

## APPROACHES ON SUSTAINABLE DEVELOPMENT BETWEEN EDUCATION AND INNOVATION

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### ABSTRACT

*Appearing in the global ecological crisis from 1929 to 1933, the concept of sustainable development was further developed by incorporating all economic, social and human spheres, and today it may represent the only way for humanity to survive. If at first Sustainable Development was thought of as a solution to the ecological crisis caused by the intense industrial exploitation of resources and the continuous degradation of the environment, it subsequently sought to preserve the qualities of the environment, promoting the concept of reconciling economic and social progress without putting threatens the natural balance of the planet. On the other hand, education and innovation improve the living and working conditions of Europeans, improve Europe's competitiveness, stimulate economic growth and create jobs, according to a publication by the European Commission. Our research aims to highlight the main features of sustainable development from the perspective of research and innovation, knowing that any education and innovation implicitly implies a number of risks that are often assumed tacitly. Following findings that have confirmed the absence of sufficient studies to confirm or rule out the risk assumptions, we have issued a series of recommendations and conclusions that allow, at least on a theoretical basis, a prudent approach to education and innovation in sustainable development.*

**KEYWORDS:** *sustainable development, innovation, technology*

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### 1. INTRODUCTION

In the specialized literature there are numerous works that aim to find out the role of innovation in the intimate sphere, in educating and informing the public.

Social networks are the public space within which millions of people from all over the world are connected and which at the same time represent a way of transmitting the message in a very short time, and in this case, promoting extracurricular activities. The public space or the public sphere is a concept attributed to Jurgen Habermas, who describes it in his work, "The public sphere and its structural transformation. Study on a category of bourgeois society". He argues that the origins of the concept are found in bourgeois society. He also distinguishes between "public" and "private". First, the author argues that "we qualify as 'public' "certain manifestations when, unlike closed circles, they are accessible to all, as we speak of public places or public houses." Secondly, he states that although the public sphere is a concept of modernity, what has been "public" and what is not public has been talked about for a long time. For example, "in the developed Greek fortress-state, the sphere of the polis, common to all free citizens (koine), is strictly separated from the sphere of the oikos, which is its own (idia) to each individual. Public life, polite bios, takes place in the market, in the agora, without being linked to this particular place. The public sphere is constituted within the conversation (lexis), which may also take the form of a consultation or

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judgment, as well as within a common action (praxis), such as the conduct of war or public games." (Habermas, 2007).

### **1.1 Extracurricular activities - the interface between education and innovation**

Extracurricular activities represent any action that a person registered in a form of education carries out and which may represent an additional basis of information, which may contribute to the education of these persons. The term "extracurricular activities" is "often used in synonyms with "co-curricular activities". Firstly, their importance in completing the National Curriculum is evident, and secondly, the spatio-temporal separation of the compulsory formal activities (Rădulescu et al., 2018). Also, in the specialty literature, the concept is often used as the equivalent of "extracurricular activities", otherwise erroneously, since they represent all activities that take place outside the educational institution and they are only a component of the activities. Extracurriculars. Thus, we note that "from a conceptual point of view, the term 'extracurricular activities' refers to all the activities (academic, artistic, sports, etc.) that are organized at the level of educational institutions or outside them (but under their tutelage or in collaboration), in groups of students / students or individually, in addition to the contents of the Educational Plans and of the Curriculum at the decision or proposal of the educational institution" (Munteanu, 2015).

With a particular emphasis on extracurricular activities of students, they are represented by: vocational training programs, internships, summer schools, educational trips, conferences, competitions, sports activities, NGO-supported activities, additional educational programs, such as for example, Erasmus, student work programs, such as Work and Travel. All these are either supported by the educational institutions or promoted through them and contribute to the education of the students and more than that, to their professional training (Burlacu, 2011). It can be argued that the extracurricular activities of the students are in fact a method of improving the knowledge, and on the other hand they are an opportunity to put into practice the theoretical aspects learned within the faculty.

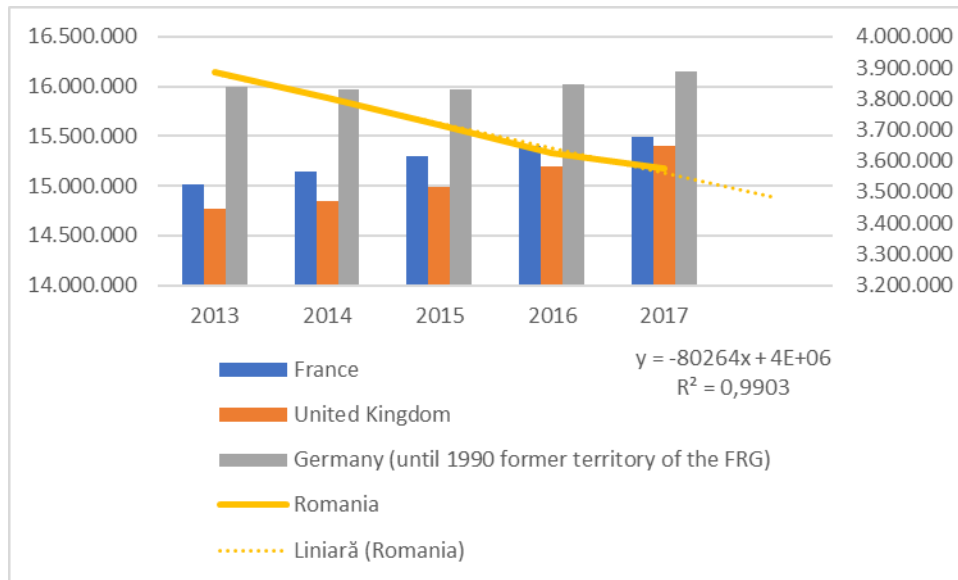
### **1.2 Aim of research**

Considering the extracurricular activities of the students, this paper aims to find out what the role of social networks is in the extracurricular activities of the students. In these conditions, in the next part the focus will be on the description of the Internet as a new means of mass communication, the description of social networks and online communication, and on highlighting the effects of social networks on young people and their implications for extracurricular activities of students.

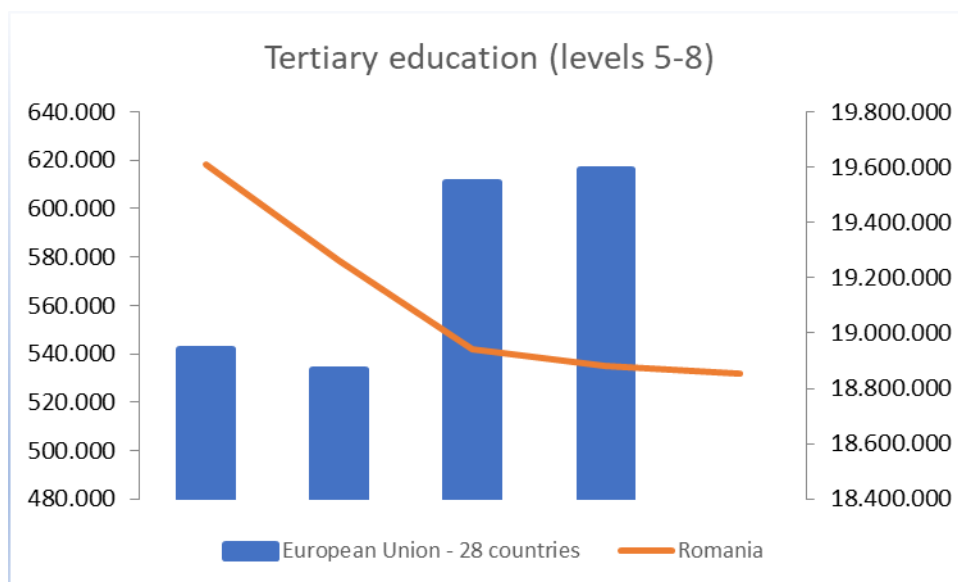
## **2. FINDINGS**

As can be seen in Figure 1, Romania's school population is steadily declining, according to Eurostat data for the period 2013-2017, as opposed to countries such as France, Germany or the United Kingdom where the school population is growing.

At the university level, the number of students registered in Romania between 2013 and 2017 is also decreasing, with the tendency to stabilize in the last period. It is worth noting that at the level of the European Union, in the period 2013-2014 there was a decrease in the number of students, which then increased in the period 2015-2017.



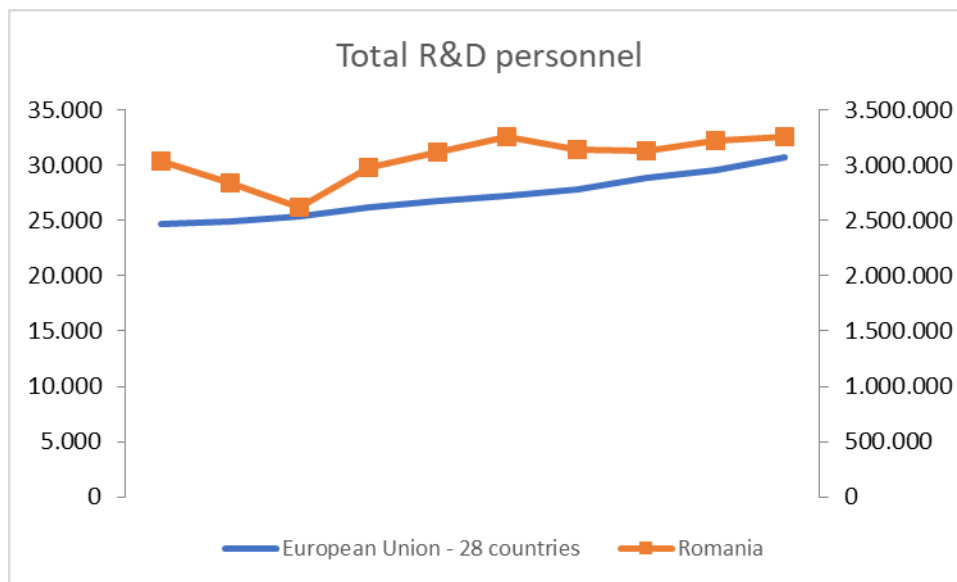
**Figure 1. All ISCED 2011 levels excluding early childhood educational development**  
 Source: The authors according to data from Eurostat



**Figure 2. Students enrolled in tertiary education**  
 Source: The authors according to data from Eurostat

It should be noted, however, that in Romania, although the school population, as well as the number of students are decreasing, the total number of people active in the field of research-development has an increasing tendency, similar to the tendency registered at the level of the whole European Union (fig. no. 3).

Another important aspect for the formation of the public space is the role played by publications-books, magazines, newspapers, but also publishers, libraries, libraries. Also added to these were the invention of the pattern. In addition, urbanization, public education and mass culture have expanded the public space from the bourgeoisie to the popular classes. (Ghebrea, 2007).



**Figure 3. Total personnel R&D at EU 28 level and in Romania between 2008-2017**

Source: The authors according to data from Eurostat

The evolution of the media and the construction of the public sphere, reaches the 21st century on the Internet. Even though the emergence of the Internet implies the widening of the public sphere until the connection of people everywhere, various critics have also been brought to him. One of these criticisms is the fact that between the virtual communities there is no authentic communication, this being mediated. Whenever it comes to comparing different means of communication, the ideal model consists of face-to-face conversations.

Under these conditions, there is a need for new research to find out why young people do not engage in extracurricular activities and what might be the factors that would make them do so, given that these activities represent a development opportunity for them (Bran et al., 2018). The universities could be helped as educational institutions and as a result of public institutions to strengthen their curriculum and at the same time be able to offer additional education to students and help them develop their practical skills, not only the theoretical ones.

### 2.1 The Internet, a new means of innovation in education

Mass media means mass media and is represented by print, audiovisual, radio and web media. The media are a means by which messages of any kind can be transmitted.

A definition of mass communication is given by Marian Petcu in the paper "Sociology of mass-media", which argues that "in relation to the form of interpersonal communication, the communication 'in mass', is the social process through which a specialized group collects, processes / produces and disseminates messages to a large and heterogeneous public, in continuous flow, through technical channels, in a competitive regime and on the basis of a normative regime" (Petcu, 2002).

All types of media have the same role, message transmission. But the importance and can be stated, even the difference is the way the message is transmitted and the impact it has on the receiver;

In order to understand the media, their importance, but especially the impact on those who have access to mass communication sources, their functions must be exposed. Under these conditions, Brian McNair in his paper *Introduction to Political Communication* identifies five functions of the media, which he links to "ideal" democratic societies. These functions are as follows: (McNair, 2007);

- Informing citizens about what is happening around them - the function of “surveillance” or “monitoring”;
- Education regarding the meaning and significance of the “facts” (the importance of this function is to explain the seriousness with which journalists protect their objectivity, given that their value as educators implies a professional detachment from the issues under analysis);
- Providing a platform for public political discourse, which will facilitate the formation of “public opinion” and relay this opinion to the public where it came from. Thus, it can be asserted that a role of the media is to provide a space for expressing the disagreement, necessary to build the idea of democratic consensus;
- Making public the activities of political and governmental institutions is the fourth function of the mass media. We can talk here about the role of the “guard dog” of democracy, which journalism has;
- Another function of the mass media is represented by their functioning as channels intended to support political views. Political parties need a means by which to communicate, in front of a mass audience, the political line and programs, so that the media must be responsive to their needs.

It can be observed that the first two functions of the media are information and education. In these conditions, the recipient of the message has the possibility by accessing the media to acquire new information and at the same time he can be educated, he can himself the norms promoted by the media. Even though Brian McNair proposes an approach to media functions from a political point of view, the fact that public administration represents the whole activity of the President and the Government, which are public but also political institutions, can be argued that the media they are a factor that can contribute to the improvement of the public administration and management through the public doing of the political and governmental activities, by their role as “guard dog” of the democracy.

On the other hand, Marian Petcu, talks about the fronts of the media, from the point of view of their impact on the mass media. In these conditions, the author of the book *Sociology of mass-media* states that: “disputes around ‘evasion’ are not recent, but relate to the first theoretical approaches to the influences that the media generates in the context of the assertion of the mass society as an amplifier and generator of mass culture.” (Petcu, 2002). Thus, “its evasion is associated with three meanings: aptitude to divert the public ‘from the real world’ for the benefit of the imaginary”, the media offering the possibility of “idealizing life”, including through stereotypes; the role of “social narcotic” of the media. To these is added a third meaning, described by Ion Drăgan in the work *Paradigms of mass communication* and represented by the “predictive meaning of social passivity and conformity” (Drăgan, 1996).

Thus, it can be observed that Marian Petcu and Ion Drăgan suppress the negative effects of the media and if we can extend the comparison, it can be said that the two understand the expression “television specialization” (Sartori, 2006) exhibited by Giovanni Sartori from the title his work, *Homo vindens. Specialization through television and post-thinking*.

The functions of the media have been approached over time by many authors, who have emphasized their various characteristics. Under these circumstances, Charles Wright argues that the functions of the media are: surveillance, correlation, cultural transmission, entertainment (Wright, 1997). Also, Ronald Cayrol argues for the existence of the following functions of the media: information, expressing opinions, economic and social organization function, entertainment function, psychotherapeutic function, instrument of identification and social belonging function, ideological function. Leo Thayer identifies the following functions of the media: socialization, identity, mythologization, compensation, information, entertainment, education. Michel Marthien talks about the following functions of the media: evasion, social cohesion, distribution of knowledge, storage of the news, guide of the news, recreation, purification. Francis Balle argues that the functions of the media are: social insertion, recreation,

purification of the soul. Other than these authors, Denis McQuail separates media functions into two categories, one targeting society and another targeting individuals. In these conditions for the company, functions such as information, correlation, assurance of continuity, entertainment and mobilization are affirmed. For individuals, the functions of mass media are: information, establishment of personal identity, integration into society, entertainment (Petcu, 2002).

It can be observed according to these definitions that information is a dominant function of the media. She is following his education.

All these features of the media are also characteristic elements of the Internet and, given that the Internet is increasingly asserting itself as a public space through social networks, it can be stated that they also take over the functions and features of the media. Moreover, it can be stated that when we refer to the Internet we also talk about the other types of media. This assertion is based on the fact that the Internet is a dynamic that all other mass media have understood and have consequently migrated and / or expanded in the virtual area. Any television, newspaper, radio station now has online support. This idea is also supported by Ileana Rotaru, who in the paper *Virtual Communication* states that: "the new media were developed as a result of the convergence process between the different media. For a long time, the mass media have developed separately, independently of each other. With the digital and computer revolution swelling like a huge wave, the use of computers is converging with communications". (Rotaru, 2010).

## **2.2 Description of social networks and online communication**

In the work *Virtual communication*, the author claims that it represents "the product of the contemporary society, of the information and electronic society. It is the communication generated by the Internet, by the world of virtuality, a world understood by some as a space of unreality, and by others as a space of a parallel, but artificial world. Given the features of virtual communication, the following can be underlined" (Rotaru, 2010):

- Interactivity: this implies the permanent change of the transmitter's role with the receiver, by their superposition;
- Simulation: represents the main form of manifestation of virtual reality by differentiating it from the traditional one;
- "Unimedia": means the confluence of separate media in the same integrated digital network and not that of "multimedia", which should refer to a combined strategy (various media channels). Multimedia does not support the real hypotheses of virtuality, namely interconnection and integration;
- Immersion: represents one of the main forms of manifestation alongside simulation and digitization, representing the process that takes place within the world or virtual spaces. Unlike the classical forms of communication, in the virtual communication takes place a deeper experience and interconnection of the different psychic processes (from the cognitive ones to the ones of attention, memory, learning, creation coupled with the affective and psychomotor ones);

- Textuality: within the virtual space there is a rediscovery of written, textual communication, by creating new forms of rapid writing specific to communication within groups on the Internet, but also to new types of texts: hyperdocuments and hypertexts;
- The open communication system: this refers to the permanent development and emergence of new types of communication, such as in the educational space: from distance learning to online counseling and tutoring);
- Community-generating communication: this leads to the rediscovery of communities in the process of globalization and individualization (incorruption);
- Flexibility and fluidity: it promotes relationships based on trust and the intrinsic motivation of communication, not on rules, responsibilities and assumed assumptions. Flexibility refers to the variety of methods, paths and processes, and fluidity implies the continuous flow of information flows, messages;
- Has unlimited storage: virtual communication allows unlimited message storage;
- Necessity of technical and informational skills - through the variety of its forms it requires certain technical skills to use the means, more complex than using a pen or simply literacy. However, the technical and informational skills can be learned gradually, mainly depending on the degree of dissemination of a form of communication (it can be given here as an example the use of email a few years ago, compared to the current use);

Virtual communication has expanded nowadays, reaching millions of people around the world through social networks. Social networks can be defined as "a web service designed to create virtual links between users with social, commercial, political and educational applications".

### **2.3 The effects of social networks on young people and their implications for extracurricular activities of students**

Oliver Martin believes that "the emergence of the internet in the public space produces revolutionary mutations. Under these conditions, for Internet users, it has become an important factor in shaping social reality, the meaning of social facts. The Internet has become, in some social media, a powerful tool for socializing and building individual identity, especially in the case of adolescents." (Martin, 2004)

The emergence of the internet has led to virtual communication. Regarding the advantages and especially from the point of view of the positive effects these are the following: access to simultaneous and verifiable information, the development of own systems of search, analysis and synthesis, easy access to data, universes and worlds. Given this message, it can contribute to increasing the role of informal and alternative education, information richness and alternative sources of knowledge, various types of messages received simultaneously (cognitive, affective, senso-motor), increasing the distributive attention and the capacity of teamwork, self-knowledge, the possibility of storing messages and returning them regardless of their nature (intra, interpersonal, group or mass communication). (Rotaru, 2010). Considering on the other hand the negative effects of virtual communication, these are represented by: alienation, closure, loss of sociability, lack of selection skills and response to the information boom.

### **3. CONCLUSION**

Given the fact that the research carried out is represented by the role of social networks in the extracurricular activities of the students, it should be made clear about the educational impact that virtual communication has. Their importance is underlined by the media inference in most aspects of social and daily life. This fact is further emphasized, the more we talk about and live in an information society, in which the media and mass media have experienced a considerable advance.

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