

## Real School in the Virtual World Study on Online Learning in the Current Context of the Romanian Education System

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**Abstract:** The research report highlights concrete aspects, the real issue of online learning that teachers currently face, and the aspects they consider vulnerable for this form of education, which leads to imbalances in the teaching-learning-deepening-assessment. One important aspect is precisely the change in the mindset of teachers to overcome their common places and an openness to us, which is not within everyone's reach, and it is teachers who should continuously define and enrich their content by means of a flexible and open design adaptable to any requirements, while the student must develop their capacity to explore and analyze these contents in a collaborative manner, thus building a new teacher-pupil relationship. It is therefore important that in the next period, these aspects summarized in research, identified by teachers as practitioners, should be the starting point for the measures envisaged by the management bodies and those with authority in the field of education to address these discrepancies, solving system problems and improving education through the development of uniform educational strategies and policies based on studies and research results.

**Keywords:** online learning; online assessment; technology; educational design; educational platforms

### 1. Preliminary Considerations. Theoretical Landmarks

From a theoretical point of view, computer-assisted training and E-learning are two similar concepts, especially in the Anglo-Saxon space, which highlights a series of theories that convey the idea that the two terms overlap, but some concepts claim that the scope of E-learning is wider and includes the scope of computer-assisted training.

Computer-assisted training is a teaching method that is based on the principles of modeling and cyber analysis of the training activity in the context of new information and communication technologies, characteristic of contemporary society.

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As evolution in the Romanian education system, the first achievements of Computer Assisted Learning (IAC) were focused more on knowledge verification, and along the way began to appear complex educational software, which can provide contexts for learning, becoming a field increasingly explored in the field of teaching.

The difference between the two concepts refers to the way of individualizing the learning process, in the sense that computer-assisted training was related to the use of software on CD or Web, which traditionally took place, more face to face, and the courses designed for e-learning can be delivered remotely, the virtual classroom, anywhere and anytime, emphasizing the individualization of the learning activities.

Over time there have been various criticisms of the development of e-learning in education, in the sense that it minimizes teacher-student communication, limits interactions, does not contribute to the development of creativity, etc., but it is certain that not only due to the current context, but the introduction ICT in education has also contributed and is obviously contributing to the modernization of the education system.

George Văideanu, since the 80s, talks about the benefits that the computer brings in teaching, but it is very important to note that designing and implementing a lesson using technology raises more issues and questions than designing and supporting a traditional lesson.

Starting from the premise that online learning is and can be a form of organizing learning, an alternative to traditional learning in the current context because it takes place exclusively online, we set out to conduct a study to identify issues that could be improved, remedied, or changed, as appropriate, based on research results.

## **2. Research Methodology**

### **2.1. The Objectives of the Research**

- Identifying the technical difficulties faced by teachers in carrying out online learning activities;
- Identifying the peculiarities of online learning for pupils/students;
- Highlighting the trends in the online learning process about the way of adaptation and involvement of teachers;

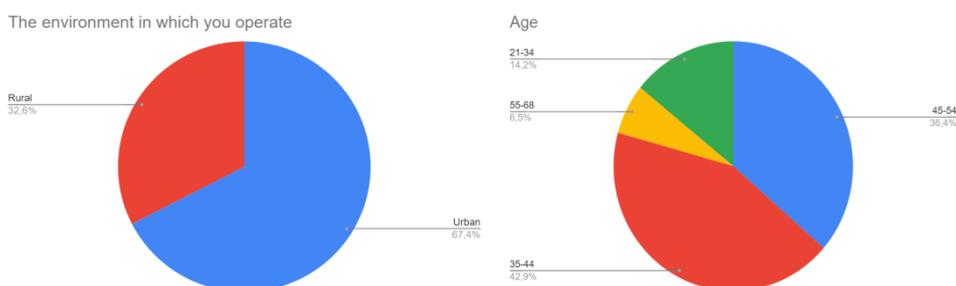
- Revealing the online learning variants, accepted as more efficient, in the given context: synchronous, asynchronous, hybrid;
- Highlighting the methodological and methodological aspects of the online learning process, which should involve changes, improvements, changes;
- Identifying online assessment methods and tools used by teachers, benefits and limitations, opportunities for improvement.

## 2.2. Description of the Sample

This research was attended by 260 teachers from pre-university and university education, 67.4% from urban areas and 32.6% from rural areas, the questionnaire being applied online, which leads us to express from the beginning certain limits of research, regarding the participation in the investigation of teachers from disadvantaged backgrounds.

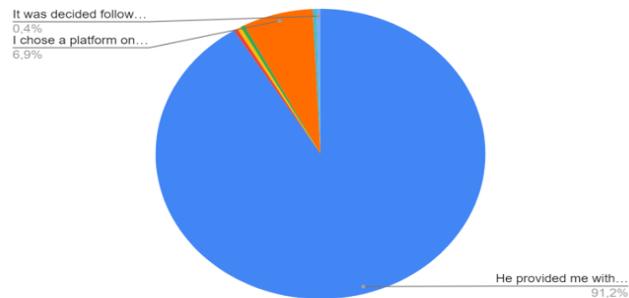
The socio-demographic data requested from the respondents targeted the environment of origin, level of education (31.2% primary, 52.3% secondary, 30.4% high school, 1.5% post-secondary / tertiary non-university, 8.1% university) age. The questionnaire was applied between 10 and 30 November 2020, after 8 months from the initial suspension of courses and the transition to the online learning system due to the pandemic crisis, respectively after two months from the beginning of the school year and approximately one month from the beginning academic year.

Thus, we are dealing with two consecutive experiences of teachers approaching online learning, and the research results are relevant from the perspective of research objectives.





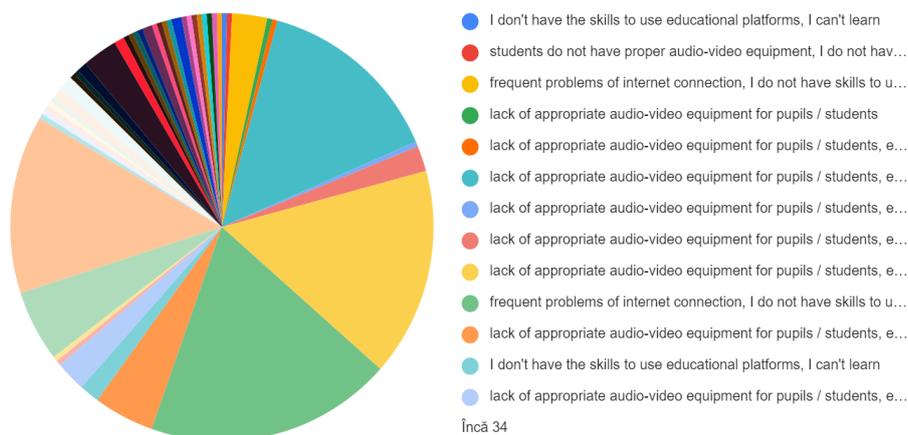
What was the way to select the learning platform?



Another question concerned the technical difficulties faced by teachers in carrying out online learning activities. To this question, 65.6% of the respondents stated that they face frequent problems of internet connection, and the lack of appropriate audio-video equipment for pupils/students is a mentioned aspect of 64% of the subjects, as well as for teachers, and 12% say they do not have the skills to use them.

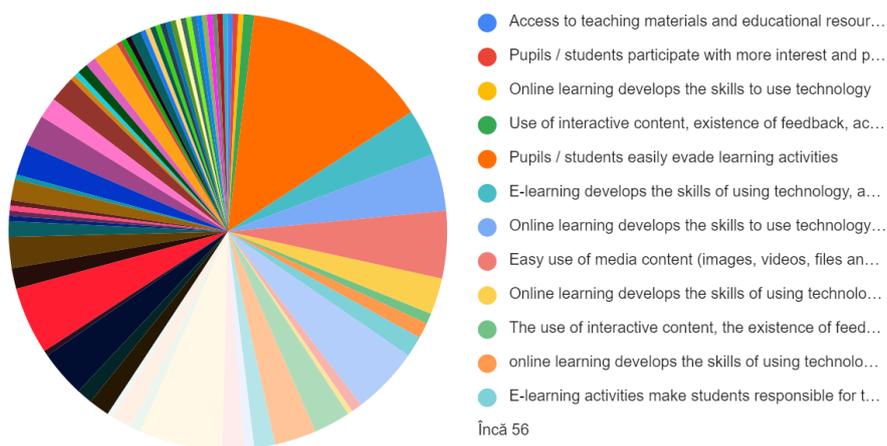
From here it can be concluded that the lack of appropriate technology affects a large part of the pupils/students, which leads to inconsistency and major imbalances in the online learning process, those affected being primarily students, respectively students. Also, technical problems with internet connection are very common and do not depend on users. However, connecting to internet networks should become a priority in the next stage of preparing and improving the online learning process, without which the others are not possible, no matter how efficient they are.

What are the technical difficulties you face in carrying out online learning activities?



When asked about the particularities of online learning for pupils/students, 59% of the subjects stated that they develop the skills of using technology, 41.7% highlight the use of interactive content, the existence of feedback, 55.2% appreciate the use of the ease of media content (images, videos, files and any kind of virtual materials that make learning more efficient), and 59% of respondents talk about the fact that pupils/students easily evade learning activities, which is actually a problem real learning online. It is interesting to note that only 7% of respondents say that pupils/students participate with more interest and pleasure in online learning activities.

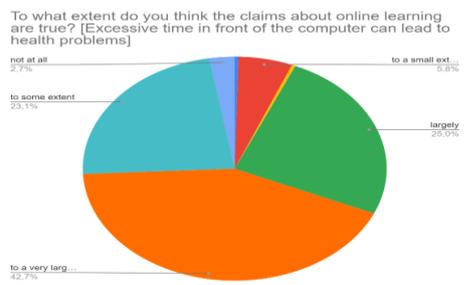
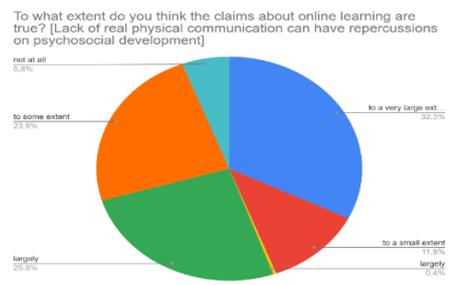
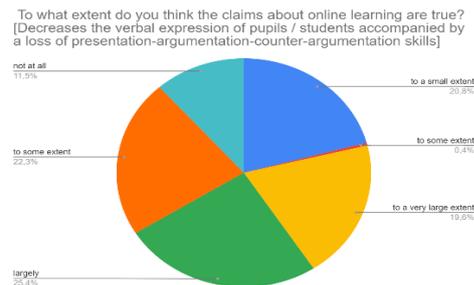
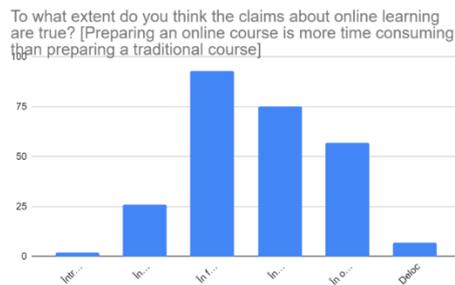
What do you think are the peculiarities of online learning for pupils / students?



It is relevant to approach the teachers surveyed, regarding some statements regarding online learning. Thus, 35% of the subjects largely consider that the preparation of an online course is more time consuming than the preparation of a traditional course, 26% of them consider the statement that online learning activities are inaccessible because not all students have the necessary technology, and 30%, to a large extent, believe that pupils/students must be extremely motivated to participate in online courses. Also, to a very large extent, 20% of the respondents agree with the statement regarding the decrease of the verbal expression capacity of the pupils/students accompanied by a loss of the presentation-argumentation / counter-argumentation capacities.

Lack of real physical communication can have repercussions on social development is a statement that 31% of subjects consider very true, and 42% to a very large extent

believe that excess time in front of the computer can lead to health problems. Another relevant answer is the possibility of conducting online learning for all subjects. 31% of those surveyed consider, to a large extent, and 30%, to a very large extent, that it cannot be carried out for all disciplines.



Open-ended question *What is your opinion on online learning?* He brought to the fore some relevant aspects, among which we mention the following:

Respondents say that online learning fails to fully contribute to the development of the skills provided in the program, is tender but teachers do not have the skills to motivate students, is very demanding for motivated and responsible teachers, and technical difficulties cause frustration, it is not effective and involves rethinking ways of learning and assessment, teachers do not have the necessary skills to teach online, affects the psychosomatic development of students, students spend too much time in front of the computer, can be a valuable, complementary source, but can not replace traditional learning, teaching-learning-assessment strategies should be rethought, leads to poor learning outcomes, does not yield, imposes additional costs, a solution only in case of emergency, in no case can replace face-to-face learning, does not ensure the quality of education, for some students it turned into play, it's not it is efficient, largely cumbersome, beneficial but it cannot replace traditional learning, it is extremely tiring, for young students it is an obstacle to correcting

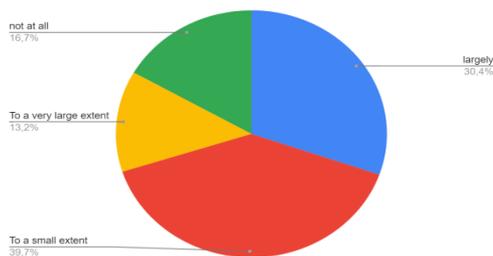
mistakes, no emotion is transmitted, to be useful the educational paradigm should be completely changed, especially with regard to the creation and use of resources (material, procedural, temporal), it would be beneficial to combine the two forms of learning, but not exclusively online, useful only for responsible pupils/ students, it seems to be a desperate solution at present, not being based on solid methodological and procedural bases, etc.

The positive aspects highlighted by the respondents are less compared to the unsatisfactory ones in terms of online learning: it is an alternative variant of learning, it makes parents responsible, develops students' creativity, if there is adequate equipment and the internet would not be a problem, it is an opportunity for the modernization of Romanian education and a great challenge for those involved, accessible and friendly, etc.

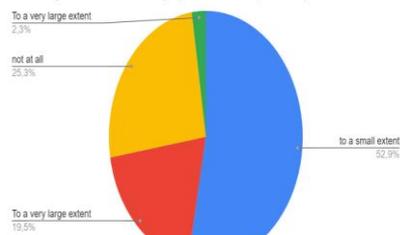
Question no. 10, *To what extent do you consider that the following variants of online learning are effective ?*, brings into discussion the three types of online learning: synchronous (online meeting), asynchronous (online learning activities, without supervision, hybrid learning, with alternating groups).

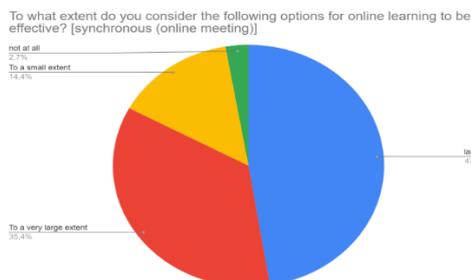
Approximately 50% of respondents consider synchronous learning to be highly effective, while asynchronous learning is less effective for more than 50% of respondents. Hybrid learning is largely effective for only 30% of respondents. Therefore, teachers consider that the most effective online learning strategy is the synchronous, online meeting, even if it is also the most consuming of human resources and educational resources.

To what extent do you consider the following online learning options to be effective? [hybrid learning with alternating groups]



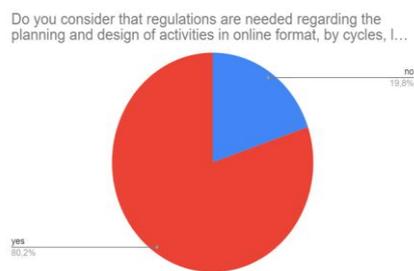
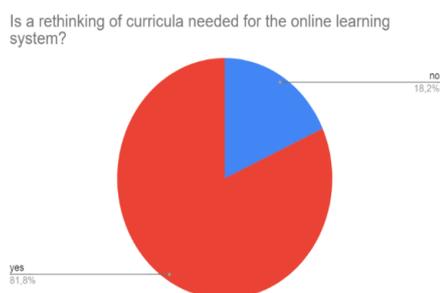
To what extent do you consider the following options for online learning to be effective? [asynchronous (learning activities ta...]





Regarding the rethinking of curricula, 81,8% of respondents believe that a rethinking of curricula is needed for the online learning system, while only 18,2% consider that this is not necessary.

Also, to question 13, respondents (80,2%) consider that regulations are needed regarding the planning and design of online activities.



The arguments that teachers bring are the following:

The need for the usefulness and futility of certain disciplines needs to be re-examined, as e-learning activities emphasize their inefficiency. The programs are loaded with too much content that cannot be taught in the online system, there is no methodology for teaching online subjects, an online lesson plan, the stages of online lessons, digital skills must be introduced, the relationship between content and skills must be rethought, with the inclusion of digital skills, as well as the relationship between theoretical and practical disciplines.

Aspects to improve: school curricula must be changed, they must be adapted to the profile of the student, another form of learning requires a different approach, the number of students in the class is another issue that should be analyzed, it is necessary to consult teachers when taking such of decisions, for special education there are real problems that need to be re-analyzed in detail, maybe some hours of

individual counseling for students with special needs, some lessons need more hours allocated, some chapters, in certain subjects, can not be conducted online. It is necessary to update the contents and develop appropriate teaching strategies for this type of learning, rethinking the whole educational process to ensure a legal, unitary and standardized framework, retraining, and teaching methods are needed, an integrated approach is needed and focused on the usefulness of learning.

Some teachers, although their numbers are considerably smaller, consider that teachers can adapt to these changes and can select the subject to be taught online based on existing curricula, it is not necessary to rethink skills, but only the contents and of performance descriptors, and changes can be made gradually, and too many regulations limit the activity of the teacher.

The second approach of the research focused on the online evaluation component.

Thus, the question regarding online applications and tools used by teachers in the continuous assessment of pupils led to the following issues:

The teachers' responses showed that they identified and used a series of online assessment applications and tools, of which we will list those that followed most frequently in the recorded responses: questionnaire, Kahoot application, tests, current assessment. oral (information, arguments, analyzes, and literary comments), topics posted on the classroom platform in word format, projects (case studies, presentation of works/figures representative of the cultural/literary currents studied, etc.), presented in PPT format, prices or others discovered and preferred by students, Liveworksheets, learning apps, Microsoft Forms, Quizizz, Gsuite and Edus Tools, Twinkl, Worksheets, questionnaires, themes, practical applications, digital portfolios, Word wall, puzzle, Padlet, ASQ Platform, Mentimeter , socrativ, google forms, thinglink

Powerpoint projects, online tests, online questionnaires, papers, projects, oral evaluation, frontal evaluation. differentiated themes, Jamboard, Word Cloud Art, online tests, Digitized platform (themes and tests included, already existing or that can be created), Asq platform, quiz tests, Kahoot, socrative, office-learning test portal, Edmodo, Quiz, tests, projects, portfolios, questionnaires, thematic debates, free discussions.

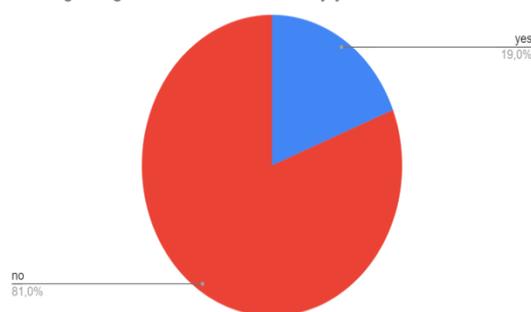
For the summative assessment (List online applications and tools used by you in the summative assessment of pupils/students), the respondents listed a multitude of tools and applications, among which we list the most commonly used: tests, worksheets, Project, digital portfolios, Kahoot, word wall, The essay edited in word and posted

on edus.ro or classroom, Online tests, Google forms, grid tests, Quiz, Google forms, tests, questionnaires, Storyjumper, Liveworksheets, Wordwal, Gsuite, Didactic.ro, Sakai platform offers such tools, Google Classroom, Wordwall, Microsoft Teams, adservio tests; youtube, socrative, etc.

A small number of respondents state that they have not used online summative assessment tools and do not have the skills to develop such tools.

Regarding the identification of the online initial assessment tools, they used at the beginning of this school/university year ? 81% of the respondents state that they used online assessment tools for the initial assessment, which we find listed in the following question. The initial assessment also offers, on the one hand, the teacher, on the other hand, the student, the possibility to have a more accurate representation of the existing situation (what is the learning potential of each of the students, which are the gaps that will have to be filled even more). chosen remedied) and at the same time to formulate the requirements for the next learning period. Thus, based on the information resulting from the initial evaluation, it is possible to plan the pedagogical approach for the next period and possibly, for special cases, of some recovery programs, or specialized intervention programs.

Did you identify the initial online assessment tools you used at the beginning of this school / university year?



Teachers mentioned initial assessment tools identified on the educational platforms used: Brio Tests, Tests and worksheets for initial assessment, Kahoot, Google forms tests, Linoit, word wall, learning Apps, tools used since 2009, oral evaluation in synchronous meetings.

The advantages of online assessment are: for 56.6% of respondents, the online assessment provides fast feedback, 47% consider it a fast and effective method of assessment, and 41.9% believe that it eliminates the emotions and stress of participants in the online evaluation. Another advantage is the one that refers to the

variety of tests applicable for each type of evaluation, 30% of the respondents appreciating this, while only 20% think that it is an advantage to individualize and adapt the tests to the intellectual level of the students.

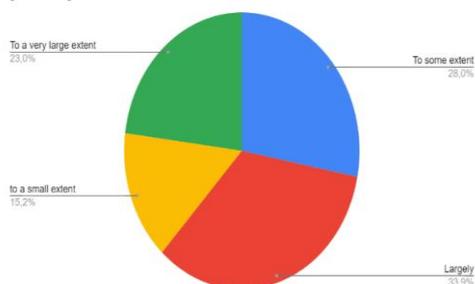
24% appreciate the objectivity of the evaluation of school results, and 23% consider that online evaluation ensures the development of intellectual skills of analysis, synthesis, and evaluation, only 12% believe that it offers the possibility of a real diagnosis, while 27% say that online evaluation changes significantly perspective on educational practice.

The limitations/disadvantages of online evaluation bring to the fore the following aspects: 71.7% of respondents consider that a material basis is needed for the good application of online assessment (equipment, software, verified test batteries, programs), 65% believe that online assessment significantly reduces the verbal expression of pupils/students, 52.7% - use, mainly, of objective items of multiple-choice and correlation type. A significant percentage of respondents, respectively 50.4% believe that we currently face difficulty in pre-training teachers in terms of using the computer as experts, and 32.9% of respondents talk about the conservatism of some mentalities.

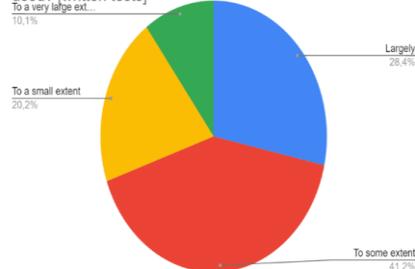
Regarding traditional assessment methods, most 41% of respondents consider that written evidence is used to some extent, while 20% believe that written evidence is used to a small extent.

The practical tests are not used at all, 7% - to a very large extent, and 40%, to a small extent, and the oral tests are used to a large extent, say 33% of the subjects. Therefore, written tests can be considered as preferred in the online assessment system.

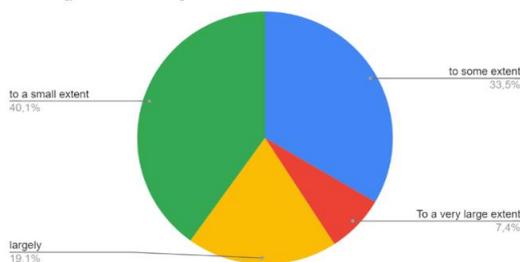
To what extent can traditional online evaluation methods be used?  
[oral test]



To what extent can traditional online evaluation methods be used?  
[written tests]



To what extent can traditional online evaluation methods be used? [practical tests]



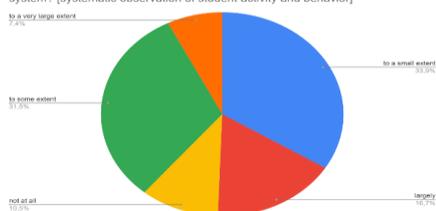
Teachers participating in this research believe that, among the complementary methods of assessment, the systematic observation of student activity and behavior can be used to a small extent - 33% and 31%, respectively, to some extent, which means that it is not very used in the online evaluation.

The investigation, as a complementary method of evaluation, is used to some extent by 35% of respondents and 33% to a small extent.

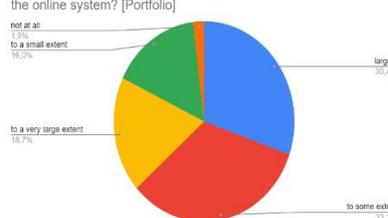
The project method seems to be the most used, 33%, to a large extent, respectively 32% to some extent.

Self-assessment is considered an easy-to-use method by 32%, to some extent, and 23.8%, to a large extent.

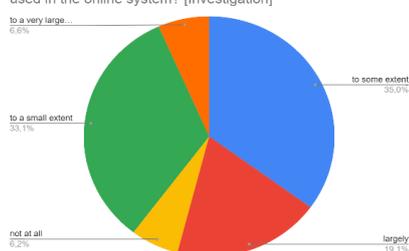
To what extent can complementary evaluation methods be used in the online system? [systematic observation of student activity and behavior]



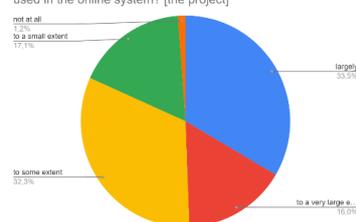
To what extent can complementary evaluation methods be used in the online system? [Portfolio]



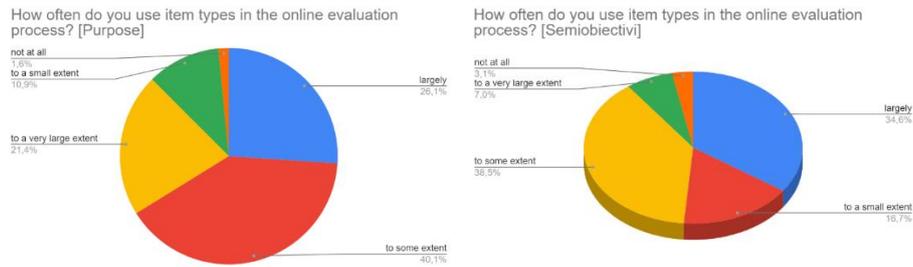
To what extent can complementary evaluation methods be used in the online system? [Investigation]



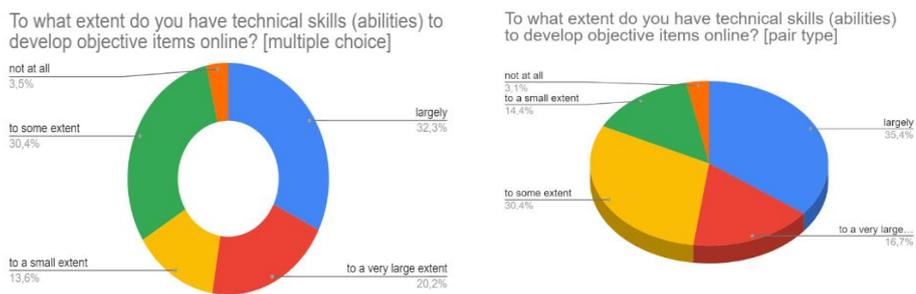
To what extent can complementary evaluation methods be used in the online system? [the project]

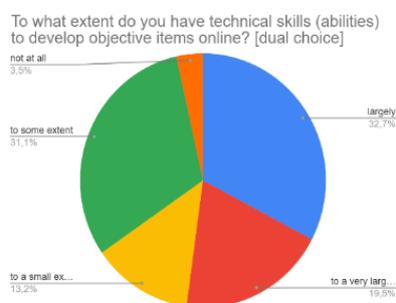


Objective items are frequently used by most surveyed teachers: 40%, to some extent, 26%, to a large extent, but, semi-objective items are largely used by 34%, and 38%, to some extent. Subjective items (with the open answer) are also frequently used by 34.2%, to some extent, and 29.6%, to a large extent.



They have technical skills (abilities), to a large extent, for the elaboration of objective items in the online system, of pair type items, only 16% of the respondents, and 35% say that they have these abilities, to a large extent. Regarding the items with dual choice, 33% have largely competencies and 19%, to a very large extent. Items with multiple choice, reveal similar scores, 20% have skills to a very large extent, and 33%, to a large extent. Summarizing the two response scales, to a large extent and a very large extent, it can be concluded that over 50% of respondents can develop such evaluation items online, which shows that the evaluation process is not affected by the lack of variety and diversity of the items, aspects related to the observance of some evaluative rigors regarding the type of formative, prognostic or diagnostic evaluation, to respect the typology of the evaluation tests, depending on the aims and objectives of the evaluation.

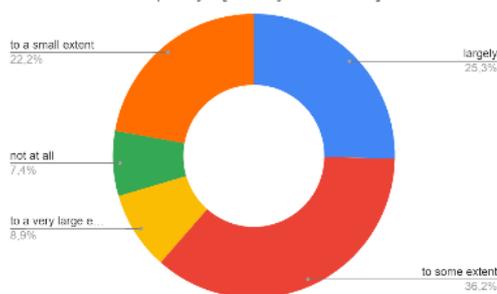




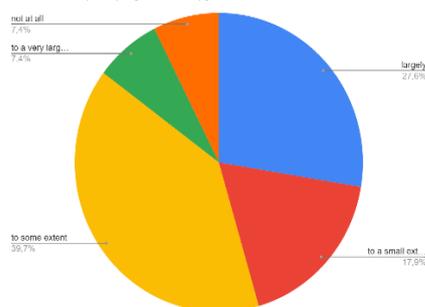
When asked about the qualities of online assessment tools, 39% of respondents believe that fidelity can be affected to some extent, and their applicability is a quality that can be affected to some extent for 38% of subjects, and the objectivity and validity of the tests could be affected for 36% of the subjects to some extent, the other percentages being distributed almost equally on the measurement scale, not at all, to a small extent or a very large extent, as can be seen from the chart below.

These answers highlight some aspects regarding the attention and rigor with which such assessment tools should be developed, to respect the balance of the evaluation action, maintaining the relationship between the informative and the formative aspects included in the objectives of the teaching-learning process deepening.

The qualities of evaluation tools are indispensable in the evaluation process. To what extent do online assessment tools affect their quality? [validity of the test]



The qualities of evaluation tools are indispensable in the evaluation process. To what extent do online assessment tools affect their quality? [test fidelity]



The educational platforms used by teachers meet current needs, as follows: 66% of respondents say that they have the advantage of ensuring that tests are scheduled at certain time intervals. 57.2% find it important as a feature to limit the time to solve a test depending on the number of questions and the level of difficulty, 48% - assigning different points on types of questions and level of difficulty, 45%, automatic closing of a test and saving results at the expiration of the allotted time,

45%, the secrecy of the tests is another important benefit for the objectivity of the evaluation, as well as the random assignment in tests of questions from different categories, respectively the definition and grouping of questions by predetermined categories, are important for 36% of respondents.

To the open question no. 27- Other proposals/suggestions for the improvement of the learning process carried out in an online system, there were 256 answers, out of which we mention the significant ones:

Existence of a national educational platform for all pre-university educational institutions, teacher training for the development and improvement of skills in the use of technology in the teaching-learning-online assessment process; multiplying assessment tools, allocating resources for pupils and teachers, standardized benchmarks, rethinking programs and framework plans, ensuring the right to education for all pupils / students, creating a test bench, for each discipline / level of study, examples good practice, more open digital resources, reorganization of the infrastructure in the online environment, training is needed, but the openness and availability for change of teachers are very important; the unblocking of the mentality “I don’t like, I don’t want, I can’t, it doesn’t make sense (online school is not school)” can also be produced through examples, demonstration lessons, successful activity sequences that teachers can access in a bank of good practices, legislative resolution by the Ministry of Education of issues related to the protection of personal data for both students and teachers; simplification of the subject, provision of devices and provision of the Internet; hiring full-time computer scientists in schools to permanently support students and teachers to use educational platforms; the existence of a database with open educational resources for each content would reduce the time allocated to their preparation.

More precise monitoring of attendance with open rooms, the obligation to keep rooms open, examples of good practice, equipping schools with the equipment necessary for online teaching, the duration of online hours to be shorter than traditional time, online education to be only an emergency measure in special cases, how is this situation because it cannot replace traditional education, the possibility of combining the two forms of learning, after identifying the most useful online learning practices, through studies and specialized research, etc.

### **3. Conclusions**

The present research brought to the fore some significant aspects that can be structured on the following categories: didactic activity of online teaching-learning, online evaluation process, curricular documents.

From the perspective of teachers, online learning has several advantages, including:

- flexible and dynamic nature of learning;
- develops the skills of using technology;
- offers the possibility to use interactive content, access to teaching materials and educational media resources (images, videos, files of any kind, virtual materials that streamline learning), educational games, multimedia presentations, etc.
- reactive, proactive, and reciprocal interactivity, as well as distinct forms of interactivity - are mentioned as the most important facilities for online learning;
- teachers consider that the most effective online learning strategy is the synchronous, online meeting, even if it is also the most consuming of human resources and educational resources;
- online evaluation is an efficient and fast evaluation method, the fidelity of the scoring system, the existence of item banks and combinatorial possibilities, the existence of statistical analysis tools and identification of types of errors, elimination of emotions during evaluation, offers the possibility of a real diagnosis, ensures development intellectual skills of analysis, synthesis and evaluation;
- Among the most effective online evaluation methods can be listed: the project, the paper, the concept maps, the reflective journal, and the portfolio.

These aspects lead to the idea that this type of learning can be as effective as the one carried out traditionally, but, with the specification and observance of some aspects to be improved, remedied, or completely changed:

- equipping students and teachers with audio-video equipment, necessary for the development of online learning, as well as providing the necessary infrastructure for connecting to the Internet, this being one of the most common technical problems faced by teachers and pupils/students;
- the existence of specific educational platforms for online learning, as it exists in the university environment, containing specific tools for teaching-learning-

deepening-assessment (material base-equipment, software, programs, batteries of verified tests);

- elaboration of open educational resources for each discipline and of the support materials to be used on certain pre-established educational platforms;
- adapting the current curriculum to the requirements of online teaching-learning-assessment;
- elaboration of specific methodologies for taking national exams;
- rethinking curricula and programs for online learning, to clarify the situation of disciplines that have a special specificity and identify technological possibilities for various learning situations
- elaboration of guides for online learning, by disciplines and according to the specifics of each one;
- identifying specific strategies for approaching online learning for pupils/students with special needs;
- developing the technical skills necessary to use online tools for teachers by ensuring participation in training courses (Universities, DPPD, CCD, CSI).

The research report highlighted concrete aspects, the real problem of online learning that teachers currently face, and the aspects they consider vulnerable for this form of education, which leads to imbalances in the teaching-learning-assessment process.

One of the important aspects is the change in the mentality of the teachers to overcome the commonplaces and an openness to the new, which is not available to everyone, the teachers being the ones who should define and enrich themselves continuously the contents, through a flexible and open design, adaptable to any requirements, while the student must develop the ability to explore and analyze these contents in a collaborative manner, thus building a new teacher-student relationship.

That is why we recommend that, in the next period, these aspects summarized in the research reports, identified by teachers as practitioners, be a starting point for the measures taken by the governing bodies, as well as those with authority in the field of education, to remedy these discrepancies, solve system problems and improve the educational activities by developing unitary educational strategies and policies, based on studies and research results.

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