *Socialism, Feminism and Philosophy: A Radical Philosophy Reader* (1990): 140.

⁴⁶ Peters, Rik. *History as thought and action: The philosophies of Croce, Gentile, de Ruggiero and Collingwood*. Vol. 6. Andrews UK Limited, 2013.

Further different approaches are the *Anglo/American*, *French*, and *Spanish* models of education. Specifically, the Anglo/American model focuses on the analytical and argumentative models, such as Philosophy for children (P4C), critical thinking, debate, problem-solving, and Content and Language Integrated Learning (CLIL).

There are further teaching methodologies that are linked to the Anglo-American culture such as *Peer Education*, *Flipped Classroom*, *Cooperative Learning* which prioritize student involvement and self-directed learning. The benefits of these methodologies include developing autonomous learning skills, optimizing classroom time, improving educational interactions, stimulating digital skills and collaboration, and promoting personal growth and emotional management.

The *French model* of teaching philosophy in upper secondary school as a secular discipline has a long tradition that dates back to Victor Cousin, an eclectic philosopher who held important institutional positions in the 1830s. Currently, philosophy is taught from the final class of lycées and has a large number of hours per week, contributing to the achievement of the Baccalauréat as the exam includes a written dissertation and an oral test. The philosophy program aims to develop reading skills, personal judgment, and open-mindedness in students, allowing them to enter society by knowing how to think and act.

The *Spanish model* of teaching philosophy in high school started in the 1970s as a result of the educational reform of the Franco regime. The subject is taught in the second year of Baccalaureate, and the program aims to develop critical thinking skills and encourage students to reflect on contemporary social and political issues.

8. Theoretical-epistemological issues. In defense of philosophy and its teaching

According to Luciano Floridi, philosophy cannot fail to speak of its method, as well as of specific contents and no one else can do it for it. Self-reflexivity in philosophy is inevitable.⁴⁷ But we must

⁴⁷ Floridi, Luciano. *Pensare l'infosfera: La filosofia come design concettuale*. Raffaello Cortina Editore, 2020.

not make a merit of it, warns Floridi for whom clever thinking uses self-reflexivity to impress. According to the philosopher, the risk is to end up saying that philosophy only asks questions. It follows that asking questions is the most important thing and that philosophical reflection is based on asking about asking.

Philosophy would be the love of questions, but this definition does not correspond to the truth, for Floridi for whom philosophy is a passion for knowledge and understanding. Now, to know and understand you need to ask the right questions, in order to have relevant and meaningful answers. It's the convincing answers that make the difference.⁴⁸

Floridi states that to do good philosophy it takes courage, above all to ask the right questions at the right time and offer the correct answers, even if they are unpleasant or unpopular. Kant recalled that this was also the essence of the Enlightenment: *sapere aude*.⁴⁹ For Floridi the philosophical answers are refined over time, they are complementary and while some have only a historical value, others are still valid today.

Also teaching philosophy online involves asking questions that precede reflection on teaching via distance learning through the internet. First, we ask ourselves if it is not the case to defend the teaching of philosophy and philosophy itself, given that from Positivism onwards, philosophy seems to have lost its specificity, which was subsequently recovered. One of the assumptions that, in our opinion, should be remembered is that philosophy is the discipline of creating concepts, according to Deleuze and Guattari.⁵⁰ This basic assumption would already be enough to re-evaluate the function of philosophy which, however, requires a sort of *defense*.

There is a need to defend the teaching of philosophy (in schools and universities), in the context of a current climate, which is decidedly critical and oppositional, which increasingly limits and restricts the meaning of any 'thinking' practice. There is also the need to defend the teaching of philosophy as

⁴⁸ Floridi Luciano, 2020.

⁴⁹ Gattei, S., 2004. Back to Kant's 'Sapere aude!'. *History of the Human Sciences*, 17(4), pp.115-121.

⁵⁰ Gustavo Luiz Gava, "The Philosophy of Distance Education." *American Journal of Educational Research*, vol. 2, no. 12C (2014): 1-3. doi: 10.12691/education-2-12C-1, 1.

an *autonomous discipline*, with its precise value and precise autonomy. Moreover, the need to defend philosophy also emerges both from those who 'internally' deny its usefulness, and therefore from the philosophers themselves, especially those who wonder why philosophy should have its own didactic, or if on the other hand, philosophy is genuinely teachable.

Philosophy must also be defended by those who 'externally' deny its usefulness, thinking that good general teaching or a range of knowledge in the anthropological and psycho-pedagogical area is more than enough to give the tools and skills of future teachers.

We must add the problem of teaching philosophy via distance learning through digital platforms, which requires specific reflection that we will address in this research. After the reflections mentioned above, we still ask ourselves: *is it possible to teach philosophy?* The question may seem idle, but philosophy is such because, among other things, it questions the obvious.

On the other hand, the question and its answer are not so obvious, if since the time of Kant and Hegel, one wonders: but do you teach philosophy, or do you teach philosophizing? Moreover, if you are teaching philosophy, why bother with the teaching process? Furthermore, if you have to teach philosophizing, how can you give a 'didactic' to this process, which is so existential and personal? The problematic nature of philosophy makes the question of its teaching problematic.

We do not ask ourselves whether didactics of philosophy exist as we could ask ourselves for the didactics of mathematics or Latin having exact contents. In philosophy the content is "unclear" because every philosopher has his definition of philosophy, and it is not even clear whether this (eventual) content is teachable or not. We therefore ask ourselves first if philosophy can be taught. The question seems to have a more straightforward and more immediate answer if you replace the general term of "Philosophy" with the expression "history of philosophy".

In fact, to the extent that a 'historical' (and only historical) teaching method is chosen and to the extent that one does not want to pose too many theoretical problems, it can easily be said that: we are called to teach the historical development of the philosophical discipline, in its authors, texts and contexts. In any case, we might argue that *the opposition between a theoretical approach* (teaching

to philosophize) *and a historical approach* (teaching the history of philosophy) *is a false and misleading one*. Instead, a hermeneutic approach, which emphasizes the mediation between philosophy and philosophizing, can be implemented.

We have already written that each teacher has his\her own philosophical pre-understanding, which can be both a limitation and a resource. We think that a good teacher must interpret their choices and explain to themselves and their students why they have made certain philosophical-methodological choices. This requires being aware of other methods and philosophical perspectives and experimenting with them to challenge the plurality of didactic-philosophical perspectives consciously. Only in this way students can make their own conscious didactic-philosophical choices. So here is another mediation to be carried out: on the one hand, Gadamer would say, the awareness of one's prejudices, of the vision of the world from which things are interpreted⁵¹ (a vision that inevitably also influences our didactic posture).

9. Contemporary pedagogical and philosophical questions

Here we discuss the challenges and opportunities of using e-learning in the teaching of philosophy. We argue that the concept of *translation* is useful in understanding the problems inherent in the teacher-student relationship when using online platforms.

The translation work involves a necessary “risk” of creating something new, rather than mere repetition of what has already been done. We believe that the communicative sharing and the relational dimension in education, particularly in the teaching of philosophy, requires the creation of a third element and the redefinition of a new territory that goes beyond mere translation.

Teachers need to dispel doubts and dispel cultural prejudices towards e-learning and recognize the extraordinary power of new media in education. A potential approach to e-learning teaching strategies could be the *Averroes method*. It is a hermeneutic educational paradigm for translation of thought,

⁵¹ Gadamer, Hans-Georg. *Philosophical hermeneutics*. Univ of California Press, 1977.

language, and knowledge from one horizon to another, particularly in the digital era. In an e-learning environment is important to create a linguistic-communicative bridge between interlocutors to establish a dual gaze. In this way we can understand the significance of multilingualism and plurilingualism in education.

We want to highlight the *need to establish a special connection between language and things and between sign and meaning* to translate thought into understandable language for others. In this regard we must take in account the *subjectivity* and the *otherness* of every communication, which is essential in the hermeneutic circle of teaching to achieve a translation of thought and knowledge.

Therefore, exist a sort of *hermeneutic bridge* as a way of communication and translation between individuals. The bridge has two pillars, one rooted in existential experience and the other in rational representation through language. The *Lekton* (the meaning) is the gateway towards mutual understanding, allowing for translation between *different universes of meaning and signs*.⁵² Communication always involves translation, even when speaking to someone of the same language. It is necessary to find a common reference system to temporarily live in and expand the cultural horizon of reference to broaden the terrain of communication. The Internet has the ambition of *broad collective sharing* and allows for complex interlocutory dynamics that embrace linguistic, value, ethical, and symbolic knowledge, as well as precognitions that precede and anticipate judgment.

10. Digital philosophy

Edward Fredkin, a distinguished career professor at Carnegie Mellon University, coined the expression "digital philosophy". Fredkin's major contribution consists of an *ontological assertion: information is the first principle of reality*, its constituent element.

⁵² Frede, Michael. "The Stoic Notion of a lekton." (1994).

In other words: where Pythagoras put the numbers⁵³ and Leibniz⁵⁴ imagined the monads, here is Fredkin place the information. And this is, without a doubt, a philosophical assertion. *Information is the basis of material reality*, which since the time of the pre-Socratics it has been the privileged field of investigation of the philosophy, but it is also the basis of the mental reality of the subject who places himself question and investigate.

In even more transparent words, the information is also the basis of the formulation of the truth, the possession of which should quench the thirst for knowledge that moves the research. Information is both the *object and the subject*. Informational is the nature of truth: according to Fredkin everything moves within this circle. A further interesting perspective about the digital philosophy comes from Gregory J. Chaitin, an Argentine American mathematician and computer scientist.

When one begins to wonder what the true essence of an object is and what the nature of a physical law is, it is a sign that one is moving away from the safe harbor of science to head towards more uncertain metaphysical landing places. Gregory Chaitin, an eclectic researcher, does not hesitate to take this route. The wind that drives him is, even in his case, openly digital. The element that made it necessary to return to a metaphysical reflection by now long gone from the philosophical landscape has been the *computer*. The computer understood not as a physical machine for calculating, but, says Chaitin, as a “*new and marvelous philosophical and mathematical concept*”.⁵⁵ The computer becomes a philosophical-mathematical concept as it confers previously unimaginable meanings to the verbs “to understand” and “to know”.

After the advent of the computer, says Chaitin, understand the essence of an entity consists in identifying its algorithmic information content, i.e. the computer program that returns, on the screen, the shape of the entity considered; moreover, after the advent of the computer, know the physical law

⁵³ Dudley, Underwood. *Numerology, or, what Pythagoras wrought*. Cambridge University Press, 1997.

⁵⁴ Garber, Daniel. *Leibniz: Body, substance, monad*. OUP Oxford, 2009.

⁵⁵ Chaitin, Gregory. "Metabiology: Life as evolving software." *Draft Version*, available for download at <http://www.cs.auckland.ac.nz/~chaitin> (2010).

that regulating the becoming of a phenomenon is equivalent to identifying the process computational system that simulates, on the screen, the evolution of that phenomenon.

As far as the essence of a body is concerned, an objection can be raised immediately, based on the difference between a real object and a simulation of the same object; but here a fundamental digital axiom takes over, according to which the essence is identified with the form, the organization, the configuration, the pattern of the entity, and certainly not with the anonymous, indiscernible, highly replaceable elements materials.

After all, anyone in philosophy who has dealt with “essence”, from Platonic tradition to the Aristotelian-Thomistic one right down to Hegel, knows that by which a thing is what it is, and not another thing is to be recognized in the intelligible-formal element.⁵⁶

Since the advent of the computer, *that element intelligible-formal coincides with the informational scheme*. As far as the concept of *law* is concerned, Chaitin's elaboration assumes even more digital coloring.

Given that the essence of an entity, and therefore also of a phenomenon, is its informational description, in *binary code*, of course by law of that given phenomenon the computer program capable of generating them is an exact simulation. The shorter the better the law. The impossibility to obtain a data compression is equivalent to an absence of the law: in other terms, we are faced with a random event. Chaitin says that in his model, both the laws of nature and the resulting universe are represented as finite strings of bits. Laws are a program, and the Universe is its output.⁵⁷

11. Digital ontology

The announcement that *information is the ultimate and definitive principle of reality* is not proclaimed only by the voices of the two authors mentioned above. On the contrary, it is supported by a chorus that arises from several disciplinary fields and which finds an easy echo in the first place in the sector

⁵⁶ Urban, Wilbur Marshall. *The intelligible world: Metaphysics and value*. Vol. 14. Routledge, 2014.

⁵⁷ Chaitin, Gregory J. "On the length of programs for computing finite binary sequences." *Journal of the ACM (JACM)* 13, no. 4 (1966): 547-569.

of advanced technologies, where a large group of experts agree with what the historian and prescient co-founder of the MIT Media Lab, Nicholas Negroponte has been repeating for some time: *the transition from atoms to bits is irreversible and unstoppable*.⁵⁸ But it also draws from the area of brain and mind studies. For example, David Chalmers, an Australian philosopher and cognitive scientist, carefully collects all the news in the sector on his website consc.net. In this way he can conclude that *information* is a natural candidate to play a fundamental role also in the theory of consciousness.⁵⁹

The message, however, circulates, rather unexpectedly, even in the field of evolutionary research, as confirmed in his *The Blind Watchmaker* by an author who is certainly not a creationist like Richard Dawkins:⁶⁰ *at the heart of every living thing there is no fire, neither hot breath, nor a spark of life, but information, words, instructions.*

If you want to use a metaphor, you shouldn't think of fires and sparks and breath. Instead, think of a billion discrete, digital characters engraved on crystal tablets. If you want to understand life, you must think not of vibrating and throbbing gels and mushes, but of information technology. From all this it seems possible to conclude that, for all these authors, *information is the basis of reality* (natural, artificial, mental). Conforming to the tradition of classical philosophy, information is the archè, the first principle which constitutes the origin and foundation of the Whole.

Its nature is immaterial, even if it does not possess those typical requisites that tradition assigned to the first pole in the Spirit-Matter and Subject-Object dualisms: one could almost speak of a neutral or secular immateriality. With a large part of tradition, however, digital philosophy shares the idea that it is precisely this immaterial element that performs the function of "substantialisation" of material reality: this was the case for the number of Pythagoras, for Plato's hyperuranic idea, for the Leibnizian monad and so on.

⁵⁸ Negroponte, Nicholas, Randal Harrington, Susan R. McKay, and Wolfgang Christian. "Being digital." *Computers in Physics* 11, no. 3 (1997): 261-262.

⁵⁹ Chalmers, David J. "Facing up to the problem of consciousness." *Journal of consciousness studies* 2, no. 3 (1995): 200-219.

⁶⁰ Dawkins, Richard. *The blind watchmaker: Why the evidence of evolution reveals a universe without design*. WW Norton & Company, 1996.

Attempting to go further into the analysis of information, beyond its function in reality, perhaps trying to give it a definition, would be improper because, as Fredkin points out, the ultimate element cannot, by its nature, be traced back to something else. One is led to imagine that a *bit*, the minimum unit of reality-information, in both an ontological and perceptive sense, has sprung from the homogeneous and undifferentiated cosmic void. From that bit was the explosion of reality. Since then, that primordial Event is refracted, on a semantic or syntactic level, in every order of experience.

12. Human knowledge refined by collective and connective memory

The technological opportunities of the digital era push and demand certain transitions: *from text to hypertext, from media to cross-media, from the worktable to the platform*. It is evident that the relationship between intimacy and exteriority changes in a world where the memory of men and the interiority linked to it has migrated to the Web, on a support other than individual synapses.

Today, since knowledge has migrated to the Web, collective and connective memory has contributed to refine human knowledge. Moreover, personal *memories will be usable, visible, navigable, visited by others through the internet*.

The theme of collective memory inevitably leads us towards the theory of *Connectivism* a theory formulated for the first time in 2005 by George Siemens, professor of psychology at the University of Texas. Connectivism implies that the digital dimension is nourished by collective intelligence, a form of distributed intelligence, baptized by the sociologist Derrick De Kerckhove as *connective intelligence*. Finally, on a pedagogical and didactic level, I believe that the use of digital tools would find *in Stiegler's theses a theoretical foundation* that allows “justifying” the relationship that students establish with smartphones, tablets, computers and viewers for augmented and virtual reality, foreseen, among other things, in the school of the near immediate future.

Contributing points

1. *Infosphere*. According to the philosopher of information Luciano Floridi human beings are fully experiencing a fourth revolution, no less profound and radical than those initiated by Copernicus, Darwin and Freud. The philosopher wrote that the information and communication technologies are changing the conception people have of themselves, of the way humans socialize with others and the approach towards a shared and collaboratively built knowledge (*connectivism*). People begin to realize that every man or woman is not an independent entity, but rather an interconnected information-carrying agent, sharing a global environment made essentially of information.
2. *Distance learning as translation*. In the academic world and above all in the world of primary, middle and secondary schools a process of digitization of education has been launched which has shown both its technological strength and its pedagogical weakness. Like the whole world of education in all its forms, the teaching of philosophy has also had to know and adopt the formula of *distance learning*, experimenting new forms of communication mediated by computer technology. This happened, however, without having made a previous reflection on the pedagogical validity of this modality and without an adequate philosophical reflection on the ongoing change in teaching. An online digital lesson implies a communication that turns out to be a *translation*. In other words, the meeting with the other assumes the connotations of a *hermeneutic approach* for which the online meeting, but also the one in the presence, is never taken for granted but implies a continuous rediscovering of the teacher-student relationship.
3. *The reticular I and the hyper-text*. The structure of the internet follows the reticular being of the "I", thanks to hyper-textuality and hyper-mediality, an aspect presenting as an authentic enrichment of knowledge if skillfully managed by educators (*students: from consumers to prosumers*).
4. *Digital tools as prosthesis*. Digital tools can be considered *extensions* of human faculties, almost as if they were prostheses. In this regard, the concept of *prosthesis* was discussed by the contemporary French thinker Bernard Stiegler. Furthermore, on a pedagogical and didactic level, the use of digital tools would find in *Stiegler's theses* a theoretical foundation that would allow "justifying" the relationship that students establish with smartphones, tablets, computers and viewers for augmented and virtual reality, foreseen, among other things, in the school of the near immediate future.
5. *Digital ontology*. Philosophy has dealt with "essence", from Platonic tradition to the Aristotelian-Thomistic one right down to Hegel. A thing is to be recognized in the intelligible-formal element. Since the advent of the computer, *that element intelligible-formal coincides with the informational scheme according to a binary code*. According to Fredkin and Chaitin *information is the ultimate and definitive principle of reality*.

Conclusion

In the last chapter of the thesis, we have proposed one of the most discussed topics of recent years regarding learning supported by technologies: that of *online participation and knowledge sharing*. The perception of its importance has gradually grown in parallel with the technological evolution of the Web and has contributed to sanctioning the transition from the old distance learning models towards e-learning and then again towards the Web 2.0 paradigm.

Online teaching allows to manage the class so that the students are fully protagonists, thus exercising a substantial and participatory citizenship profile. This last aspect refers in particular to the concept of e-Citizenship which has nowadays become crucial for social life of the city of the 21st century.

The success of Web 2.0 has confirmed that the construction of *knowledge is indeed a social and situated process*. Whether it is learning in the formal or informal environment, of adults undergoing company training or of school or university students, the assumption on which the online didactic, educational or training action is based is substantially the belief that through the mediation of an adequate technology can foster the communicative relationship between several people.

At the same time, the *collaborative construction and sharing of knowledge* is developed, thus improving the teaching/learning processes. In this sense it must be recognized as a *systemic perspective* seeing teachers and students interacting in building knowledge.

In this thesis we briefly presented the thesis of the French philosopher Bernard Stiegler according to which there is *an original technicality of the human being* for which the digital tool is nothing but an inevitable structural component of man for the knowledge of the world.

In the context of a systemic interaction, however, one has to wonder what sense the teaching of philosophy has and whether there is a teaching of philosophy. The same questions are asked about

the teaching of philosophy online. The teaching of philosophy implies a profound reflection on the conveyance of contents which in themselves already contain multiple answers on the meaning of the discipline and on the way in which it should be conveyed. Furthermore, there is the essential relationship between content and the psycho-pedagogical modality of the transmission of knowledge. We realized that there is a one-to-one relationship between philosophy as content and its teaching. Since the time of Kant and Hegel, a teacher wonders if he\she teaches philosophy or teaches philosophizing.

We realized how difficult is focusing on didactics of philosophy which is so existential and personal. The problematic nature of philosophy makes the question of its teaching problematic. We do not ask ourselves whether didactics of philosophy exist as we could ask ourselves for the didactics of mathematics or Latin.

There are exact contents in the other disciplines and more or less effective teaching methods. In philosophy, however, the content is already unclear because every philosopher has his definition of philosophy, and it is not even clear whether this (eventual) content is teachable or not.

Moreover, in this work we tried to clarify how face-to-face teaching (not only philosophy) may have been enriched by distance learning. For this reason, we have resorted to concepts such as translation and the *hermeneutical circle*, referring to thinkers such as Ricoeur and Gadamer. Ricoeur's thinking underlines an irreducible ambiguity that persists in language, in understanding, in transmission, in the face of the awareness of not being able to suppress the otherness of the other.

Therefore, both in terms of communication and in terms of recognition of the other, distance learning raises questions on which it is necessary to reflect in order to set up a meaningful teaching. From this point of view, Gadamer's hermeneutics on the pedagogical level regarding the "consideration" of the other, especially if it is a learner, comes to our aid. Apart from distance teaching of philosophy, teachers perhaps need to rethink their teaching models.

In this sense, we have briefly described some teaching models of philosophy from various cultural backgrounds with the aim of highlighting the complex problematic nature of teaching this discipline.

However, rather than talking about a possible definitive solution for the complex problem of teaching philosophy, we prefer to “choose” a couple of potential mediations. The first proposed mediation is between philosophy and philosophizing: which becomes mediation between teaching the history of philosophy and teaching people to think for themselves. On the other hand, pre-understandings are inevitable. Each teacher has his philosophy, implicit or explicit, unaware or aware. This case applies both to those who teach in secondary schools and those who teach at the University. It is, therefore, also valid for those who teach Didactics of philosophy.

Teachers and learners can challenge the plurality of didactic-philosophical perspectives consciously: in this way the students will make their own conscious philosophical choice. Another potential mediation relies on Gadamer’s philosophy highlighting the importance of the awareness of one's prejudices, of the vision of the world from which things are interpreted.

Finally, one of the core topic is the concept of translation borrowed from Averroes, explaining that an online digital lesson implies a communication that turns out to be a translation. In other words, the meeting with the other assumes the connotations of a hermeneutic approach for which the online encounter, but also the one in the presence, is never taken for granted but implies a continuous rediscovering of the teacher-student relationship.

Last paragraph of the thesis focuses on the Luciano Floridi Onlife Manifesto, written in collaboration with thirteen scholars, stating there is anymore no difference between virtual and real life. Therefore, in XXI century new values are to be reconsidered from a social, economic, geopolitical point of views. In thesis ‘appendix, I transcribed the entire introduction extracted from “The 2016 Manifesto for Teaching Online”.

The content is in line with our thesis and our intention is to reinforce some of the content developed in our work. In fact, some of the core ideas driving the manifesto are *that good digital education lies in the hands of teachers*. Another one core idea is: *online can be the privileged mode. Distance is a positive principle, not a deficit*.

Bibliography

- A S. Makarenko, *Bandiere sulle torri*, tr. it., vol. I, *Edizioni Cultura Sociale*, Roma, (1955), 56.
- Agamben, Giorgio. *Che cos' è la filosofia? Macerata: Quodlibet*, 2016.
- Agostino, Aurelio. *De magistro*. La Scuola Editrice, 1968.
- Akçayır, Gökçe, and Murat Akçayır. The flipped classroom: A review of its advantages and challenges. *Computers & Education* 126, (2018): 334-345.
- Arsena, Angela. Per insegnare la filosofia on-line: suggestioni platoniche e questioni didattiche. *Journal of Educational, Cultural and Psychological Studies (ECPS Journal)* 16, (2017): 251-267.
- Atutov, P. R. The Founders of Marxism-Leninism on Polytechnical Education. *Soviet Education* (Taylor & Francis) 29, no. 7, (1987): 65-77.
- Bacon, Francis. *The new Organon, or true directions concerning the interpretation of nature*. (2017), 7.
- Bakhtin, Mikhail M. Author and hero in aesthetic activity. In *Art and answerability*, pp. 4-256. University of Texas Press, 2021.
- Bandler, Richard, John Grinder, and Steve Andreas. *Neuro-linguistic programming™ and the transformation of meaning*. Utah: Real People, 1982.
- Barthes, Roland. *The rustle of language*. Univ of California Press, 1989.
- Başaran İnce, Gökçen. Digital Culture, New Media and The Transformation of Collective Memory. *Ileti-s-im* 21, 2014.
- Bassi, Domenico. Il primo libro della Vita Civile di Matteo Palmieri e l' Institutio oratoria di Quintiliano. *Giornale storico della letteratura italiana* 23 (January 1894): 182.
- Bawden, David, and Lyn Robinson. *BawdeInformation overload: An overview*. 2020
- Bayer, Thora Ilin. *Cassirer's metaphysics of symbolic forms: a philosophical commentary*. Yale University Press, 2008.
- Bayne, Siân, et al. *The manifesto for teaching online*. MIT Press, 2020.
- Becker, K. A. History of the Stanford-Binet intelligence scales: Content and psychometrics. (*Stanford-Binet Intelligence Scales, Fifth Edition Assessment Service Bulletin No. 1*). Itasca, IL: Riverside Publishing. 2003.

- Belas, Lubomir, and Sandra Zakutna. Kant's method of teaching philosophy. *Studia Kantiana* 14.21 (2016): 27-36.
- Benjamin, James. The roots of informal logic in Plato. *Historical foundations of informal logic* (1997): 25-35.
- Benjamin, Ludy T. A history of teaching machines. *American psychologist* 43, no. 9 (1988):703.
- Berbaum, Jean. Développer la capacité d'apprendre. Recherche & formation (Institut National de Recherche Pédagogique), no. 13 (1993): 203-208.
- Bergson, Henri, Nancy Margaret Paul, and W. Scott Palmer. *Matter and memory*. Courier Corporation, 2004.
- Berlin, Isaiah. *Concepts and categories: Philosophical essays*. Princeton University Press, 2013.
- Berthoz, Alain. Simplexity. In *Simplexity*. Yale University Press, (2012), 12.
- Berti, Enrico, Alfredo Cantoni, Loris Ricci Garotti, Giorgio Guzzoni, Leo Lugarini, and Jerzi Pogonowski. *Il Pensiero. rivista di filosofia* 8, no. 1/3 (1963).
- Bianchi, Luca. Umberto Eco, Arte e bellezza nell'estetica medievale. *Rivista di Storia Della Filosofia* 45, no. 4 (1990).
- Bianco, Franco. Insegnamento della filosofia: metodo storico o metodo zetetico. *Paradigmi* 8 (1990): 391-410.
- Biase, Giuliana Di. Liberal education in John Locke's some thoughts concerning education. *Giornale Critico Della Filosofia Italiana*, September 2015: 573-574.
- Biasiotti, Maria Angela, and Roberta Nannucci. E-democracy prospects: e-citizenship within the European and Italian policies. *e-Society 2004* (2004): 859.
- Blumenberg, Hans. *La legibilidad del mundo*. Vol. 106. Grupo Planeta (GBS), 2000.
- Bourdieu, Pierre. *Leçon sur la leçon*. Minuit, 2016.
- Bransford, John D., Robert D. Sherwood, and Tom Sturdevant. *Teaching thinking and problem solving*. (1987), 162-181.
- Bruner, Jerome Seymour. *After John Dewey, What?* Bank Street College of Education, 1961.
- Bruner, Jerome. *In search of pedagogy - volume I: The selected works of Jerome Bruner*. New York: Routledge, 2006.
- Bruner, Jerome. *Toward a theory of instruction*. Vol. 59. Harvard University Press, (1966), 75.
- Buccellato, M. C. Metelli Di Lallo, Analisi del discorso pedagogico. *Rivista di Storia Della Filosofia* 22, no. 3 (1967).
- Butt, Trevor, and Gabriele Chari. *George Kelly e la psicologia dei costrutti personali*. F. Angeli, 2009.
- Buzzetti, Dino. Che cos'è, oggi, l'informatica umanistica? L'impatto della tecnologia. Dall'Informatica umanistica alle culture digitali. Edited by Gianfranco Crupi Fabio Ciotti. In *memoria di Giuseppe Gigliozzi. Roma: Quaderni Digilab* 2, 2012. 103-132.

- Bynum, Terrell Ward, and James H. Moor. *The digital phoenix: How computers are changing philosophy*. (1998).
- Caillot, Michel. Berbaum, Jean. -Développer la capacité d'apprendre. 1991; Berbaum, Jean. -Pour mieux apprendre. 1992.; Develay, Michel. -De l'apprentissage à l'enseignement. 1992. *Recherche & formation* 13, no. 1 (1993): 203-208.
- Cambi, Franco. Sulla pedagogia di Ferrante Aporti: note. *Studi sulla Formazione/Open Journal of Education* (Firenze University Press) 13, no. 2 (2010): 123-132.
- Cambi, Franco. *Insegnare e apprendere la filosofia: l'esercizio del pensiero*. Armando Editore, 2000, 7.
- Cardellini, Liberato, and Richard M. Felder. L'apprendimento cooperativo: un metodo per migliorare la preparazione e l'acquisizione di abilità cognitive negli studenti. *La chimica nella scuola* 21.1 (1999): 18-25.
- Carlo Pancera, Educare nel lavoro, educare al lavoro, in *E. Becchi, Storia dell'educazione*, La Nuova Italia, (1987), 89-107. (Pancera 1987).
- Carr, Nicholas. *Internet ci rende stupidi? Come la rete sta cambiando il nostro cervello*. Raffaello Cortina Editore, 2013.
- Casas, Martha. *The Use of Skinnerian Teaching Machines and Programmed Instruction in the United States, 1960-1970*. (2002).
- Cecchinato, Graziano. Tags: media, conoscenza. *Bibliotime* 12.2 (2009), 9.
- Chaitin, Gregory J. On the length of programs for computing finite binary sequences. *Journal of the ACM (JACM)* 13, no. 4 (1966): 547-569.
- Chaitin, Gregory. Metabiology: Life as evolving software. *Draft Version, available for download at <http://www.cs.auckland.ac.nz/~chaitin>* (2010).
- Chalmers, David J. Facing up to the problem of consciousness. *Journal of consciousness studies* 2, no. 3 (1995): 200-219.
- Chase, Greene William. Moira, Fate, Good, and Evil in Greek Thought. *L'Antiquité Classique (Harvard University Press)* 14, no. 2 (2013): 408-409.
- Chignell, Andrew, and Colin McLear. Three Skeptics and the Critique: Review of Michael Forster's Kant and Skepticism. *Philosophical Books* 51.4 (2010): 229-230.
- Ching, Hsianghoo Steve, Paul WT Poon, and Carmel Mc Naught, eds. *eLearning and digital publishing*. Vol. 33. Springer Science & Business Media, 2006.
- Chomsky, Noam. *A review of BF Skinner's verbal behavior*, 1996.
- Cohen, S. Marc, and C. D. C. Reeve. *Aristotle's metaphysics*. (2000).
- Commission of the European Communities Brussels, 21.11.2001- Eur-Lex. Accessed February 22, 2023. *European Guidelines for Validating Non-Formal and Informal Learning*. Accessed February 22, 2023. https://www.cedefop.europa.eu/files/3073_en.pdf.
- Commission of the European Communities Brussels, 21.11.2001- Eur-Lex.” Accessed February 22, 2023.

- Coyle, Do. Content and language integrated learning: Towards a connected research agenda for CLIL pedagogies. *International journal of bilingual education and bilingualism* 10, no. 5 (2007): 543-562.
- Crowder, Norman A. On the differences between linear and intrinsic programming. *The phi delta kappan* 44, no. 6 (1963): 250-254.
- D'Amore B. et al., Che problema i problemi. *L'insegnamento della matematica e delle scienze integrate*, Centro Morin, Paderno del Grappa (TV), 2006
- D'acunto, Giuseppe. La trinità della parola in Agostino. *Miscellanea francescana* 112 (2012).
- D'Alembert, Jean Le Rond. Discours préliminaire de l'encyclopédie. Paris: A. Colin et Cie. 1894
- D'Alessandro, Paolo, Matteo Bonazzi, and Andrea Potestio. Su Jacques Derrida: scrittura filosofica e pratica di decostruzione. *Su Jacques Derrida* (2012), 23-25.
- Dalton-Puffer, Christiane. *Discourse in content and language integrated learning (CLIL) classrooms*. Vol. 20. John Benjamins Publishing, 2007
- Darby, Michele. Debate: A teaching-learning strategy for developing competence in communication and critical thinking. *American Dental Hygienists' Association* 81, no. 4 (2007):78.
- David W. Johnson Roger T. Johnson, Cooperative Learning, Innovacion Educacion – I Congreso Internacional, Zaragoza, (2017): 2-3.
- Dawkins, Richard. *The blind watchmaker: Why the evidence of evolution reveals a universe without design*. WW Norton & Company, 1996.
- De Kerckhove, Derrick. Dall'alfabeto a internet. *L'homme* (2008).
- De Kerckhove, Derrick. *Psicotecnologie connettive*. EGEA spa, 2014.
- De Kerckhove, Derrick. *The architecture of intelligence*. Springer Science & Business Media, 2001.
- De Kerckhove, Derrick. *The augmented mind*. 40K, 2010.
- De Kerckhove, Derrick. The skin of Culture. In *Critical evaluations in cultural theory*, by Marshall McLuhan, edited by Gary Genosko, 148-160. London-New York: Routledge, (2005):148-160.
- De Pasquale, Mario. Insegnare filosofia. Modelli di pensiero e pratiche didattiche. *Comunicazione Filosofica* 20 (2008).
- Delprato, Dennis J., and Bryan D. Midgley. Some fundamentals of BF Skinner's behaviorism. *American psychologist* 47, no. 11 (1992): 1507, 1507.
- Derrida, Jacques, and Bernard Stiegler. *Echographies of television: Filmed interviews*. (2002).
- Derrida, Jacques. Freud e la scena della scrittura. *Id., La scrittura e la differenza, trad. it. a cura di G. Pozzi, Einaudi, Torino* (1971): 255-297.
- Descartes, René. *Regulae ad directionem ingenii*. Edited by George Hefferman. Amsterdam-Atlanta: Radopi, 1998.
- Descartes, René. *Discourse on method and meditations on first philosophy*. Hackett Publishing, 1999.
- Develay, Michel. De l'apprentissage à l'enseignement. Recherche et formation (Institut National de Recherche Pédagogique), no. 13 (1993): 203-208.

- Dewey, John. The Relation of Theory to Practice in Education. *Teachers College Record* 5, no. 6 (1904): 9-30.
- Dottrens, Robert. Édouard Claparède. *Bulletin Société Binet-Simon* 73 (1973), 1-3.
- Douglas Walton and Alan Brinton, 25-35. Oxon-New York: Routledge, 2016.
- Dreyfus, Hubert L. *What computers still can't do: A critique of artificial reason*. MIT press, 1992.
- Dubreucq, Francine. Jean-Ovide Decroly. *Prospects* 23, no. 1 (1993): 249-275.
- Dudley, Underwood. *Numerology, or, what Pythagoras wrought*. Cambridge University Press, 1997.
- Eco, Umberto. *Semiotics and the Philosophy of Language*. Vol. 398. Indiana University Press, (1986), 127.
- Ennis, Robert H. A concept of critical thinking. *Harvard educational review* (1962).
- Erasmus da Rotterdam, De ratione studii, in *E. Becchi and D. Julia, Storia dell'infanzia*, vol. II, Laterza, (Roma-Bari 1996): 207.
- Estes, William K. Is human memory obsolete? Comparisons of computer memory with the picture of human memory emerging from psychological research suggest basic differences in modes of operation, with little likelihood that one can replace the other. *American Scientist* 68.1 (1980): 62-69. European Guidelines for Validating Non-Formal and Informal Learning. Accessed February 22, 2023. https://www.cedefop.europa.eu/files/3073_en.pdf.
- Facci, Michele, et al. *Generazione Cloud. Essere genitori ai tempi di Smartphone e Tablet*. Edizioni Erickson, (2013), 28.
- Fasoli, Giovanni, and Lino Rossi. *Digital people: Tracce di antropologia digitale. Tra clinical model e development model*. libreriauniversitaria. it Edizioni, 2018, 52
- Federici, Corrado. Paul Ricoeur. On Translation. Translated by Eileen Brennan. With an Introduction by Richard Kearney. London and New York, Routledge, Pp. xx+ 46. *TTR: traduction, terminologie, rédaction* 19.1.(2006): 223-225.
- Ferri, Paolo. *Nativi digitali*. Milano: Bruno Mondadori, 2011.
- Ferrière, Adolphe. Qu'est-ce que l'École active? *Vasconcellos, F. Une École nouvelle en Belgique* (1922), 9-11.
- Feyles, Martino. *Ipomnesi: la memoria e l'archivio*. Rubbettino Editore, 2013.
- Floridi, Luciano. *The fourth revolution: How the infosphere is reshaping human reality*. Oxford: OUP, (2014), 25.
- Floridi, Luciano. *The onlife manifesto: Being human in a hyperconnected era*. Springer Nature, 2015.
- Floridi, Luciano. *Pensare l'infosfera: La filosofia come design concettuale*. Raffaello Cortina Editore, 2020.
- Forster, Michael. *Hegel's dialectical method*, 1993.
- Francis Edmunds, An Introduction to Steiner Education - *The Waldorf School*, Sophia Books, (2012), 39.

- Frede, Michael. *The Stoic Notion of a lekton*. (1994).
- Fredkin, Edward. An informational process based on reversible universal cellular automata. *Physica D: Nonlinear Phenomena* 45, no. 1-3 (1990): 254-270.
- Freud, S. Three Essays on the Theory of Sexuality (1905). *The Standard Edition of the Complete Psychological Works of Sigmund Freud, Volume VII (1901-1905): A Case of Hysteria, Three Essays on Sexuality and Other Works*, (1905):123-246.
- Fröbel, Friedrich, and Gustav Rönisch. Friedrich Froebel. In *How Children Learn*, by Linda Pound. Andrews UK Limited, 2019.
- G. Gentile, *Sommario di pedagogia come scienza filosofica*, vol. I, Sansoni, (Firenze 1954), 113.
- G.W.F. Hegel, *Philosophy of Right*, translated by S.W Dyde, Batoche Books, Kitchener, Ontario, Canada, 2001.
- Gadamer, Hans-Georg. *Philosophical hermeneutics*. Univ of California Press, 1977.
- Galilei, Galileo. Dialogo sopra i due massimi sistemi del mondo, edited by L. Sosio, Milano: Einaudi Editore (1970).
- Galliani, L. Apprendimento in età adulta, Contesti e Reti. In *Lectio magistralis presentata alla Conferenza ICT and Adult learning. European Agenda on Adult Learning. Torino, IT: Isfol*. 2013, 1.
- Gapski, Harald. Alcune riflessioni sulla digital literacy. *Italian Journal of Educational Technology* 16.1 (2008): 23.
- Garber, Daniel. *Leibniz: Body, substance, monad*. OUP Oxford, 2009.
- Garcia, Leovino Ma. On Paul Ricoeur and the Translation—Interpretation of Cultures. *Thesis eleven* 94, no. 1 (2008), 72-87.
- Gattei, S., 2004. Back to Kant's 'Sapere aude!'. *History of the Human Sciences*, 17(4), pp.115-121.
- Gava, Gustavo Luiz. The Philosophy of Distance Education. *American Journal of Educational Research* 2.12 (2014): 1-3.
- Gawel, Joseph E. Herzberg's theory of motivation and Maslow's hierarchy of needs. *Practical Assessment, Research, and Evaluation* 5, no.1 (1996), 11.
- Geake, John. Neuromythologies in education. *Educational research* 50, 2008: 123-133.
- Gentile, G. Il circolo della filosofia e della storia della filosofia. *La Critica* 7 (1909): 143-149.
- Gianfranco Crupi (a cura di), Atti del convegno di studi in memoria di Giuseppe Gigliozzi, (Roma, 27-28 ottobre 2011) *Quaderni Digilab* 2, (2012).
- Giovanni Stelli, David Lanari, *Modelli di insegnamento della filosofia: modello teoretico, modello storico, filosofia al computer*, Armando Editore, (2001), 22.
- Giuliana Di Biase, Liberal education in John Locke's some thoughts concerning education, in *Giornale Critico Della Filosofia Italiana*, (September 2015): 573-574.
- Giuliano, Luca. Identità e narrazione in ambienti sociali digitali. *Rassegna italiana di sociologia* 43.1 (2002), 17.

- Gordon W. Allport, *The nature of prejudice*, Addison Wesley Publishing Company, (1958): 39-41.
- Greene, William Chase. Moira, Fate, Good, and Evil in Greek Thought. In *Moira, Fate, Good, and Evil in Greek Thought*. Harvard University Press, 2013.
- Gustavo Luiz Gava, The Philosophy of Distance Education. *American Journal of Educational Research*, vol. 2, no. 12C (2014): 1-3. doi: 10.12691/education-2-12C-1, 1.
- Guyer, Paul, and Allen W. Wood. *Critique of pure reason*. (1998): 702-704.
- Hackforth, Reginald, ed. *Plato: Phaedrus*. No. 119. Cambridge University Press, (1972): 159.
- Hadot Pierre. *Philosophy as a way of life: Spiritual exercises from Socrates to Foucault*. (1995), 60.
- Harasim, Linda. A history of e-learning: Shift happened. *The international handbook of virtual learning environments* (2006), 59-94.
- Heidegger, Martin. *Being and Time* (translated by John MacQuarrie and Edward Robinson) Blackwell Publishers. (2001), 33.
- Heidegger, Martin. *The question concerning technology*. New York 214 (1977), 38-39.
- Hendrick, Carl. Why schools should not teach general critical-thinking skills. *Aeon Media Group Ltd* (2016).
- Henri Meschonnic, La poetica del tradurre, Italian translation, Marcos y Marcos, (2000), 62.
- Herczeg, Michael. Derrick de Kerckhove: The Architecture of Intelligence. *i-com* 1, no. 2 (2002):48.
- Hickie, William James. *The comedies of Aristophanes*. Vol. 2. London: HG Bohn, 1860.
- Hilton III et al., The four 'R's of openness and ALMS analysis: frameworks for open educational resources. *Open learning: The journal of open, distance and e-learning* 25, no. 1 (2010): 37-44.
- Horacek, Helene A. *The rear-view Mirror Syndrome in Education*. PhD diss., Fresno State College, 1971.
- Hösle, Vittorio. *Forms of Truth and the Unity of Knowledge*. University of Notre Dame Press, 2014.
- Howells, Christina, ed. *Stiegler and technics*. Edinburgh University Press, 2013.
<http://www.ibe.unesco.org/sites/default/files/cousinee.pdf>
- Hub, Bible. *διδάσκειν*. https://biblehub.com/greek/didaskein_1321.htm (accessed November 2022).
- Jacques Derrida, Khóra, Édition Galilée, Paris, (1993), 58.
- Jaeger, Werner. *Paideia*. Vol. 3. Oxford UP, 1939.
- Jansen, Erin. *NetLingo: The internet dictionary*. Netlingo Inc., (2002), 391.
- Jean d'Yvoire, Premessa al «Dossier Francia, Bollettino della Società Filosofica Italiana, (1996, 158), 103.
- Jean Jacques Rousseau. *Emile or Concerning Education, Extracts Containing the principal elements of pedagogy Found in the first three books*. With an introduction and notes by Jules Steeg, Depute, Paris, France, translated by Eleanor Worthington, D. C. Heath & Company, Boston, (1889): 147.

- Jones, Patrick, et al. Critical thinking skills for education students. *Critical Thinking Skills for Education Students* (2013): 1-128.
- Kant, Immanuel, and Paul Guyer. *The Cambridge edition of the works of Immanuel Kant*. (1996), 50.
- Kant, Immanuel. Reiss Hans, and H. B. Nisbet. An answer to the question: what is enlightenment? *Hans Reiss's (org, Kants political writings, Cambridge University Press, 1993, p. 54* (1991).
- Kant, Immanuel. *Kant's inaugural dissertation of 1770*. Vol. 1, no. 2. Columbia college, 1894
- Karl R. Popper, *Congetture e confutazioni. Lo sviluppo della conoscenza scientifica*, tr. it. Il Mulino, Bologna, (1972), 545.
- Kathleen, McLaughlin, and Pellauer David. *Time and Narrative*. (1984).
- Kaya, Zeki, and Ahmet Selçuk Akdemir. Learning and teaching: Theories, approaches and models. *Ankara: Çözüm Publishing* (2016).
- Krippner, Stanley. Systems Theories: Their origins, foundations, and development. *Advances in psychology*. 1998.
https://www.academia.edu/713345/Systems_Theories_Their_origins_foundations_and_development
- L'INSEGNAMENTO DELLA FILOSOFIA NEI LICEI IN EUROPA. Italia, Germania, Inghilterra, Spagna. Padova, lunedì 2 dicembre 1996: Palazzo del Bo', cortile antico, aula E. Prof. Gregorio Piaia (Università di Padova), *I programmi di Filosofia in Italia*; Prof. Dermot O' Keeffe (Trinity RC School), *L'insegnamento basic della Filosofia in Inghilterra*; Prof.ssa Barbara Brüning (Universität von Hamburg), *I programmi della Filosofia nei Länder in Germania*; Prof. Imenez Garcia (Universidad Complutense de Madrid), *I programmi di Filosofia in Spagna*. Prof. Paolo Parrini, *I programmi dell'insegnamento della Filosofia in Italia*. Coordinatori: Proff. Paolo Leonardi e Paolo Parrini. Sezione: Filosofia. ARIFS INTERNATIONAL, <https://www.arifs.it/convegni/>
- Lasswell, Harold D. The structure and function of communication in society. *The communication of ideas* 37.1 (1948): 136-139.
- Latour, Bruno. *An attempt at a compositionist manifesto*. Vol. 3. (2010): 471-490.
- Latour, Bruno. *We have never been modern*. Harvard university press, 2012.
- Le Gentil, Pierre. Jacques Le Goff, Les Intellectuels au Moyen Age. *Revue du Nord* (Éditions du Seuil), no. 156 (1957): 291-293.
- Le Gentil, Pierre. Jacques Le Goff, Les Intellectuels au Moyen Age. *Revue du Nord* (Éditions du Seuil), no. 156 (1957): 291-293.
- Lehrer, Jonah. *Proust was a neuroscientist*. HMH, 2008.
- Leroi-Gourhan André. *Le Geste et la Parole-tome 1: Technique et langage*. Vol. 1. Albin Michel, 2009.
- Leroi-Gourhan, André. *Gesture and speech*. miT Press, 1993.
- Letiche, Hugo, and Jean-Luc Moriceau. Simondon: Investigating the pre-organizational. *Culture and Organization* 23, no. 1 (2017): 1-13.

- Levinas, Emmanuel. *Entre nous: On thinking-of-the-other*. Columbia university press, 1998.
- Lex - 32014R0536 - En - EUR-Lex. EUR. Accessed February 22, 2023. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014R0536>
- Lex - 32014R0536 - En - EUR-Lex. EUR. Accessed February 22, 2023.
- LexUriServ <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2001:0678:FIN:EN:PDF>.
- Limone, Pierpaolo. *Ambienti di apprendimento e Progettazione didattica. Proposte per un sistema educativo transmediale*, Carocci, Roma, (2012), 68.
- Linge, David E. *Philosophical hermeneutics*. (1976), 7-10.
- Lipman, Matthew, and Ann Margaret Sharp. *Teaching Children Philosophical Thinking: An Introduction to the Teacher's Manual for Harry Stottlemeier's Discovery*. (1975).
- Liu, Tze-Chang. Digital policy in European countries from the perspective of the Digital Economy and Society Index. *Policy & Internet* 14.1 (2022): 202-218.
- Lourenço, Orlando. Piaget and Vygotsky: Many resemblances, and a crucial difference. *New ideas in psychology* 30, no. 3 (2012): 281-295.
- Ludwig Wittgenstein, *Philosophical Investigations*, Translated by G. E. M. Anscombe, P. M. S. Hacker and Joachim Schulte Revised fourth edition by P. M. S. Hacker and Joachim Schulte, Blackwell Publishing Ltd, (2009): 88e.
- Malusa, L. (Ed.), *La trasmissione della filosofia nella forma storica: Comunicazione e documenti* (Vol. 33). Franco Angeli, 1999.
- Manara, Fulvio Cesare. *Comunità di ricerca e iniziazione al filosofare: Appunti per una nuova didattica della filosofia*. Lampi di stampa, 2004
- Mangiatordi, Andrea. *Didattica senza barriere. Universal Design, Tecnologie e Risorse Sostenibili*. Pisa: EDIZIONI ETS, 2017.
- Maria Nicodemo - Filippo Gomez Paloma, Oltre l'Educazione Nuova? *Ricerche di Pedagogia e Didattica – Journal of Theories and Research in Education* 9, 3 (2014),124.
- Maritain, Jacques, and Giancarlo Galeazzi. *Per una filosofia dell'educazione*. La scuola, (2001), 61-72.
- Mark Wrathall, *How to read Heidegger*, W. W. Norton & Company, New York London, (2005), 8.
- Martin Heidegger, *Basic Concepts of Aristotelian Philosophy*, translated by Robert D. Metcalf/Mark B. Tanzer, Indiana University Press, (2009): 18-25.
- McCulloch, Warren S. Machines that think and want. *The Embodiments of Mind* (1965):307-318.
- McLuhan, Marshall. *Understanding media: The extensions of man*. MIT press, 1994.
- Midoro, Vittorio. Quale alfabetizzazione per la società della conoscenza?. *Italian Journal of Educational Technology* 15.2 (2007): 47.
- Miettinen, Reijo. The concept of experiential learning and John Dewey's theory of reflective thought and action. *International journal of lifelong education* 19.1 (2000): 54-72.

- Montessori, Maria. *The Montessori method: the origins of an educational innovation: including an abridged and annotated edition of Maria Montessori's The Montessori method*. Rowman & Littlefield, 2004.
- Moran, Dermot. *Husserl's crisis of the European sciences and transcendental phenomenology: An introduction*. Cambridge University Press, (2012), 318-324
- Morgan, Clara. Constructing the OECD programme for international student assessment. In *PISA under examination*, pp. 47-59. Brill, 2011.
- Morin, Edgar. *Les idées: leur habitat, leur vie, leurs moeurs, leur organization*. Vol. 4 of La méthode. (1986).
- Most, Glenn. Heraclitus on religion. *Rhizomata* 1, no. 2 (2013): 153-167.
- Murphy, Patricia. Defining pedagogy. In *Equity in the classroom*, 17-30. Routledge, 2003.
- Murray, James S. Disputation, Deception, and Dialectic: Plato on the True Rhetoric (Phaedrus 261-266). JSTOR, 1988: 279-289.
- Negroponte, Nicholas, Randal Harrington, Susan R. McKay, and Wolfgang Christian. Being digital. *Computers in Physics* 11, no. 3 (1997): 261-272.
- Newberg, Andrew B. *Principles of neurotheology*. Routledge, 2016.
- Newman, A. L. (2015). What the right to be forgotten means for privacy in a digital age. *Science*, 347(6221), 507-508
- Nietzsche, Friedrich Wilhelm. *Aurora. Pensieri sui pregiudizi morali*. Vol. 328. Newton Compton Editori, (2012), 32.
- Nietzsche, Friedrich Wilhelm. *Beyond good and evil*. Www. BNPublishing. com, 1968.
- Novikoff., Alex J. *The Medieval Culture of Disputation. Pedagogy, Practice, and Performance*. Church History and Religious Culture, April 9, 2018: 145-148.
- Olimpo, Giorgio. Rifessioni brevi su digital literacy e digital competence. *Italian Journal of Educational Technology* 21.1 (2013): 14-18.
- Online Initiative: <https://ec.europa.eu/digital-agenda/onlife-initiative>
- Online Manifesto link: <https://ec.europa.eu/digital-agenda/en/onlife-manifesto>
- Otto, W. Gli dèi della Grecia, tr. di G. Federici Airoldi, *Adelphi, Milano* (2004), 70.
- Outler, A. C. (1955). Augustine: confessions. *Retrieved November, 21, (2005)*, 113.
- Päivärinta, Tero, and Øystein Sæbø. Models of e-democracy. *Communications of the Association for Information Systems* 17.1 (2006): 37.
- Palfrey, John, and Urs Gasser. *Born digital: Understanding the first generation of digital natives*. ReadHowYouWant. com, 2011.
- Pancera, Carlo. Educare nel lavoro, educare al lavoro. In *Storia dell'educazione*, by E. Becchi, edited by E. Becchi, 89-107. La Nuova Italia, 1987.

- Pederson, Randall J. The Medieval Culture of Disputation. Pedagogy, Practice, and Performance, by Alex J. Novikoff. *Church History and Religious Culture* 98, no. 1 (2018): 145-148.
- Pérez et al., Scenari connettivisti e progetto di Learning Object adattabili alla diversità cognitiva. *Italian Journal of Educational Technology* 19, no. 2 (2011): 102-111.
- Perkinson, Henry J. *Learning from Our Mistakes: A Reinterpretation of Twentieth-century Educational Theory*. Peaeger, 1984.
- Perla, Loredana, and Viviana Vinci. Didattica per competenze nei Licei. Una ricerca collaborativa Scuola-Università. *Italian Journal of Educational Research* 16 (2016): 127-140.
- Peters, Michael A. Interview with Pierre A. Lévy, French philosopher of collective intelligence. *Open Review of Educational Research* 2, no. 1 (2015): 259-266.
- Peters, Rik. *History as thought and action: The philosophies of Croce, Gentile, de Ruggiero and Collingwood*. Vol. 6. Andrews UK Limited, 2013
- Petrilli, Susan. Dialogue, responsibility and literary writing: Mikhail Bakhtin and his Circle. *Semiotica* 2016, no. 213 (2016): 307-343.
- Petrina, Stephen. Sidney Pressey and the automation of education, 1924-1934. *Technology and Culture* 45, no. 2 (2004): 305-330.
- Piaget, Jean, Willem Evert Beth, and Wolfe Mays. *Epistémologie génétique et recherche psychologique*. Presses univ. de France, 1957.
- Piaget, Jean. Piaget's theory. In *Piaget and his school*, pp. 11-23. Springer, Berlin, Heidelberg, 1976.
- Pickett, Adrienne, and J. G. York. Multicultural teacher education: Developing a hermeneutic disposition. *Philosophy of Education Archive* (2011): 68-77.
- Pierluigi Bertolini. *L'esistere pedagogico. Ragioni e limiti di una pedagogia fenomenologicamente fondata come scienza*. La Nuova Italia, (Firenze 1988), 114-115.
- Pischetola, Magda, and Lyana Virgínia Thédiga de Miranda. Systemic thinking in education and a situated perspective on teaching. *Ciência & Educação (Bauru)* 26 (2020).
- Plato, Plato. *Sophist*. BoD—Books on Demand, 2019.
- Plato, Republic, 6, 509d-511e.
- Plato. Plato's Phaedrus. Edited by Reginald Hackforth. Translated by Reginald Hackforth. Cambridge: Cambridge University Press, 1972.
- Plato. The Republic. Edited by G. R. F. Ferrari. Cambridge: Cambridge University Press, 2000.
- Popper, Karl R. *Epistemologia razionalità e libertà*. Armando, (1972), 112.
- Popper, Karl. *The Logic of Scientific Discovery*. London and New York: Routledge Classics. (2002), 20.
- Pressey, Sidney L. *Psychology and the new education*. 1944.
- Ricoeur, Paul. Ermeneutica filosofica ed ermeneutica biblica. *Studi biblici* 43 (1977).

- Ricoeur, Paul. *From Text to Action: Essays in Hermeneutics*, II, translated by Kathleen Blamey and John B. (1991), 73.
- Ricoeur, Paul. *La traduzione tra etica ed ermeneutica*, tr.it., Morcelliana, Brescia, (2001), 33.
- Ricoeur, Paul. *Dal testo all'azione. Saggi di ermeneutica*. Vol. 244. Editoriale Jaca Book, (1989), 67.
- Ricoeur, Paul. *Il conflitto delle interpretazioni*. Vol. 396. Editoriale Jaca Book, (1995), 31-32.
- Ricoeur, Paul. *Interpretation theory: Discourse and the surplus of meaning*. TCU press, 1976.
- Rivoltella, Pier Cesare. *Neurodidattica. Insegnare al cervello che apprende*. Raffaello Cortina, 2012. 8.
- Roberts, Ben. Stiegler reading Derrida: The prosthesis of deconstruction in technics. *Postmodern Culture* 16, no. 1 (2005).
- Rockwell, Geoffrey. *Defining dialogue: From Socrates to the internet*. (2003).
- Rogers, Carl Ransom. *The carl rogers reader*. Houghton Mifflin Harcourt, (1989), 62.
- Roque, Maria-Angels. Towards Ecologised Thought: Interview with Edgar Morin. *Quaderns de la Mediterrània* 16 (2011): 101-106.
- Rose Edwards, A.S. *Makarenko's General Educational Ideas and Their Applicability to a Non-Totalitarian Society*, Dissertations, Loyola University Chicago, (1991), 245.
- Rose, Herbert Jennings. *A handbook of Greek mythology*. Routledge, 2004.
- Rosmini, A. Teosofia, a cura di SF Tadini. *Bompiani, Milano* 106 (2011), 1279.
- Rotterdam, Erasmo da. De ratione studii. Vol. 2, in *Storia dell'infanzia*, vol. II, Laterza, (Roma-Bari 1996), 207., by Egle, and Dominique Julia Becchi. Roma-Bari, Italia: Laterza, 1996.
- Rousseau, Jean Jacques. *Emile or Concerning Education: Extracts Containing the Principal Elements of Pedagogy Found in the First Three Books*. Edited by Jules, Depute, Paris, France Steeg. Translated by Eleanor Worthington. Boston: DC Heath & Company, 1894.
- Ruffaldi, Enzo, and Gaspare Polizzi. *Insegnare filosofia*. (1999), 68.
- Sadiku, Matthew NO, Mahamadou Tembely, and Sarhan M. Musa. Digital philosophy. *International Journal of Advanced Research in Computer Science and Software Engineering* 8.5 (2018): 27.
- Sartre, Jean-Paul, and Sarah Richmond. *Being and nothingness: An essay in phenomenological ontology*. Routledge, 1956.
- Sassi, Maria Michela. Parmenides and Empedocles on krosis and knowledge. *Apeiron* 49, no. 4 (2016): 451-469.
- Sayers, Sean. Marxism and the dialectical method. *Socialism, Feminism and Philosophy: A Radical Philosophy Reader* (1990):140.
- Schneider, Elisabeth. *Naturae rationalis individua substantia. Boethius as a Paradigm of Late Ancient Thought*. Berlin-Boston: De Gruyter, (2014):245

- Sedley, David. *Plato's cratylus*. Cambridge University Press, 2003.
- Shiner, Michael. Defining peer education. *Journal of adolescence* 22, no. 4 (1999): 555-566.
- Siemens, George. Connectivism: Learning as network-creation. *ASTD Learning News* 10.1 (2005): 1-28.
- Siemens, George. Elearnspace. Connectivism: A learning theory for the digital age. *Elearnspace.org* (2004): 14-16.
- Sloterdijk, Peter. *Not saved: Essays after Heidegger*. John Wiley & Sons, 2017.
- Solop, Frederic I. Digital democracy comes of age: Internet voting and the 2000 Arizona Democratic primary election. *PS: Political Science & Politics* 34.2 (2001): 289-293.
- Stein, Edith. On the Problem of Empathy, translated by Waltraut Stein. *Washington: ICS* (1989), 116.
- Steinbauer, Anja. Sapere aude!: An introduction to Kant. *Philosophy Now* 49 (2005): 7-9.
- Steiner, George. *Lessons of the Masters*. Vol. 2001. Harvard University Press, 2003.
- Stiegler, Bernard, *La Technique et le temps, 2. La désorientation*. Paris, Galilée (1996), 121.
- Stiegler, Bernard. *La technique et le temps, T. 3: Le temps du cinéma et la question du mal-être*. *Revue Philosophique de la France Et de l 194*, no. 4 (2004).
- Stiegler, Bernard. *La technique et le temps: 1. La faute d'Epiméthée*. (1994): 184.
- Stiegler, Bernard. *Technics and time: The fault of Epimetheus*. Vol. 1. Stanford University Press, 1998.
- Stiegler, Bernard. Temps et individuations technique, psychique et collective dans l'oeuvre de Simondon. *Intellectica* 26, no. 1, (1998): 241-256.
- Stiegler, Bernard. *Automatic society, volume 1: The future of work*. John Wiley & Sons, 2018.
- Stiegler, Bernard. *La technique et le temps: 1. La Faute d'Épiméthée. 2. La Désorientation 3. Le Temps du cinéma et la question du mal-être*. Fayard, 2018.
- Stjernberg, Fredrik. Epistemic vices, critical and zetetic. 2/ *STEN ANTTILA & SUSANNA AXELSSON* (2021): 65.
- Talisse, Robert B. Teaching Plato's Euthyphro Dialogically. *Teaching Philosophy* 26, no. 2 (2003):163-175.
- Tanaka, Fumihide, Aaron Cicourel, and Javier R. Movellan. Socialization between toddlers and robots at an early childhood education center. *Proceedings of the National Academy of Sciences* 104, no. 46 (2007): 17954-17958.
- Taxonomy of Educational Objectives - The Classification of Educational Goals, Handbook 1 - Cognitive Domain, by a Committee of College and University Examiners: *Benjamin S. Bloom. Editor University Examiner University of Chicago, Max D. Engelhart Director. Department of Examinations Chicago City Junior Colleges, Edward J. Furst Chief, Evaluation and Examination Division University of Michigan, Walker H. Hill Examiner. Board of Examiners Michigan State University, David R. Krathwohl Coordinator of Research Bureau of Research and Service Michigan State University, Longmans, Green and Co LTD, London, 1956*
- Tessaro F., *Metodologia e didattica dell'insegnamento secondario*, Armando Editore, Roma, 2002.

- Testoni, Laura. Digital literacy e mediazione informativa attraverso la lettura dell' Onlife Manifesto. 2 Vedianche, (2014): 17-20.
- Thomas O. Beebee, Borges Translating Ibn Rushd Translating Aristotle. In: Transmesis. Palgrave Macmillan, New York, (2012), 116.
- Titone, Renzo. Orientamenti e problemi: Metodologia didattica. Zurigo: Pas-Verlag, 1963.
- Todaro, Letterio: Between New Education and idealistic vision: Giuseppe Lombardo Radice and the arduous path of l'Educazione Nazionale in Italy (1927-1933) - In: *Schweizerische Zeitschrift für Bildungswissenschaften* 41 (2019) 2, S. 354-368 - URN: urn:nbn:de:0111-pedocs-203495 - DOI: 10.25656/01:20349.
- Topping, Keith J. Trends in peer learning. *Educational psychology* 25, no. 6 (2005): 631-645.
- Tran, Van Dat. Theoretical Perspectives Underlying the Application of Cooperative Learning in Classrooms. *International Journal of Higher Education* 2, no. 4 (2013): 101-115.
- Trendelenburg, Friedrich Adolf. *Über den letzten Unterschied der philosophischen Systeme*. Dümmler, 1849.
- Tucker, Bill. The flipped classroom. *Education next* 12, no. 1 (2012): 82-83.
- Umberto Eco, *Fenomenologia di Mike Buongiorno*, in Diario minimo, Mondadori, Milano, (1988), 10-11.
- Umberto, E. C. O. *The limits of interpretation*. (1994), 44.
- Urban, Wilbur Marshall. *The intelligible world: Metaphysics and value*. Vol. 14. Routledge, 2014.
- Vattimo, Gianni. *Beyond interpretation: The meaning of hermeneutics for philosophy*. (1997).
- Vernadsky, Vladimir I. *The biosphere*. Springer Science & Business Media, 1998.
- Vico, Giambattista. *The new science of Giambattista Vico*. Cornell University Press, 2015.
- Viganò, Renata. *Pedagogia e sperimentazione: metodi e strumenti per la ricerca educativa*. Vol. 2. Vita e pensiero, (2002), 275.
- Von Bertalanffy, Ludwig. A systems view of man. Edited by Paul A. La Violette. Routledge, 2019.
- Walton, Douglas. *Abductive reasoning*. University of Alabama Press, 2014.
- Watzlawick, Paul, Janet Beavin Bavelas, and Don D. Jackson. *Pragmatics of human communication: A study of interactional patterns, pathologies and paradoxes*. WW Norton & Company, (2011), 48-71.
- Weil, Simone. *The need for roots: Prelude to a declaration of duties towards mankind*. Translated by Arthur Wills. London and New York: Routledge, 2003.
- Werner, Daniel S. *Myth and Philosophy in Plato's Phaedrus*. Cambridge University Press, 2012.
- Wiener, Norbert. The human use of human beings. *New York* (1954), 17.
- Wiktionary. δέχομαι. n.d. <https://en.wiktionary.org/wiki/> (accessed November 2022).
- Wiktionary. δέχομαι. n.d. <https://en.wiktionary.org/wiki/> (accessed November 2022).

Wiley, David A., Connecting learning objects to instructional design theory: a definition, a metaphor, and a taxonomy, p. 7, in D. A. Wiley (Ed.), *The Instructional Use of Learning Objects*. Bloomington, in Association for Educational Communications and Technology, 2000.

Willingham, Daniel T. Critical thinking: Why is it so hard to teach? *Arts Education Policy Review* 109, no. 4 (2008): 21-32.

Winden, M. Marcovich and J.C.M. Van. *Clementis Alexandrini Paedagogus*. Leiden - Boston: Brill, 2002.

Wittgenstein, Ludwig. *Tractatus logico-philosophicus*. Routledge, 2013.

World Economic Forum. *New vision for education: Unlocking the potential of technology*. Vancouver, BC: British Columbia Teachers' Federation, 2015.