THE CHALLENGES OF ONLINE EDUCATION IN PRE-UNIVERSITY EDUCATION IN ROMANIA: A CASE STUDY IN THE CONTEXT OF THE RESTRICTIONS DERIVED BY THE COVID-19 MEDICAL CRISIS

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Abstract

The article addresses the issue of the use of computers and digital techniques in the educational process of pre-university education, having as application dimension a case study conducted on educational institutions in a locality in Romania. The two quantitative surveys performed, one among teachers and the other among students, surprise their opinion on the potential offered by the use of computers and social networks in the learning process, their efficiency, but also the perception resulting from conducting courses exclusively online, in the context of the restrictions imposed by the coronavirus pandemic. The obtained results show that only a part of the advantages of using information technologies could be capitalized in the teaching activity carried out exclusively online, the reasons being exposed both by the teachers and by the students, in the open questions of the surveys.

Keywords: ICT, online education, pre-university education, pandemic, social network.

JEL Classification: -

1. Introduction

The increasing use of computers in education is an advantage from several points of view: the possibility of a better organization of learning, the improvement of educational management, the support of pedagogical research.

Thus, the computer can assume a function of presenting in a *suis-generis* form, of some new contents and at the same time to mediate a rigorous management of their assimilation through specific programming techniques. In addition, the computer proves to be an interactive environment, able to facilitate a conversational way of working, to maintain a sustainable machine-student dialogue. Moreover, it can be the basis for demonstrations, having the ability to stimulate processes, situations and natural, physical and social phenomena with complex evolutions in physics, chemistry, biology, etc. The computer

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offer feedback to pupils in order to indicate the results obtained immediately, to signal and correct any mistakes, to consolidate the data received, to stimulate learning. It also provides access to important, convenient, and flexible databases and can be easily accessed from any place of the world[39].

2. The potential offered by modern technologies for the instructive-educational process

An individual can choose a certain way in which to communicate the requested data: text, image, audio signal, etc. Information can be referenced and processed, it can be incorporated in several ways, it can add value and it can be analyzed through existing software tools[40]. In school, the introduction of the Internet and modern technologies leads to important changes in the educational process. Thus, the act of learning is no longer considered to be effect of the teacher's efforts and work, but the fruit of the students' interaction with the computer and of the collaboration with the teacher. This change in the education system has pursued, from the very beginning, well-structured objectives such as increasing the efficiency of learning activities and developing the skills of communication and individual study[41]. As advantages evoked by specialists we can mention:

- Stimulating the capacity for innovative learning, adaptable to conditions of rapid social change;
- Increasing the efficiency of the coherent acquisition of knowledge through the immediate appreciation of the students' answers;
- Strengthening students' motivation in the learning process;
- Installation of the climate of self-overcoming, competitiveness;
- Development of visual culture but also stimulating logical thinking and imagination;
- Awareness that the notions learned will find their usefulness later;
- Facilities for fast data processing, performing calculations, displaying results, making graphs, tables;
- Introduction of an independent work style;
- Ensures the choice and use of appropriate strategies for solving various applications; also, various pedagogical methods;

[39] Carstea Vlad, "Is e-learning the way of the future in education?", Journal of Information Systems & Operations management, vol15.2, December 2021, pp. 40-50.

[40] Iancu Ş., "Impactul social al utilizării tehnologiei informaţiei şi comunicaţiilor", Academy of Romanian Scientists, Bucharest, 2008.

[41] Făt S., Labăr A., „Eficienţa utilizării noilor tehnologii în educaţie", Evaluative research report, EduTIC, Centrul pentru Inovare în Educaţie, Bucuresti, 2009.

- Ensuring a permanent feedback, the teacher having the possibility to redesign the activity according to the previous sequence;
- Developing thinking so that starting from a general way of solving a problem the student finds his own answer for a concrete problem;
- The relational perspective is improved by establishing a human and social relationship between the educated and the educator[42].

However, we also have a number of disadvantages that should not be ignored:

- Excessive use of the computer can lead to loss of practical skills, calculation and investigation of reality;
- Excessive individualization of learning leads to the denial of the teacher-student dialogue;
- Random use of the computer without a specific purpose during class can cause boredom, monotony;
- The high cost of the latest technology, which is an impediment for a large part of the Romanian population.

Reducing these negative effects requires, first and foremost, appropriate government policies that integrate the realities, expectations and experiences already gained in the educational process. The creation of an E-Learning Romania community, for example, aimed to support the design, implementation and evaluation of national e-Learning programs by providing suggestions and identifying development opportunities[43].

In term of social networks, they are a constantly moving target for researchers and decision-makers in many fields. A social network is, generally speaking, a network of people with common goals, for example a network of pupils/students, specialists in a field. In recent years, the social network has taken on the meaning of a network of Internet users where users can sign up and interact with other users, already registered. Thus, members of a social network are interconnected informally, without obligations, but usually actively contribute to the collection and dissemination of information around the globe via the web. Discussion topics vary depending on the destination/target audience of the social network, and these can be: music, art, video games, famous people, fashion, news, jobs, etc[44].

[42] Idem.
[43] Dobrițoiu M., Corbu C., Guță A., Urdea Ghe., Bogdanffy L., „Instruire Asistată de Calculator și Platforme Educaționale On-Line", Publishing House Universitas, Petroșani, 2019.
[44] Cheleș A., Constantin M., „Influența rețelelor de socializare asupra manifestării spiritului antreprenoria"l, Academy of Economic Studies, Faculty of Agri-Food and Environment Economy, Bucarest, 2017; Dobrițoiu & alii, op. cit.

There are currently several social networks such as Facebook, MySpace, You Tube, Windows Live Spaces, LinkedIn, Vimeo, Twitter, Dailymotion, OpenID, etc which have attracted millions of users; many of whom access them daily, and students are no exception. To these well-known networks, we can add QQ from China, V Kontakte from Russia, Orkut very popular in Brazil and India, Hi5 in Peru, Columbia, Ecuador, Portugal, Mongolia, Maktoob for the Arab community[45] (Dobrițoiu et alii, 2019), but also Flickr, Google+, Badoo, Bebo, Buzznet, CaringBridge, Cellufun, Classmates.com, Cloob, Cross.tv, Faces.com, Flixter, Habbo.

Social networks can provide considerable benefits in terms of communication and relationships between users, as well as benefits in learning and participating in online courses and platforms. As a result, researchers should investigate the online social practices of children and young people, as their enthusiasm for using social networks is undeniable, and future uses of these technologies could yield surprising results[46].

Social networking sites are varied and incorporate new information and communication tools such as mobile data connection, photo sharing, video, and blogging. Most types of social networks are those that contain members of a category, such as graduated or classmates, or means of connecting with friends (usually self-describing pages).

3. Inferences of the use of information technology in the instructive-educational process

Influencing its development, social and academic life, access to digital devices and the Internet has become a necessity for the existence of the new generation. The evolution of technology and its integration in all sectors of society has led to demand for education system to meet the new requirements and challenges for the school, for its actors, but also for those responsible for their training. Embracing new methods should not lead to the elimination of traditional ones, but to an optimal combination.

The idea of "formalizing the non-formal and the informal" is the best way for pupils to master the criteria of correct and effective use of contexts, environments, tools, new means of learning. In this educational context, in the space outside the school, the role of the teacher changes, encouraging and helping the students to identify the problems and the answers themselves, to discover the new information, necessary for the task to be solved. The teacher's attributions take the form of orientation interventions, guiding pupils during the activities carried out.

If the non-formal presupposed the presence of the teacher, but the absence of the school - as a space - at this moment the space of the formal loses its limits. In the context of the extension of space, the disappearance of temporal landmarks seems inevitable – which, previously, were well delimited. Education has become possible everywhere and anytime.

[45] Dobrițoiu & alii, op. cit.
[46] Iordache D.D., „Utilizarea reţelelor de socializare în rândul studenţilor români – variabile, avantaje şi limite", Romanian Journal of human-Computer Interaction 7 (3), pp. 195-208, Bucarest, 2014.

As is well known, these extensions do not diminish the role of teacher, but enhance him surprisingly for a long time.

In this context, research into the forms of use of new information technologies becomes a priority, because, on the one hand, they are elements that make possible the extension in space and time, and on the other hand, because "the formalization of the non-formal and the informal" is the way to endow pupils with those criteria of correct and efficient use of contexts, environments, tools and new means of learning.

The educational effects of the use of ICT are considered remarkable, since the first decade of the new millennium, if they are integrated into a well-founded training and self-training strategy. The use of educational technology and software in the instructional-educational process promotes another model of learning and didactic interaction, which manages to transform electronic communication into an educational one. Information technology changes not only the way we communicate, but also the nature of information and the way it is exploited, so that information can be provided in multiple form (text, image, audio, video), can be integrated in different ways and processed including with the help of computers tools[47].

The use of Internet allows its involvement not only in quick access to useful information for a specific topic, but also in establishing effective ways of quasi-permanent relationship between pupils and teachers. Thus, there are possibilities for assigning tasks to pupils outside the institutionalized context of the school, in places chosen by the teacher or where the pupil is. These tasks can be for a pupil or a group of pupils – sent by one or more teachers – also coordinated remotely. The teacher's priority is to teach pupils how, for what and which of the sources to "run", how to use them usefully, providing them with criteria for identifying, selecting, analyzing and interpreting available information. We can say that the period of conducting the courses exclusively online, in Romania, in the context of the pandemic, was an opportunity to fully test this way of learning!

Lovers of constant online browsing and confident in their digital skills, pupils have the false impression that the new tools will be enough for them, for example, to get a job, to engage in administrative actions or health services. The school becomes the place where pupil finds out that the transfer of competencies at the social level, of integration in the socio-economic life requires a sustained and organized effort. These skills can be significantly improved through training and certification, so by motivating subjects to make a systematic effort[48].

4. Using the computer and social networks in the pre-university educational process from the perspective of teachers

We set out to analyze the way in which ICTs are integrated in the pre-university educational process using as a case study the educational units from a locality in Romania, which has both middle schools and high schools. It is about the town of Câmpina, with about 40,000 inhabitants, which has three middle schools and six high schools (including national

[47] Iancu Ș., op. cit.
[48] Chicu S., „Forme de utilizare a noilor tehnologii educaționale pentru nativii digitali", summary of the doctoral thesis, Al. I. Cuza University, Iaşi, Romania, 2018.

colleges). The case study was conducted in the form of a quantitative survey, using a questionnaire sent online to teachers from four high schools and a general school (Technological High School "Constantin Istrati" Câmpina, Forest Technical College Câmpina, Energy Technological High School Câmpina, Technological School of Filipeştii de Pădure, "Alexandru Ioan Cuza" Gymnasium School - Câmpina). From these, 41 teachers agreed to answer questions. As the survey was conducted between July 26 and August 9, 2020, the study was able to capture both the general use of ICT in education and the conduct of online courses in the context of the restrictions imposed by the coronavirus pandemic.

The objectives pursued in the quantitative survey among teachers were:

a) Understanding how electronic devices are used in the educational process;

b) The opinion of the teachers regarding the effects of the use of computers in the educational process;

c) The way in which ICTs were used during the period in which the teaching activity was carried out online in the context of the restrictions related to the pandemic.

In structure, the sample of respondent teachers is as follows:

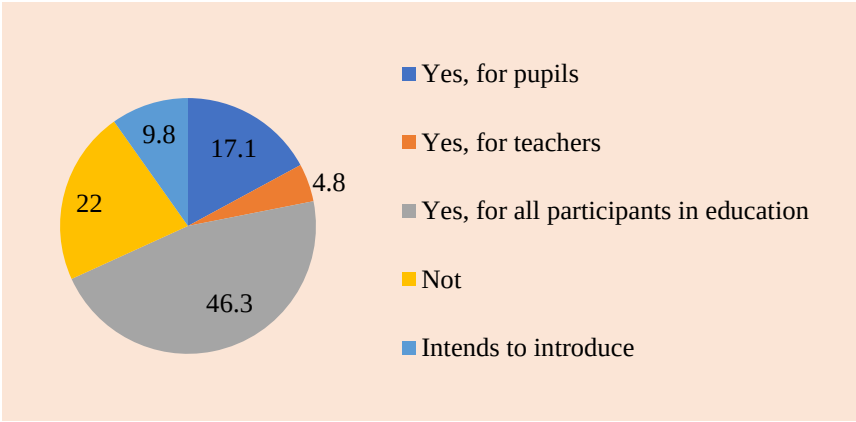
- From the point of view of seniority : over 20 years old (27%), 16-20 years old (24%), 11-15 years old (15%), 6-10 years old (17%), 1 - 5 years old (17%);
- 44% of the respondents have Ist didactic degree, 22% have IInd didactic degree, 25% are people with final appointment in pre-university education and 10% are beginners;
- 95% of the respondents have higher education and only 5% secondary education.

a) How electronic devices are used in educational process

The first set of questions sought to find out how computers are generally used in the educational process, ie the situation before the onset of coronavirus pandemic and the transition to online or mixed schooling.

Regarding *the endowment with computers*, a third of the respondents stated that they do not have them in the classroom or will be introduced in the near future (Chart no. 1).

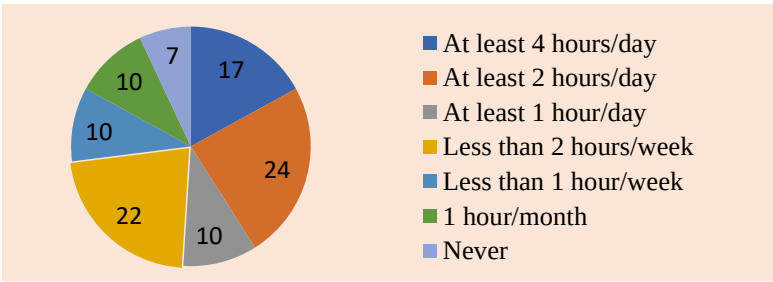
Chart no. 1. Equipping with computers in educational institutions (%)



In total, 83% of respondents *use the computer in the educational process*, a situation that includes the use of personal laptop of the teacher.

Regarding the *frequency of use of calculation tools by teachers*, in the teaching process, the situation is varied, from those who use more than 4 hours a day (17%), to those who use them occasionally (one hour a month - 10%) (Chart no. 2). The variation can also be explained by the different content of the subjects taught.

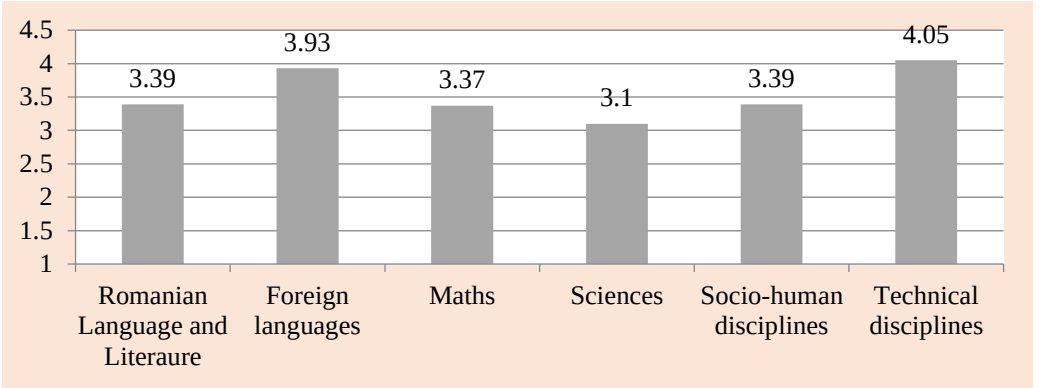
Chart no. 2. Frequency of use of computers in the educational process (%)



b) The opinion of the teachers regarding the effects of the use of the computer in the educational process

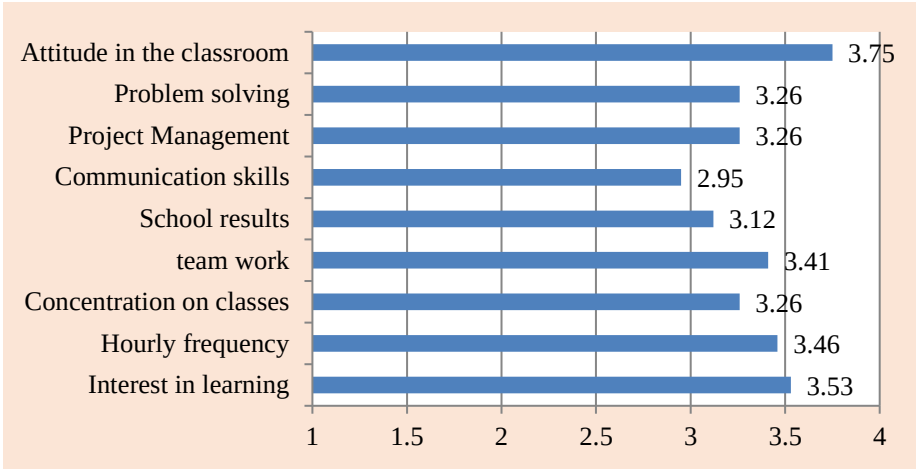
Regarding the efficiency of computers in the educational process, we used to evaluate the opinion of teachers the Osgood scale, with 5 levels (from completely inefficient – level 1, to very efficient – level 5 of the scale). The scores obtained indicate a higher efficiency attributed to computers in terms of teaching technical subjects (score 4.05/5) and foreign languages (score 3.93/5) and an average efficiency for other subjects under discussion (Chart no. 3).

Chart no. 3. Computer efficiency for pupils training (score)



Another question to determine the effects of using calculators was based on a series of 9 statements build on specific items for the evaluation of teaching activity among pupils: "interest in learning", "attendance", "ability to concentrate", "teamwork", "school results", "communication skills", "project management", "problem solving ability", "positive attitude in the classroom". The interviewed teachers were asked to express their agreement on *the ability of computers to help change pupils behavior by improving each of the 9 items,* using the 5 – level Likert scale (from total disagreement – level 1, to total agreement –level 5). The score based on the answers shows that for each item an average level was obtained, around 3 (out of 5), respectively "neither agreement nor disagreement". In other words, on average, respondents cannot comment on a positive effect of computer use on the items analyzed, nor can they say that the effect is zero. Of all the items discussed, the only one that scored higher was "attitude in the classroom", with a score of 3.75 out of 5 indicating a relative agreement among respondents that using computer contributes to a more positive attitude of pupils in the classroom.

Chart no. 4. Behavioral changes observed by the teacher as a result of the use of computers in the class (score)



Regarding *the influence of computers on the teaching process*, five other items were chosen, and the measurement of the influence was done on a 5-level Likert scale (from total disagreement – level 1, to total agreement –level 5). The five statements that teachers were asked to agree on are:

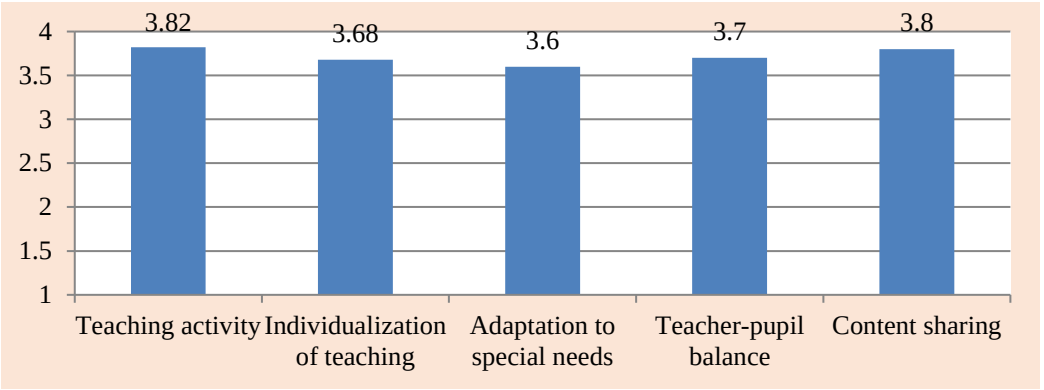
- ”Computers used in the classroom facilitate the teaching activity” (item: teaching activity in general);
- ” Computers in the classroom allow me to better adapt my lessons for each pupil individually” (item: individualization of teaching);
- ”Computers are especially useful for adapting learning activities for students with special needs or learning difficulties” (item: adapting to special needs);
- ”Technology helps me to achieve a balance between teacher-centered and pupil-centered learning” (item: teacher-pupil balance);
- ”Technology helps me get the required content/share the content with my colleagues” (item: content sharing).

The scores obtained on this question are close to level 4 out of 5, ie “agreement”, which means that the respondents agree that the use of the computer contributes to the improvement of the teaching process for all 5 items analyzed, a greater influence being attributed to the possibility to obtain and share the informational content (score 3.8/5) and the teaching activity in general (score 3.82/5) (Chart no. 4).

Asked about *the usefulness of social networks in the educational process*, on an Osgood scale with 5 levels (from useless – level 1, to very useful – level 5), the respondents considered that they are useful (score 4.24/5). On the other hand, among the difficulties encountered when using social networks, were stated: “risk of distraction”, ‘dependence on laptop/phone”, “lack of communication”, “impossibility of concrete monitoring’, “limited

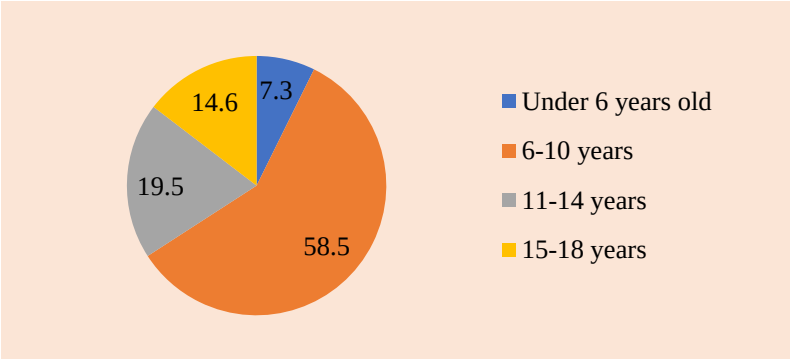
access of pupils to these technologies", " high time consumption for homework verification".

Chart no. 4. Changes in the technology' use at the level of the educational process (score)



Finally, when asked about the optimal age at which a pupil can access a computer under the guidance of the teacher, most teachers indicated the range of 6-10 years (58.5%) (Chart no. 5).

Chart no. 5. The optimal age at which a pupil can access the computer under the guidance of a teacher (%)

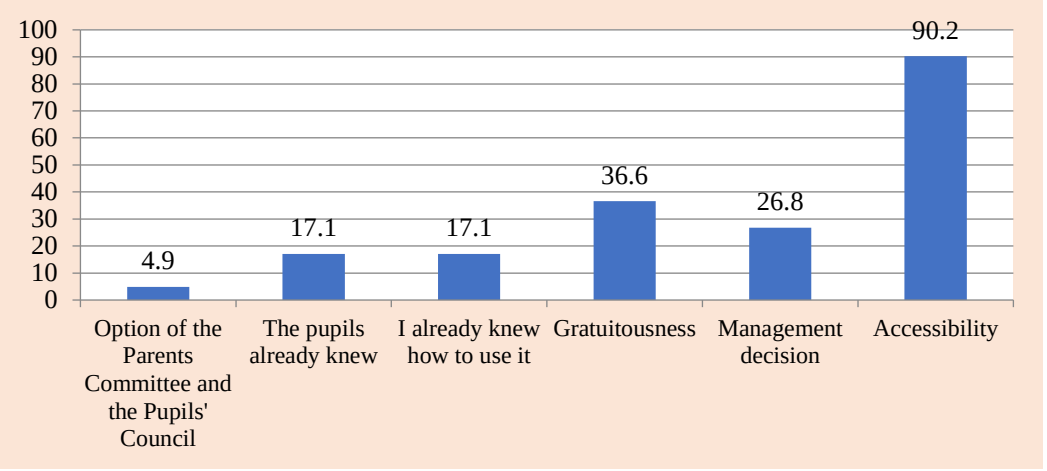


c) How ICTs were used during the period in which the didactic activity was carried out online

Given that the study was conducted after the period in which the teaching activity took place in online form, as a result of the restrictions imposed by the coronavirus epidemic, a number of questions focused on how ICTs were used in this context.

Regarding *the platforms used for teaching*, the first place is Google Classroom, used by all respondents, followed by Whats app (83% of respondents), Zoom meeting (51%) and Facebook (29%). The criteria according to which the platforms were chosen are multiple, from the degree of accessibility, to the obligations imposed at the level of the school or the school inspectorate (Chart no. 6).

Chart no. 6. Criteria for choosing the online platform (%)



The evaluation of the *teaching experience exclusively online*, using these platforms, on a 5-levels scale, from very unpleasant (level 1) to very pleasant (level 5) generated an average score of 3.58 (out of 5), which means a appreciation "few pleasant" to "acceptable".

Among the *elements appreciated favorably by the teachers* were evoked: "the possibility to use diversified teaching materials (tutorials, ppt presentations, worksheets, documentation sheets)", "speed in transmitting information", "transmission of information from anywhere", "the possibility to transmit more information", "new ways of teaching", "the attractiveness of platforms for students".

On the other hand, *the disadvantages* of using these platforms exclusively were mentioned:

- "Lack of socialization, lack of competition between pupils, impossibility of pupil-centered learning and adapted to their needs";

- “Long time for the preparation of the didactic activity, minimum response from the students”; “Difficulties in understanding new content, lack of interest of some pupils”; “Pupils ignored many of the classes, materials and worksheets provided”; “The message was not received correctly”;
- “I didn’t “feel” the pupils, they couldn’t connect emotionally”, so it was a certain disinterest of the pupils”;
- ”Impossibility to follow pupils during online activities”, “Lack of an objective assessment”;
- “Lack of technical means, as well as quality Internet in some cases”;
- “Methodological indications received from the Ministry of Education regarding the conclusion of the averages”.

5. The use of ICT in the pre-university educational process according to the pupils

In parallel with the quantitative study conducted among teachers, a survey was conducted also based on an online questionnaire, among pupils from the same high schools included in the case study (Technological High School “Constantin Istrati” Câmpina, Forestry Technical College Câmpina, Energy Technological High School Câmpina, Technological High School of Filipeştii de Pădure).

The objectives of this survey were:

- Analysis of the behavior of using social networks in the learning process;
- Pupils’ opinion on the usefulness of social networks in the educational process;
- Pupils’ opinion on conducting teaching exclusively online (in the context of the pandemic).

The application period of the questionnaire was similar (to the survey among teachers) and 103 responses were totaled. In the structure, the responding pupils have the following demographic characteristics:

- Age: 15-16 years old (16.5%), 16-18 years old (64.1%), over 18 years old (19.4%);
- Environment of residence: urban (55.3%), rural (44.7%);
- Gender: girls (66.7%), boys (33.3%).

a) The behavior of using social networks in the learning process

To find out how pupils use social media in their learning, questions were asked about usage preferences, reasons for use, subjects used, and frequency of use.

Regarding the *social networks used for learning*, most pupils mentioned WhatsApp (86.4%), followed by Facebook (48.5%) and Instagram (35%). Twitter, Classroom, Zoom, Google Chrome, You Tube, Tumblr were also mentioned with less than 2%.

The main reasons for using these social networks in connection with school activities were: "searching for information, documentation" (70.9%), discussions, "exchanges of views with colleagues" (61.2%) and "submission of reports, referred to teachers" (51.5%).

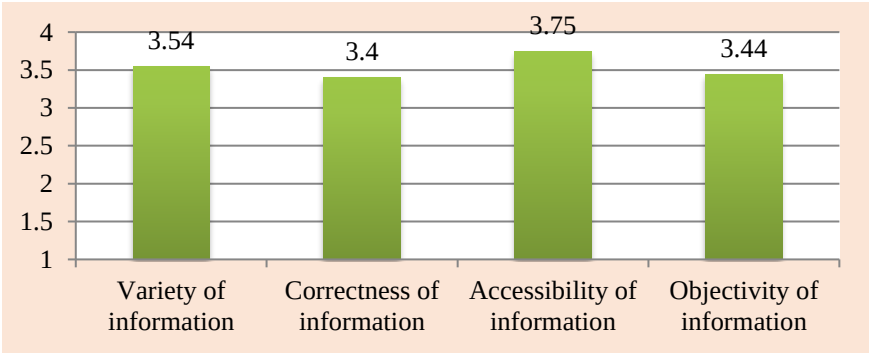
The disciplines for which the social networks were used the most were Romanian language and literature (73.8%), mathematics (63.1%), foreign languages (52.4%) and socio-human disciplines (48.5%). Lower percentages were obtained for sciences (chemistry, physics, and biology) (35.9%), computer science (29.1%) and technical disciplines (23.3%).

Regarding *the frequency of use*, more than half of the pupils (51.5%) stated that they use social networks daily or almost daily in their learning activity. To these are added a percentage of 30.1% who use these networks once or twice a week.

b) Pupils' opinion on the usefulness of social networks in the educational process

When asked to appreciate *the usefulness of using social networks* on a 5-level Osgood scale, from "useless" - level 1, to "very useful" – level 5, for 4 attributes (variety, correctness, accessibility and objectivity of information), pupils assigned grades that generated average scores between 3 (less useful) and 4 (useful). A better appreciation was obtained regarding the accessibility of the information (score 3.75 out of 5), while for the objectivity of the information the pupils declared a lower utility (Chart no. 7).

Chart no. 7. The usefulness of social networks in the educational process (score)



Among *the advantages* that pupils appreciate regarding the use of social networks in the educational process, we mention first of all those related to the amount, nature and variety of information: "a lot of useful information", "the advantage of informing me more and learning", "we were able to use more varied or new teaching materials, as opposed to classical teaching at school".

c) *The opinion of the pupils regarding the development of the teaching activity exclusively online*

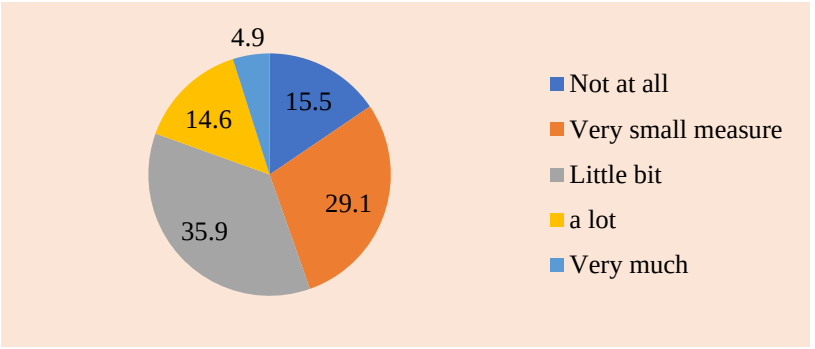
Regarding the period in which the courses were conducted online, in order to prevent the spread of coronavirus, the pupils were asked to express their opinion on how the educational process took place.

A first question referred to the platforms used for *teaching*. The most evoked were, in order: Google Classroom (96.1%), Whats app (61.2%), Zoom meeting (46.6%) and Facebook (8.7%).

The reasons for choosing these platforms were: the decision of teachers (67%), accessibility and ease of use (47.6%), free use (11.7%), familiarity with the platform (10.7%), the decision of the Parents' Committee and the Pupils Council (4.9%).

Asked to *rate the online learning experience*, on a 5-level Osgood scale, from "very unpleasant" (level 1), to "very pleasant" (level 5), the pupils gave grades that determined an average score of 3.09, corresponding to a "few pleasant" experience. Moreover, 29.1% of pupils said that online learning can replace "to a very small extent" traditional learning methods, 35.9% "little extent" and 15.5% "not at all" (Chart no. 8).

Chart no. 8. The extent to which online learning can replace traditional learning methods (%)



Regarding *the knowledge assimilated by pupils* in the online learning period, compared to the traditional one, 64.1% of pupils said that they assimilated less knowledge, 33% the same amount of knowledge and only 2.9% state that they assimilated more knowledge.

Online learning has a number of *benefits* for pupils, which can be grouped into several categories as follows:

- Advantages of communication: "more open interaction with teachers", "it was easier for shy colleagues to interact from behind the computer than in the

classroom", "expression was free", "teachers were able to better observe if we have writing mistakes".

- Advantages related to comfort: "flexible schedule", 'relaxation (learning at home)", "I reduced the time spent on the road", "I did not commute", "more time searching for information for reports and documentation".

On the other hand, *online education* has, in the opinion of the interviewed pupils, a number of *disadvantages compared to traditional education*:

- Lack of socialization, communication with colleagues: "Distance from the social group", "We feel the unpleasant effects of lack of direct socialization with colleagues and teachers (during breaks, before and after classes)";
- Technical problems: lack of adequate devices, poor connection;
- Distracting attention to other types of content, creating an addiction;
- Poor communication in the case of team activities, but also unequal communication between pupils due to the individual communication style of each;
- Lack of experience in online learning/teaching: 'poor organization", "I did not understand the message clearly", "too many topics", "difficulty in selecting relevant information";
- Reduced motivation for learning outside the formal setting (from school).

6. Conclusion

Our article aims to analyze the use of computers and digital communication in the educational process, using for the case study the situation of educational institutions in a medium-size locality in Romania. The study, based on two quantitative surveys with a questionnaire, one among teachers and one among students, was conducted in the period immediately following the state of emergency decreed in Romania to prevent the spread of coronavirus. During the state of emergency, which lasted a month and a half, the courses in Romanian education, regardless of the level, were conducted exclusively online. Therefore, our study captures not only the situation of the use of computers and social networks in the pre-university educational process in general, but also the particular aspect of the online learning period.

The conclusions can be summarized in three main areas: (a) the situation of computers and their use in the educational process, (b) the assessment of the effect of computers use in the educational process, in the opinion of teachers and the use of social networks, in opinion of students, (c) the experience of the online school in the opinion of teachers and students.

(a) Equipping with computers and using them in the educational process

According to the teachers, the schools in the sample have computers for the educational process, which are intended for use by pupils or teachers or both categories of beneficiaries. However, 22% of respondents stated that the school where they work does not have adequate equipment, which suggests the need for additional investment in this regard.

Regarding the actual use of computers in teaching, this is done by 83% of teachers, but the frequency is different from one person/discipline to another.

In addition to the school facilities, pupils use information on social networks, but also communication in the process of learning and performing work tasks. The frequency of use is high (over 50% use social networks daily), and the main subjects for which they are used are Romanian language and literature and mathematics; in fact, these are the subjects with high stakes in the baccalaureate exam.

(b) The effects of using computer and social networks in the educational process

In the opinion of teachers, computers are considered to have a high efficiency in the case of teaching technical subjects and languages, while for other subjects, the efficiency is average. In terms of pupils' skills, the only thing that is stimulated by using the computer in the teaching process is the attitude in the classroom; for the other competencies discussed ('interest in learning", "class attendance", "ability to concentrate", "teamwork", "school results", "communication skills", "project management", "ability to problem solving"), teachers did not notice major changes due to the use of the computer.

If the influence on pupils does not seem significant, in the opinion of teachers, the situation is different in terms of the influence of the computer on the teaching process itself. From this point of view, the teachers consider that the computer contributes to the improvement of the teaching activity in general, to the obtaining of new contents and the possibility of sharing them, to the individualization of the teaching, ensuring a better balance between teacher-centered learning and pupil-centered learning, as well as adapting teaching to needs of pupils with special needs.

Form the pupils' point of view, the information – and here we are referring only to that coming from social networks – is useful in terms of accessibility and variety, while their degree of correctness and objectivity limits their usefulness.

(c) Online school experience

The online school was based mainly on the use of Google Classroom platform, to which WhatsApp, Zoom and Facebook were added. The main selection criteria were accessibility (90% of teachers, 48% of responding pupils), the decision of the school management (27% of the teachers), the decision of the teachers (67% of responding pupils), free use (reason mentioned by 37% of teachers and 12% of responding pupils).

For teachers, the experience of teaching exclusively online was rated with a score of 3.58 out of 5, which corresponds to an experience "few pleasant" to "acceptable". For pupils, the score obtained is 3.09 out of 5 which corresponds to a "few pleasant" experience. Only

20% of pupils (ie 1 in 5 respondents) believe that online learning can replace the classical one, the others being of the opinion that traditional methods can be replaced to a "very small extent", "little extent" or "not at all" by the online school.

Although our study is an exploratory one, aiming to capture the first reactions following the abrupt and unforeseen change in teaching as a result of the rules imposed by the pandemic, the results obtained are suggestive of the situation in which the computer and social networks were used before the pandemic, and how both teachers and pupils reacted and perceived the transition to online teaching.

Corroborating the results of the two studies and referring to the theoretical information that shaped the research framework, we can retain the appreciation enjoyed by digital teaching/learning techniques due to the diversity of content and forms of information presentation, adaptability, speed and comfort in use, the possibility of use of new or varied teaching methods to increase the attractiveness of teaching, to stimulate communication between teacher and pupils.

On the other hand, the differences in technical equipment between users, as well as access or connectivity were significant and negatively affected the online learning process. The transition to online education involved a major effort for teachers to prepare teaching materials, communication and assessment through the platforms chosen for teaching, but also for pupils to understand and adapt to new activities and requirements. However, the main disadvantage reported by both the teacher and especially the pupils was the lack of informal communication, socializing relationship, as well as "emotional" communication between pupils or between pupils and the teacher.

The fact that the online school experience has been considered few pleasant to acceptable by teachers and few pleasant by pupils must be thought-provoking about all the causes of this low satisfaction. Basically, the lack of solid experience in using online teaching techniques has led to limited use of the advantages of these techniques, mentioned by us in the first part of the article, but to a realization of many of disadvantages that no specialist can deny.

The experience of the online school has shown the extent to which teachers and pupils can adapt at this time to changing the means of conducting educational activity, but also the potential of current digital technologies to support the educational process in the future. We believe that this type of study must be carried out on a national scale, in order to quantify the positive effects observed, the difficulties encountered and to retain, based on these experiences, those methods and means that can be integrated into teaching in a world that now from there, it will focus more and more on the digital dimension.

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