

**ERD 2021****9th International Conference Education, Reflection, Development****DEFINING THE MAP OF PHILOSOPHY OF EDUCATION IN THE  
AGE OF INFOSPHERE**

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**Abstract**

In contemporary society, the Internet has sharply redesigned both the scenario of communication and education. By connecting computers and portable devices, the Net has allowed access and planetary sharing of information. This has resulted in a new cultural revolution called "infosphere" by philosopher Luciano Floridi. This revolution needs a specific philosophy. The philosophy of education as a philosophical science can play a critical role in the age of the Infosphere. Based on these premises, this paper aims to deepen, by a hermeneutical methodology approach, the meanings of philosophy of education within the age of digital culture. Secondly, it seeks to understand its possible role and function as a science of digital education within contemporary communication scenarios. To explore this second aim, we have conducted some focus groups with secondary education teachers. A text analysis software has analysed the qualitative data collected through the focus groups. Thanks to this analysis, we have been able to sketch a concept map of the philosophy of education and show its potential as an educational science capable of understanding and removing possible paradoxes, criticalities, obscure and hidden aspects of the Internet. The paper will conclude by highlighting the relevance of the philosophy of education as a critical tool for contemporary teachers and educators who deal with the Internet and ICT.

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## 1. Introduction

In contemporary society, the advent of Web 2.0 has sharply redesigned both the communication and education scenarios intended as an intentional transmission of values aimed at improving the person and his interaction with the world and others.

The advent of the Internet, i.e., the network that connects computers and portable devices, allowing the planetary access and sharing of information processed through these tools, has posed new challenges for philosophy. In this context, philosophy gives a diachronic (in the historical becoming) and synchronic (in the *hic et nunc* of its immediacy) interpretation of its relationship with the surrounding world aimed at the acquisition and elaboration of valuable knowledge for the development of humankind (Volpi, 2004).

The philosophy of education aims to develop a deep, systematic, and critical understanding of the educational fact and processes through which human beings transmit their values and norms from a generation to another. All this requires a general theory to be better understood in its possible paradoxes, critical issues, and obscure and hidden aspects to remove the obstacles that prevent the full realization of human beings' existential condition and humanizing process (Cambi, 2005).

The philosophy of education investigates the anthropological and philosophical assumptions of education in the light of values, norms, and rules manifested in human beings' attitudes and behaviors. These are rich in anthropological and philosophical beliefs. The philosophy of education is the discipline that also studies the different world conceptions among educational sciences. Moreover, it investigates how the educational fact is conceived in its elements, structures, and fundamental developments. The philosophy of education is a teleological science that examines the ends and aims of education to pursue through educational action (García & García, 2012).

Mainly by using the theoretical and historical-comparative method, the philosophy of education tries to answer what education is in the

light of human values (Clark, 2015). Without education, there would not exist a human being but only an animal. *Homo Educandus* – which represents the subject, purpose, and "object" of the philosophy of education – is simultaneously a biological, psychical, and social being, never passive but always active.

The philosophy of education is not a simple "philosophy" focused on education and the educational with all the close range of dimensions it implies. It always remains a philosophy that addresses the problems of the human *sub specie educationis*, concretely and spiritually. Therefore, "doing philosophy of education" implies "having" (or "becoming aware of") a conception of the world and life. Without awareness, the educator and teachers could not find a comprehensive explanation of the plenty of "why" of the educational reality they and their pupils are deeply immersed in. Philosophical knowledge is fundamental for the educator because it gives the latter a critical ability to understand their thoughts and behaviors.

Philosophy is a conception of the world and of life that affects behavior. The educator must be aware of their behaviors to remove any distortions, paradoxes, or contradictions in communication with the student. This happens in the case of the hidden curriculum.

Each type of philosophy chosen by the educator leads to an attitude that, in turn, will lead to behaviors that reflect the philosophy adopted. Philosophy is a totalizing reflection in which the natural and the human are strictly connected. Therefore, the educator cannot undertake their mission if, in the beginning, they did not consciously elaborate, by clarifying it to themselves, an image of the human being they intend to educate. For this reason, as the philosopher of education Edda Ducci (2002) has highlighted, the philosophy behind the action should always be a "philosophy of the human".

However, philosophy represents a spiritual activity and a tool that refers to a specific research and investigation technique to understand and interpret the human being as "inseparable" from education and learning (Guilherme, 2018).

Philosophy is, after all, linked to knowledge in education. It studies the more general laws that refer to objective reality: that is, nature, society, and learning. Etymologically the term "philosophy" connotes a love of wisdom (sophia). In its interpretation, derived from Socrates, Plato, and Aristotle, philosophy searches for "wisdom." Philosophy can be considered an approach that guides the individual to acquire a concrete vision of life, values, meaning, and purposes. As a component of life, education is also part of philosophy. The philosophy of education, therefore, pursues the following objectives:

1. To determine the essence and meaning of learning, training, and education as different dimensions linked to a single process.
2. To determine the objectives of education in existential and value terms for human life.

### **1.1. A philosophy for understanding the educational process in the contemporary world**

Taking this into account, we can identify at least three main approaches within the philosophy of education. Mainly: the essentialist approach, the existentialist, and the critical one.

1) The essentialist approach emphasizes how human existence is something unchanging over time. Such an approach was dominant in the past, especially in antiquity and in the Middle Age, passed from Plato to contemporary Neotomists. According to this view, the human being has an unchanging and eternal essence or nature. It is evident that if the human being has an unchangeable essence, the aims of education must also be immutable, universal, absolute, and equal for all human beings. Consequently, education conceived according to this principle will be a rational process, always subject to control, whose purpose is to achieve specific objectives in the most effective way possible. In this context, the main aim of education is to make the subject autonomous and capable of controlling and rationalizing the learning process in the best possible way. This philosophical approach is centred on a rationalistic and positivistic conception of education. According to this concept, education is a science that presents - as such - its "scientific" method, and it is capable of applying it to achieve the expected results. These results can always be measured and evaluated.

2) The existentialist approach, on the other hand, develops its analysis starting from the "existential" content of education as something linked to human life and the personal experience of the subject. According to this approach, in human life – manifested primarily as experience – existence precedes the essence. Human values, therefore, arise in the historical process and are enriched by cultural development, and have a changeable character. According to the existentialist approach, the philosophy of education does not have a single universal objective. It has an assortment of changing purposes that

vary according to historical and geographical circumstances, and even from one individual to another. This approach conceives truth as a continually improving process throughout history. The educational process does not have an end beyond itself, but it is itself its end. The educational process is all that favours the growth and improvement of the human being as a person. This approach conceives education as something that is continuously changing and in a phase of endless experimentation.

The genesis of this approach can be found in the educational philosophies of the greats of the history of western pedagogy: Rousseau, Froebel, Pestalozzi, Montessori. According to Dewey, we can never separate the principles of human interaction from each other. The union of both elements allows us to evaluate the value of the experience, the practical consequences of the latter, taking into account the individual peculiarities, the flexibility of the learning path, the times, the methods, and the educational contents of the learning process. What matters is not so much what a person learns, but the cultivation of the values that learning involves and the tools for further knowledge (Collis & Moonen, 2008).

3) The critical approach in the philosophy of education is inspired by the social theories of the Frankfurt School (in particular Habermas) and, even before, in chronological order, by the thought of Karl Marx and Friedrich Nietzsche. This approach has its climax in critical pedagogy (Paulo Freire's pedagogy). According to this conception, education has a "critical" function: that is, it must help the person to unmask the possible conditionings, "other" interests, and the power relationships that are inherent in the educational process as a process that involves relationships of strength between people, power groups and "classes."

This approach intends to understand the educational process at the "root" by eliminating all the superstructural elements (mainly the ideologies that always hide power interests from the dominant groups).

According to this approach, education must always have an "emancipatory" and "political" function, aiming to acquire values oriented to citizenship and democracy. Moreover, it must always relate to aspects of social justice and freedom. In the critical philosophical approach, knowledge is never something static and neutral for social values and ideologies. However, by going to the "radicality" of education, it is possible to lay the foundations for a critical vision of the whole educational process on which reflective thinking can take root, capable of overseeing any other interests that may result hidden within the educational process itself. These Interests might not agree with the characteristic of "intentionality" of the educational process: that is, the promotion of all the dimensions of the person, their freedom, the protection of their rights as a human being, their improvement from every point of view.

The critical philosophy of education shows how knowledge is never static and neutral about dominant interests and ideologies. It comes to be continuously used to manipulate and legitimize different claims to access power and money at the expense of individuals' interests, freedom, and rights. Knowledge always has ethical and political consequences, and it is necessary to become aware of this perspective, sometimes hidden in social practices. Indeed, fundamental knowledge generates awareness of "why" they occur and not just "how."

The critical approach starts from the assumption that human education, if properly analysed and understood in its ethical value and social structure, can be transformed into an instrument of social change. To achieve this change, we must understand the role played by educational agents (mainly the

school, the State, the family, the Church / religious system, and the media, for example). They are not seen only as agents who exercise primary social control and oversee socialization but also as "political" agents who, in a non-neutral way, influence both behaviour and the perception of people's values.

Education as a set of processes and emancipatory and liberating actions can make people aware of what influences their minds and behaviour.

In the Internet, social networks, and new media age, the philosophy of education moves among the three approaches mentioned above. The three philosophical approaches help contemporary educational anthropology to answer three main questions. That is to say: what is the meaning of education in modern society? What experiences and methodologies should one use to educate, teach, and learn in the age of the Network and globalization? Finally, what content and information should be transmitted and what educational strategies one should develop to achieve a qualified education free from the logic of technical rationalization, capitalist production, and the power groups that control it (Bauman, 2001).

## **1.2. The Infosphere and the Internet as a scenario for the philosophy of contemporary education**

Moreover, the Infosphere has changed the way people communicate and relate to each other. The term "infosphere" today means the global space in which information is exchanged. The Infosphere is the whole of cyberspace (the space of the Internet) and all new media.

The term infosphere appeared for the first time in 1980 in the book *The third wave* of Alvin Toffler. He claimed that the human information space, with its communication tools (television, telephone, fax, and mass media), was gradually integrated into the social system. Toffler had identified the new media tendency to "invade" the spaces of social and culture (and therefore also of education). The term infosphere has spread further from the nineties onwards of the last century and has allowed developing a reflection on the impact of new media in culture and society and is the basis of the considerations on the collective intelligence and the virtual reality of philosopher Pierre Lévy.

The word "infosphere" is used nowadays to identify a space the physical body, mental extensions, and communicative interactions with other human bodies coexist. This sophisticated space can affect our lives and our phantasmatic activities by influencing the structure of the human nervous system and, consequently, our knowledge.

The term has been taken up by Luciano Floridi, the first author using it to highlight how information sharing and processing in the network, thanks to new communication technologies, has changed the relationships between people, determining the emergence of a new human condition. The advent of the Internet, for the Italian philosopher, has defined the so-called "fourth revolution" in which communication and information technologies are changing the human being's (right) way of conceiving and thinking of themselves, society, and the species they belong to.

Along with time, space has also changed in the Infosphere, where online and offline become synonymous with reality itself according to the principle that what is real is informational and what is informational is real. According to Floridi, all this entails a continuous "transformation into data" of reality, which has ethical and moral consequences. The new Information and Communication Technologies allow the accumulation, processing, and sharing of information, which has ethical

implications regarding access to them by people, their visibility, and the privacy linked to their sharing. The Infosphere promises new ethics that moves between freedom and control and calls people to a new and more complex responsibility than in the past as regards society as it is and how it should be (Stewart, 2016).

Analogical and digital dimensions, online and offline dimensions of knowledge are confused and give life to a complex interaction between human and digital interfaces, whose power can be, for example, experienced in the so-called "internet of things," in virtual reality, the augmented one, or the clouds.

## 2. Problem Statement

Thanks to the Internet and its related technologies, the human being in the Infosphere era is always connected. Information and communication technologies represent the body and mental self-technologies that modify the practices and contexts through which humans shape and build their knowledge (Seery, 2010). Nowadays, learning is becoming more and more collective and social. It has more and more the structure of a network, based on continuous interconnections, links, and references to the internal elements that structure the system itself (Luckin, 2010).

Within the culture of Infosphere, Facebook has become the powerful metaphor of knowledge understood as a network of related information and knowledge shared and processed by people in a social and community form (Davidovitch & Belichenko, 2018). Sharing one's knowledge, data, opinions, and knowledge through Facebook and social networks call the individual's responsibility for their social self, implying a more marked need for an individual and collective conscience (Jarvis, 2009).

The new anthropology of contemporary *Homo Technologicus* and *Homo Communicans* requires a philosophical-educational look on the Internet and social networks. Such new anthropology needs to understand the complexity of socio-cultural changes in a digital world where there is a need to rediscover, under the various layers that cover them, the human values through a new ethical look more flexible and disenchanting.

Considering what has been said, therefore, it is difficult to face any aspect of contemporary society without taking into consideration the Internet. Many people's lives are so saturated with digital technology that the distinction in daily life between online and offline can no longer describe a situation without the Internet being always connected. The new generations are unable to speak of the Internet as something external and separate from their lives.

Being online is part of their life and, since they were born, they consider it a fundamental requirement of modern life and their primary needs. The Internet is now part of the lives of young people and of their education. The Internet is now an integral element of education in developed nations, and its importance will continue to grow (Cole, 2000).

However, the impact of the Internet on education is not direct. Just remember that, to date, more than half of the world's population has no direct experience of using the Internet. However, this situation could change in the coming years with the global expansion of mobile telephony. However, the problem of unfair access to the network remains one of the most significant problems today.

Furthermore, as training models based on classroom lessons and traditional exams continue to prevail, the educational changes experienced in the Internet age are complex and often occur with insufficient resources.

For many scholars, the Internet has always been an intrinsically educational tool. Many argue that the main characteristics of the Internet coincide primarily with the interests, objectives, and aims of education. For example, both the Internet, education, and instruction aim to exchange information, communication, and knowledge creation. For this reason, we can affirm that:

- The participatory and community nature of many of the Internet's social applications and activities is in line with the fundamental characteristics of human learning, in particular, those of creating, sharing, collaborating, and analysing.
- Therefore, given the ability of the Internet to make it possible to carry out these activities on a large scale and almost instantly, the educational repercussions of the Internet are often described with positive attitudes and judgments.

### **3. Research Questions**

We can consider the repercussions of the Internet on education and on learning from four different perspectives.

1) The first concerns the potential it offers people to learn more freely without the constraints of the "real world." The Internet generally reduces local, spatial, temporal, and geographical limitations for people who cannot access learning opportunities and high-quality teaching aids, regardless of particular circumstances. Thus, the Internet provides a multidimensional type of training, valid at any time, place, and suitable to any target group. Furthermore, the Internet allows overcoming physical and social barriers and is an inherently democratic means of communication and interaction. The ability to support educational interactions and experiences with greater freedom and in a context of equity concerning the use of resources is considered a reflection of the intrinsic qualities of the Internet as a "radically democratic space of infinite connectivity" (Murphy 2012, p. 122).

2) The second point of view concerns that the Internet promotes a new learning culture based on the principle of collective exploration, play, and innovation rather than on what was once called "individualized education." The Internet allows learning from "many to many," rather than from "one to many," effectively encouraging socio-constructivist learning methods allowing people to develop cognitive development of a profoundly social and cultural nature. The Internet allows those who use it to benefit from highly information-rich environments (Luckin, 2010). The Internet offers people easy access to sources of theoretical and practical knowledge outside of their restricted environment. In this sense, there is currently considerable interest in the Internet's ability to support effective forms and modalities of "situated learning" and "communities of practices" distributed digitally and virtually. Therefore, the Internet is considered a powerful tool that allows learning through authentic activities and the interaction between people and broader social environments.

3) The third point of view concerns that the Internet promotes large-scale connectivity between people and information. This phenomenon implies a change of relationship between people and data from one side and knowledge from the other side. The Internet favours knowledge creation and consumption

far from the epistemological hypotheses of formal and mass education. The online relationships that Internet users maintain with online information have led to a different assessment of the nature of the learning process. The Internet proposes, as previously stated, forms of "collective intelligence" and forms of "fluid intelligence" and "Connectivism" since online learning is subject to the ability to access and use the information distributed according to personal needs (Siemens, 2004). Based on this perspective, education is understood as connecting to specialized nodes and information sources when required and if necessary. Therefore, knowledge of the Net becomes available or not under the ability to feed and maintain these connections (Chatti & Quix, 2010). The result is a knowledge construction "by discovery" and "interpretation" through the search for information within the network cyberspace and not by merely knowledge "accumulation."

4) The fourth one concerns that the Internet has radically personalized the way people learn; therefore, training becomes a much more individualized process than in the past. The Internet is associated with greater autonomy and social control, giving people more choices as regards the form and nature of what they learn, as well as the "where," "when," and "how" they learn. Therefore, training becomes an aspect of life that the person can completely control. The Internet provides a "digital exchange" that simultaneously carries out training activities with simultaneous educational activities connected with other daily tasks and duties. Internet users often need to have skills related to organizing and managing their training without complying with the rules and unreasonable expectations of an a priori coded education system (Farmer & Ramsdale, 2016).

Based on the four perspectives explained above, the central questions of our study were: how can philosophy of education be an effective tool to understand and interpret the world critically? Moreover, how can it contribute to learning in the age of Infosphere within a more democratic perspective?

#### **4. Purpose of the Study**

The Internet has undoubtedly challenged the traditional forms of education, training, and education imposed during the nineteenth and twentieth centuries, particularly the institutionalized and formal models of school and university. The Internet poses a challenge to the public education systems monopoly and professionals' interests who work there. Therefore, it seems that the Internet questions the boundaries between experts and beginners, between processes of production and consumption of knowledge, between the temporal and spatial conventions for learning. As for the practice of teaching itself, the Internet is associated with a series of radically different learning customary actions and with other social relationships that imply a different philosophy of education and ethics (Martin & Noakes, 2012).

Indeed, the Internet has provoked ongoing debate and concern within the global educational community (Marson, 2000). On the one hand, it has imposed the task of rethinking and reconfiguring the notions of school and university to respond to the needs of the Internet age. As Collins and Halverson (2009) affirm, the task of reinventing schools and universities for the Internet age requires not only to "reconsider what is important to learn" but also to "rethink learning itself" with a new philosophy.

The Internet has developed new educational philosophies that have led to the development of teaching methods built around the collective creation (instead of individual consumption) of knowledge to



provide playful learning based on reflection and the enthusiasm for exploring. The educational philosophy of Web 2.0 has allowed the development of new teaching models open to learning and mastering technologies.

However, the Internet seems to propose more radical forms of deinstitutionalization of education. These out-of-school movements have gained popularity among groups outside of mainstream official education. These groups are convinced that the Internet will eventually make the educational institutions themselves redundant. Key concepts such as "self-direction," "self-organization," "self-education" used in the pedagogical terminology lose most of their meaning in front of the Internet revolution.

These concepts connect the Internet with a general refusal of traditional education, especially with what has long been described as a "banking model", obsolete to accumulate knowledge contents. On the other hand, Internet-based education is conceived within a free discussion, an open debate, fundamental questions, continuous experimentation, and shared knowledge.

As in other aspects of digital activity, education is now considered to be something likely to be reprogrammed, modified, and even "hacked" to meet the needs of each person better.

The institutions and systems we see around us, in schools, universities, and the labor market, are systematically dismantled. If someone wants to develop the skills needed to navigate the world, they will have to change their education with its hustle, bustle, connectivity, and creativity.

Therefore, starting from this genesis, we aimed to deepen, by a hermeneutical methodology approach, the meanings of philosophy of education within the age of digital culture and to grasping its possible role and function as a science of digital education within contemporary communication scenarios.

## **5. Research Methods**

To explore the last function of the philosophy of education within the new communication scenarios, we have administered a questionnaire to a sample of 137 secondary school teachers and conducted some focus groups. We have asked the teachers about their opinions concerning the Internet and Web 2.0 technologies to teach and develop a possible philosophical approach to these issues. We collected all the data through three phases.

In the first phase, we created a questionnaire online containing items based on the Likert scale distributed to the secondary school teachers. In the second phase, we have conducted three focus groups. In the third one, 35 trainee teachers were in-depth interviewed.

All the qualitative data collected were statistically processed with software for data analysis. Also, we conducted a textual and frequency analysis through a specific software (Voyant). Thanks to this analysis, we have been able to sketch a concept map of the philosophy of education and show its potential as an educational science capable of understanding and removing possible paradoxes, criticalities, obscure and hidden aspects of the Internet, and the educational technologies for teaching and learning.

In the interviews administered to the groups of teachers, we have focused on the following critical points concerning the philosophy of education.

- 1) The capacity of reflecting upon the needs and conditions legitimating the concept of education within the ICT.

- 2) The capability of using the Internet as a reflective means for the school curriculum and lifelong learning.

Indeed, the questionnaires and interviews have emerged the pedagogical potential of the philosophy of education within the Infosphere's scenarios and stressed the following philosophical principles to observe when using the Internet according to an educational perspective.

- The principle that new media can develop critical thinking if framed within intentionally designed educational objectives and context.
- The principle that affirms the dignity of all human beings and their right to access the Web.
- The principle that recognizes in each person the possibility of understanding the universal values of communication starting from a reflection upon their existence and personal experience.
- The principle that recognizes and accepts cultural pluralism, diversity, and difference (of gender, ethnicity, etc.).
- The principle of firmly believing in the educational potential of new media.

The philosophy of education looks with optimism at the learning and educational processes that can be developed through the Internet and is convinced that the new communication and Web tools are means for a better and more just society and democracy. There is no doubt that the Internet proposes a philosophy of education that does not destroy but reshapes the knowledge of traditional schools and universities and which in the last hundred years had been the dominant educational model. Therefore, reflecting philosophically on the Internet today means facing and discussing the inevitability of educational change, the transformation, and the "breakdown" of the teaching/learning models of the twentieth century.

E-learning represents the most obvious way of exploiting the training and educational potential of the Internet. Until a few years ago, many of the primary examples of e-learning consisted of providing unidirectional content and, therefore, were a replica of traditional "postal" forms of distance education.

The advent of the virtual has profoundly changed this system. Today E-learning has evolved and integrated with m-learning (mobile-learning) to create training opportunities anywhere and anytime. By m-learning, we mean the possibility of using educational content and materials through mobile devices and wireless connections. The advantages offered are:

- *Ubiquity*, to be able to access training from anywhere.
- *Convenience*, because can be used small and low-cost devices.
- *Independence* from the place of access, making the distance from the training delivery point irrelevant: access can take place in a classroom or university laboratory or from geographically distant locations.
- *Personalization of learning*, to build paths according to their times and rhythms (Keegan, 2002).

All this is possible because the mobile device can be activated easily in a short time and any place. Generally speaking, we can say that the term mobile identifies a device that can be put in a pocket. Notebooks or laptops are not mobile from this point of view because they require a boot phase and a shutdown phase, and an adequate support surface, often connected to the power supply network (Caudill, 2007). The habit of people, especially young people, listening to audio resources with an iPod while

jogging or on the way to university leads almost naturally to the idea of dedicating different moments of the day to training using devices furniture. M-learning, therefore, also means the possibility of exploiting the times commonly not used.

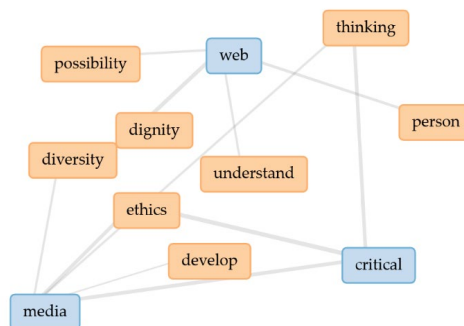
The digital scenario envisaged by this mobile and remote learning cannot separate the scenario in which teachers, trainers, tutors, or educational content developers find themselves operating. The target of our action are people, mainly young people, who are digital natives and bring with them new styles of behaviour and interaction (Prensky, 2001):

- frequent communication;
- immediate access to documents;
- permanent connection to the Internet;
- prevalent use of smartphones compared to traditional computers;
- community orientation;
- preference for non-rigid and predefined approaches to problems;
- customization of times, places, study rhythms.

The current age is characterized by a significant diffusion of smartphones and tablets, and e-book readers. Sales of smartphones, in particular, have surpassed those of traditional cell phones.

Indeed, not all students have high-performance mobile devices (there is an economical digital divide among students as it has been evident in contemporary pandemic times): however, one should note that the prices of medium-performance smartphones are decreasing. New tablets and high-performance smartphones have been placed on the market economy.

It can be assumed in perspective that schools and universities can be partially freed from the costs and management of equipped computer labs because it will be easier for the student to "bring the computer" to the university, being an object that the student "puts in their pocket" in the morning together with the motorcycle or car keys and the wallet (Caudill, 2007). Mobile computing opens up broad development prospects for lifelong learning and the life-wide learning concept that emerged fully already in the November 2000 Memorandum of the so-called Lisbon strategy to eliminate the digital divide related to age and education. It is much easier and more immediate to use a smartphone than a traditional computer.



**Figure 1.** The concept map of philosophy of education and its pedagogical potential for critical thinking

## 6. Conclusion

Although the Internet seems to have an impact on the philosophy of traditional education and on the way of conceiving education and training, revolutionizing it if not upsetting it, it is also true that the most successful models of teaching and e-learning on the Internet are those that reflect or even replicate pre-Internet systems: classrooms, lectures, and books. The division of knowledge into thematic areas, individual assessment, or consultations with expert teachers continue to be the model of education and education in the era of the Internet, e-learning, and mobile learning (Turkeli & Senel, 2016). Although this continuity is understandable, it contradicts those who advocate a radical transformation and disruption of the educational status quo. Therefore, in contrast to the revolutionary zeal of some analysts, the Internet has a more significant impact on education when it does not generate radically new patterns of participation and educational practices.

For example, the recent boom in MOOCs in countries such as the United States and the United Kingdom, instead of bringing educational opportunities to those without them, facilitates more educational resources for people with tremendous resources. The reason is the excellent preparation these people have.

This phenomenon does not mean that MOOCs are an ineffective form of education, but simply that their effect is to intensify rather than expand educational participation and the use of knowledge in those who already possess it to a high degree. In fact, from this point of view, the alleged properties of radical and transformative social change attributed to MOOCs (and other forms of Internet education) should be reconsidered and rethought because the educational philosophy that has so far inspired them, while being intrinsically and ethically “good” and “positive” is not proving helpful.

This example makes it very difficult to predict the impact of the Internet on future education and on the philosophy of future education, which will have to be developed starting from the training experiences that the Internet will propose. However, it is not even correct to think that the Internet does not bring anything new to the education or philosophy that draws inspiration from it and processes the specific knowledge. Of course, the Internet is associated with educational changes, although such changes are complex, contradictory, paradoxical, and sometimes very confusing.

However, the Internet has concrete ethical implications for human education. It promotes an implicit identification of practice and action by increasing the responsibility of people when they choose educational options and assume the consequences of their choice (Seifert, 2016). All forms of online education require the person to have a high degree of autonomy. In such people, educational success will always depend on managing the progressive commitment to learning through the means they will choose. Only a privileged minority of people can act entirely autonomously. This individualization of the action itself will transform education into an area of higher risk and opportunity (Oblinger, 2012).

These aspects raise several relevant ethical questions. For example, what absolute equality exists between people when choosing to use the Internet as a tool for their training? Are they free or conditioned? Furthermore, how far are they, or can they be from this? Also, to what extent are personalized forms of online education limited to facilitating mass customization of similar educational services and content? What is the nature of collective forms of online education? What are the

particularities of the communities of Internet learners in terms of social diversity, commitment, or solidarity? Is the Internet weakening or even eroding the notion of education as a public good or not?

The Internet has strengthened the importance of databases, data mining, and analysis algorithms, increasing the number of organizations and institutions responsible for collecting, aggregating, and analysing data (Eynon, 2013). In essence, the Internet allows people to process these data on a large scale and cumulatively. Today we live in the era of big data, in which computer systems make available to us large quantities of information produced by and on people, on things and on and their interactions. These data present, as we mentioned earlier, problems regarding their management, processing, and interpretation.

The Internet also appears to alter the psychological, emotional, and spiritual foundations of education. For example, many of the forms of education mentioned above involve a more significant presence of training and education in society and social life.

This attitude implies an always active condition of potential educational situation. The availability of online education at any time and everywhere involves a clear shift of education towards environments of daily life, work, and community where teaching and learning could not have so much presence and importance. There is explicit parallelism with what Basil Bernstein (2000) has identified as "the pedagogy of society": that is to say, a modern society that ensures that pedagogy is integrated into all possible spheres of human life.

This approach leads us to formulate some ethical questions: is it right to participate in an educational activity at any time of the day and in any context, perhaps losing other possible experiences? Is it essential to be able to "disconnect" when you want from the pressure of learning? Are there contexts and circumstances more suitable than others for learning?

The Internet sometimes seems to (involuntarily) transform learning into a competition/race for those who learn more and faster. Instead of making it easier for people to learn together and in harmony, it would seem that the Internet forces people to dive into continuous and non-stop teaching and learning cycles. This happens by inculcating in them values that seem individual (the laboriousness and the self-need for high-quality standards in work). Such values are imposed from the outside and result from society training models and capitalist philosophy. In this sense, the Internet makes more concrete, masking, and intensifying them, the materialistic and competitive connotations that learning has in capitalist society. Therefore, in the era of the Internet and the Infosphere, only the commitment to a genuinely critical philosophy of education, supported by a genuine desire to know and understand in depth the social and cultural processes, can help unmask these connotations, helping to emancipate the contemporary human being.

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## References

- Bauman, Z. (2001). *The individualized society*. Polity.
- Bernstein B. (2000). *Pedagogy, Symbolic Control, and Identity*. Lanham, MD: Rowman & Littlefield.
- Cambi, F. (2005). *Manuale di Filosofia dell'educazione*. Laterza.
- Caudill, J. (2007). The growth of M-Learning and the Growth of Mobile Computing: Parallel developments. *IRRODL*, 8(2), 1-12
- Chatti, M., & J. C. Quix (2010). Connectivism. *International Journal of Learning Technology*, 5(1), 80-99.
- Clark, J. A. (2015). Does Philosophy of Education Have a Future? *Educational Philosophy & Theory*, 47(9), 863-869.
- Cole, R. A. (2000). *Issues in Web-based pedagogy: A critical primer*. Westport, CT: Greenwood Press.
- Collins, A., & Halverson, R. (2009). *Rethinking education in the age of technology*. Teachers College Press.
- Collis, B., & Moonen, J. (2008). Web 2.0 Tools and Processes in Higher Education: Quality Perspectives. *Educational Media International*, 45(2), 93-106.
- Davidovitch, N., & Belichenko, M. (2018). Using Facebook in Higher Education: Exploring Effects on Social Climate, Achievements, and Satisfaction. *International Journal of Higher Education*, 7(1), 51-58.
- Ducci, E. (2002). *Approdi dell'Umano. Il dialogare minore*. Anicia.
- Eynon, R. (2013). The rise of big data: what does it mean for education, technology, and media research? *Learning, Media and Technology* 38(3), 237-240.
- Farmer, H. M., & Ramsdale, J. (2016). Teaching Competencies for the Online Environment. *Canadian Journal of Learning and Technology*, 42(3), 1-17
- García Amilburu, M., & García Gutiérrez, J. (2012). *Filosofía de la Educación. Cuestiones de hoy y de siempre*. Narcea-UNED.
- Guilherme, A. (2018). Philosophy of Education: contemporary critical issues. *Foro de Educación*, 16(24), 1-5.
- Jarvis, J. (2009). *What would Google do?* London: Collins.
- Luckin, R. (2010). *Re-designing learning contexts*. Routledge.
- Marson, S. M. (2000). Internet Ethics for Social Workers. *New Social Worker*, 7(3), 19-20.
- Martin, M., & Noakes, M. (2012). Fostering a Web 2.0 Ethos in a Traditional e-Learning Environment. *Electronic Journal of E-Learning*, 10(3), 283-292.
- Murphy, D. (2012). *The architecture of failure*. Zero.
- Oblinger, D. (2012). *Game changers: education and information technologies*. Louisville, CO: Educause.
- Prensky, M. (2001). Digital Natives, Digital Immigrants. *On the Horizon*, 9(5), 1-6).  
<https://www.marcprensky.com/writing/Prensky%20%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>
- Seery, A. (2010). Education, the Formation of Self and the World of Web 2.0. *London Review of Education*, 8(1), 63-73.
- Seifert, T. (2016). Involvement, Collaboration and Engagement: Social Networks through a Pedagogical Lens. *Journal of Learning Design*, 9(2), 31-45.
- Siemens, G. (2004). *Connectivism: a learning theory for the digital age*. Retrieved from: <http://www.elearnspace.org/Articles/connectivism.htm>
- Stewart, G. (2016). Reviewing and Ethics in the Online Academy. *Educational Philosophy & Theory*, pp. 437-442.
- Turkeli, A., & Senel, O. (2016). Physical Education Teacher's Attitudes towards Philosophy of Education and Technology. *Educational Research and Reviews*, 11(15), 1351-1354.
- Volpi, C. (2004). *L'educabilità umana nell'era della rete*. B. Mondadori.