ANALYZING THE EDUCATIONAL PROCESS DURING THE PANDEMIC: UNIVERSITY TEACHERS' PERCEPTIONS OF THE EFFECTIVENESS OF ONLINE TEACHING ACTIVITIES

Ana-Maria PETRESCU[1], Gabriel GORGHIU[2], Elena-Ancuța SANTI[3]
Valahia University of Târgoviște, Teacher Training Department,
ROMANIA
Email: [1]anapetrescu2007@yahoo.com, [2]ggorghiu@gmail.com, [3]elena.santi@valahia.ro

ABSTRACT
In the unprecedented backdrop of the COVID-19 pandemic, educational institutions around the world have been looking for solutions and ways in which the educational process can be largely unaffected. The uncertainty, changes, and challenges generated by the move to online schooling have created multiple gaps between educational institutions in different environments, exacerbating inequities in the system, with large losses for certain categories of pupils and students and thus contributing to increasing drop-out rates. Rapid, forced digitization, the need to adapt the curriculum to online teaching, logistical difficulties, and shortages, as well as isolation, anxiety, fatigue, and stress, were important variables having a direct influence on the quality of online education. "Pandemic pedagogy" and "post-pandemic pedagogy" represent terms that have emerged in this particular context, and indicate the paradigm generated by this crisis, seen as a moment of resetting education systems, of rebirth and rethinking education. The impact of this new virus on society and, implicitly, on education, can be a starting point for capitalizing on the opportunities created, so that the positive elements, the strategies that have proved effective, can be developed and implemented in the future. By analyzing this period, with its advantages and disadvantages, good educational practices can be drawn from it, useful in shaping new directions in education. This paper aims to identify university teachers' perceptions of the effectiveness of online teaching activities during the pandemic, as well as important related dimensions such as social, relational, and emotional.
Keywords: *pandemic; online education; students; teachers*;

INTRODUCTION
Education is a dynamic and flexible process, aiming to prepare individuals for life, through specific interventions directed towards reaching their bio-psycho-social potential and becoming active parts of social life, bearers, and value creators. For any society, education is a sure investment for the future, that guarantees development, evolution, and prosperity.

The COVID-19 pandemic has swept across the globe, disrupting or even temporarily halting multiple sectors of activity. Each country took swift, fortuitous measures to minimize losses and to rebalance as easily as possible. In Romania, the pandemic started in March 2020, and one of the first measures adopted by the government was to halt physical teaching activity at the pre-university and university level for about two weeks, followed by the fortuitous and difficult reorganization of education in an online context. Among those who

were directly affected by the changes, there were educational actors - teachers, pupils, students, institutional education managers, auxiliary staff - but also parents and even local communities. They all sought solutions, reoriented and reorganized, invested time and resources, engaged and adapted the existing capital to the new context. The results have varied: some worked, some needed rethinking, some failed. Online education, in addition to its specific advantages (it can be carried out anywhere, anytime, eliminating barriers of time and space etc.), also has many disadvantages, especially in terms of the relational, emotional, and social dimensions of the educational process. Interaction mediated by modern technology is artificial, inconsistent, limited, tiring, and demotivating.

The return of educational actors in the face-to-face format, after about two years in which didactic activities were carried out in an online format, and sometimes, depending on the epidemiological context, alternated with the physical format, showed a series of negative consequences regarding the re-accommodation and readaptation of pupils and students: loss of motivation for learning, behavioral problems, learning difficulties, knowledge gaps, maladaptive behaviors, difficult-to-manage emotions, ineffective communication. Teachers and learners experienced new contexts and new methods, and faced unprecedented problems, with some shortcomings of the educational and social system, those transitional periods required care, attention, patience, empathy, support, and special support from teachers, but above all, flexibility and creativity. The vocation for the teaching profession was the key element that strengthened the teachers' resilience and motivation, helping the teachers to overcome the pandemic period. The 2022-2023 university year was the year in which the education system returned to the traditional educational modalities, in physical format; but some practices that have proved effective in a pandemic context are still capitalized, some lessons learned during this period are starting points in creating a new, innovative, forward-looking vision of education, taking into account the profile of today's students, but also the requirements and changes in tomorrow's labor market. Online teaching has established a place and a definitive status in the educational economy, as an alternative or as a viable solution in critical contexts, so some higher education institutions, based on university autonomy, have kept online courses, capitalized on educational platforms, and taken important steps in the digitization of education.

In Valahia University of Targoviste, the transition from face-to-face to online education was facilitated by the existence of a compulsory logistical basis. The *Moodle* platform was already operating in the university, even if it was not widely used by teachers and students, which allowed uploading and storing support materials for course and seminar activities. In the first stage, teaching activities were carried out synchronously or asynchronously, even on the *Moodle* platform, with the use of *Forum* or *Chat* applications. However, teachers and students faced several difficulties generated by creating institutional addresses allowing access to the platform, the configuration of the spaces allocated to each subject, the constitution of student groups, the development of support materials etc. In addition to those problems, several were caused by the need to provide the necessary devices for online educational activities, for students and teachers.

Gradually, the *Microsoft Teams* application was also put into operation, which allowed for more efficient course and seminar activities to be carried out synchronously, according to the timetable, via an audio-video connection. Also within this platform, spaces for other activities were set up aimed at ensuring communication between members of the academic community, such as psycho-pedagogical counseling of students, holding working

meetings of various academic structures (departments, faculties, research centers, board of directors, university senate), *ARACIS* accreditation of various study programs, training activities for obtaining the second teaching degree, conducting special inspection and submission of the methodical-scientific paper for obtaining the first teaching degree.

1. CONCEPTUAL FRAMEWORK

With the strong development of technology and its penetration into all social environments, imposed by the pandemic context, online education (digital, virtual, distance, e-learning, technology-mediated education, or, more recently, e-education) has taken hold and has definitively changed the educational paradigm and traditional models, representing today an intrinsic component of the modern education system.

According to Cucoș (2020, p. 258), e-learning is an educational reality achieved through electronic networks and mediated by new communication and multimedia technologies. The prefix "*e-*" refers to clear terms (electronic, online, and delivered through the Internet); thus, e-learning or virtual learning involves the interaction between the teaching-learning-assessment process and information technologies. Onyema et al. (2020) define online education as a general concept that refers to teaching and learning using technological tools and online platforms.

Anderson (2011, p. 68), in his model of online learning (Fig. 1), illustrates the key variables that interact to create quality online educational experiences and contexts. The author emphasizes the teacher's task to choose, adapt, and refine through feedback, assessment, and reflection, instructional activities that maximize the benefits of the Internet. In the online context, therefore, the teacher must select appropriate methods, relevant content, and suitable resources to facilitate learning, bearing in mind that the communicative and relational dimensions that enhance the formative value of teaching in the physical format are lacking in the virtual space, and the student has a much greater responsibility in taking on the learning task, in sustaining the necessary effort (self-motivation, self-regulation) and in managing personal and temporal resources, as well as environmental factors that may interfere with the learning process. In the online format, the learner must be autonomous, responsible, and resilient, to have a meaningful performance.
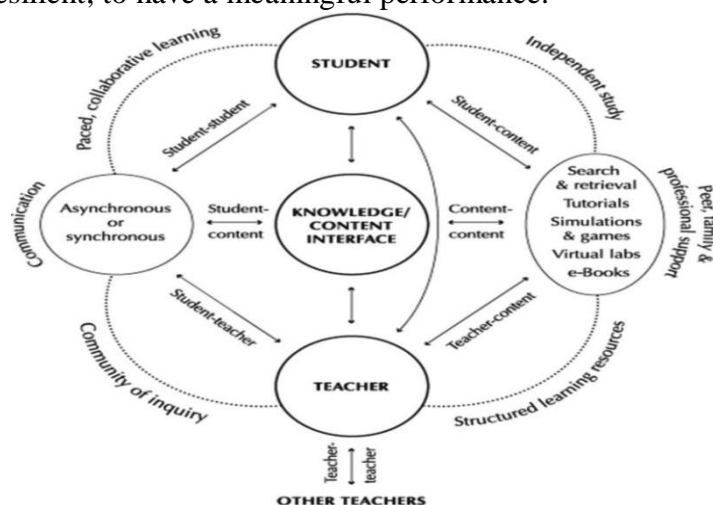

Fig. 1. A model of online learning (Anderson, 2011, p. 61)

Onyema et al. (2020, p. 113) state that the success of online education depends on several factors, such as internet connectivity, access to technology, and developed digital skills. As stated by Makri & Vlachopoulos (2021), in online teaching, due to its complexity, it is imperative to take into account many parameters that may influence the learning process. The authors appreciate that instructional design is a valuable conceptual tool that should aim at choosing an effective design model, correlated with appropriate strategies, respecting the particularities of the learners, based on good communication, creative skills, as well as a deep understanding of learning theories and the specifics of learning in that context.

Teaching and learning in the online environment present a series of advantages and disadvantages, opportunities and threats, both from the perspective of the educational service provider and from the perspective of teachers and students, which we try to summarize in the following SWOT Analysis:

- *Strengths*:
- Access to education anytime, anywhere;
- Student-centered learning;
- Platform-mediated collaborative learning;
- Accessibility;
- Comfort and safety of personal health and the health of others (in a pandemic context);
- Increased interest in online resources;
- Increased learning attractiveness;
- Increased self-confidence, self-esteem, sense of self-efficacy;
- Autonomy in learning;
- Responsible assumption of the own learning process;
- Improving critical thinking skills, and creativity;
- Various materials, open educational resources;
- Self-paced learning;
- Fast and efficient feedback;
- Reduction of some costs (time, travel, accommodation etc.);
- Synchronous and asynchronous interaction, flexibility;
- Promoting active and independent learning;
- More efficient use of time (Asfour & Alkharoubi, 2023);
- Providing extra time for study, exposure to new and exciting forms of learning, and easy access to online materials (Dung, 2020);
- Providing inclusive education even during disasters (Akhter et al., 2021).

- *Weaknesses*:
- Depends on a good internet connection;
- Depends on electricity;
- It requires high-performance technological devices;
- During online learning, the teacher cannot check every student;
- Decrease in students' motivation and interest in learning (Kohli et al. 2021);
- Learning disabilities;
- Limited access to learning facilities such as laboratories (Onyema et al., 2020, p. 118);
- Increasing social inequality;
- Fatigue, overwork;

- Sedentarism, lack of movement, boredom, and monotony (Dung, 2020);
- Lack of conditions for developing social interaction skills (Dung, 2020);
- Stress;
- High volume of work;
- A lot of time and effort goes into preparing or adapting an online course;
- Poor socialization, and ineffective communication, as verbal, nonverbal, and para-verbal communication are not optimally used;
- Closed rooms, lack of control over student behavior;
- Vision problems;
- Difficulty in getting/maintaining attention;
- Procrastination;
- Not every activity can be carried out through online platforms;
- Evaluation difficulties (low objectivity, possibility of fraud);
- The relational and affective dimensions are affected;
- Anxiety, and depression due to lack of real, authentic interaction;
- Some students feel uncomfortable and shy in situations that require them to express their opinions or avoid expressing their views, and personal ideas;
- Sense of isolation and lack of initiative to learn, lack of concentration (Benito & Camral, 2023);
- The sense of belonging to a community is difficult to form, and poor relationships.

- *Opportunities*:
- It is a viable option during crises;
- Improving the digital competencies (Onyema et al., 2020, p. 113) of teachers and students;
- Developing creativity;
- More attractive delivery;
- Preparing for the future (Onyema et al., 2020, p. 114), the development of lifelong learning skills;
- Access to further training;
- Taking responsibility for one's education;
- Developing self-discipline and independence in learning;
- Improving course quality and effectiveness (Dung, 2020);
- Gamification and virtual reality are new and engaging ways of learning;
- Autonomy in terms of time management for independent learning;
- Access to learning support materials.

- *Threats*:
- Reduced funding for education;
- Reduced opportunities for disadvantaged and rural pupils (Onyema et al., 2020, p. 118);
- High school and university drop-out rates;
- Disruptions in the home environment;
- Time wasted on unnecessary activities (games, social networking sites, etc.) (Akhter et al., 2021);
- Technical issues;
- It can affect your eyes and health in general;
- Incorrect acquisition of knowledge and/or inadequate training of skills;
- Lack of feedback or getting delayed feedback that can no longer be exploited in time.

2. RESEARCH METHODOLOGY

Through the "*Quality of Academic Training in the Online Environment*" project, carried out by the Teacher Training Department during the academic year 2021-2022, research was conducted to identify the opinions and perceptions of university teachers on the effectiveness of training activities, carried out in the online environment, during the pandemic period. For this purpose, a 12-item questionnaire was developed and administered using the *Google Forms* application, of which: 2 subjective, open-ended items, and 10 closed-ended, predetermined items.

The questionnaire was administered anonymously and the confidentiality of the answers was ensured. The research sample consisted of 30 university teachers from Valahia University of Targoviste, who carried out course and seminar activities within different study programs, at bachelor, master, and doctoral levels, with teaching positions of assistant, lecturer, lecturer or university professor and with a teaching seniority between 10 and 38 years. The data obtained through questionnaires were initially processed from a quantitative point of view and then analyzed from a qualitative, appreciative point of view, about the data provided by the literature and the authors' professional expertise.

3. RESULTS AND ANALYSIS

The first item of the questionnaire aimed to collect the respondents' views on what online teaching has meant to them. Being an open-ended item, it received diverse, predominantly positive opinions, such as it was a challenge, an opportunity to learn new things and identify more effective ways of working with students, a new teaching experience, an effective solution in a situation of acute crisis, a means of professional development, a new teaching/professional experience, which offered the possibility to do different, atypical activities, a change in teaching methods and thus in assessment methods.

Other respondents associated online teaching with the opportunity to interact with more students, especially those who for various reasons did not frequently participate in face-to-face activities. However, we cannot ignore the fact that some respondents chose to point out some shortcomings or shortcomings of online teaching - a sustained effort, sometimes tiring, and exhausting, to organize the platform and structure/update the supporting materials for students, difficulties in communicating with students, lack of involvement in activities of all students, decreased ability to understand the exposed notions, by students' lack of concentration strictly on these activities, etc.

We appreciate that all the opinions provided by the respondents, as a result of their experiences during the pandemic period, are conclusive for creating an authentic, comprehensive, and in-depth picture of the teaching activity carried out in the context of online learning.

The next item asked respondents to choose from a predetermined list of the main advantages and disadvantages of online teaching. Thus, in the advantages category, the majority of respondents placed: ensuring personal and student health, the possibility of using interactive digital applications and educational videos, communication with students who had less attendance at face-to-face activities, the use of educational platforms, and the time saved by eliminating transportation/travel.

In the category of disadvantages or limitations, we find several aspects related to: technical difficulties beyond the competence of the teacher (poor internet connection, inefficient devices etc.), some problems encountered in the process of capturing the attention

of students, as well as in the vertical (teacher-student) and horizontal (student-student) relationships. We consider the answers provided to be relevant, as they are in line with a series of similar results obtained in the context of numerous specialized studies carried out in recent years on the topic.
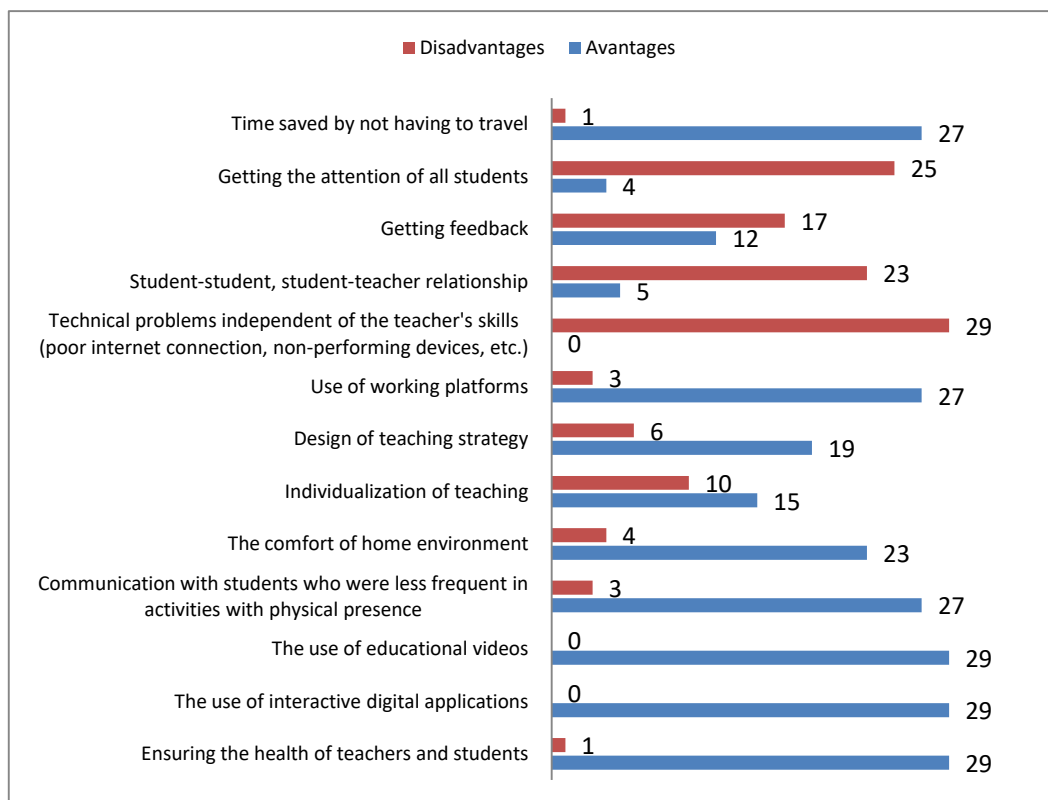

Fig. 2. University teachers' perception of the advantages and disadvantages of online teaching

The third item complements the previous one and asks respondents to select answers from a list of possible pre-determined options on the main aspects that would make online teaching more attractive and effective. In this context, as shown in the figure below, 50% of the respondents opted for the use of new teaching resources, 46.7% for the provision of an appropriate didactic-material base (infrastructure, logistics, and others), 36.7% for the use of practical assessment methods, 33.3% for the use of appropriate communication methods and 5% for teacher training.
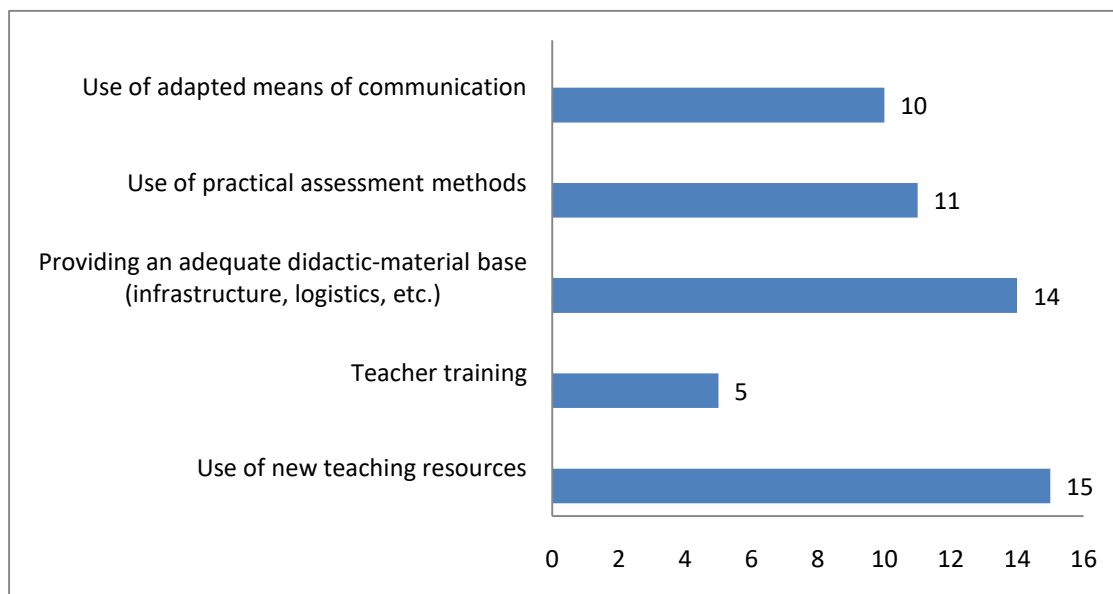
Fig. 3. Teachers' perceptions on what would make online teaching more engaging and effective

We noted that the answers provided cover a wide range of problems associated with online teaching and correlated with possible optimization/remedial solutions, which relate both to the context in which the teaching is carried out and especially to the human resource involved, namely the teacher, as an educational actor committed in a responsible and committed way to the design and implementation of an effective training process, even in new, atypical and sometimes difficult to manage conditions.

In an attempt to analyze in depth, the phenomenon under investigation, we asked the respondents for their opinions on the extent to which online education in general and online teaching in particular has produced psychological effects on students. The responses obtained in the upper and middle part of the rating scale are as follows:

• students' attention and curiosity - 30.30% very much, 43.33% very much;
• autonomy in learning - 23.33% to a very great extent, 43.33% to a great extent;
• creativity - 30% to a large extent, 30% to a moderate extent;
• motivation for learning - 33.33% to a moderate extent, 23.33% to a very great extent;
• critical thinking - 40% to a moderate extent, 23.33% to a very great extent;
• self-confidence and self-esteem - 40% moderately, 23.33% highly;
• activism, involvement - 26.66% to a moderate extent, 23.33% to a great extent;
• understanding of content and awareness of gaps - 36.66% to a moderate extent, 20% to a great extent, and 20% to a very great extent;
• sociability, interpersonal, and communication skills - 30% to a very great extent, 16.66% to a great extent;
• personal development - 33.33% to a moderate extent, 23.22% to a great extent.

All those factual data lead us to assess that the respondents are aware of the multitude of effects that online teaching has generated or can generate at the level of mental processes and functions, respectively at the level of the whole personality system of the learner.

Analyzing in particular the main aspects that stimulate students' motivation for learning in the context of online education, respondents highlight the following: the use of

interactive digital applications (53%), effective communication (26.7%), the use of examples from everyday life (20%), the alternation of synchronous and asynchronous activities (20%), the use of modern/interactive methods of instruction and assessment (10%) and the provision of formative feedback by the teacher (10%). These choices lead us to believe that motivation for learning is a significant aspect of teaching activity for the respondents and as such there is a clear concern to stimulate the motivation for learning of the learners.
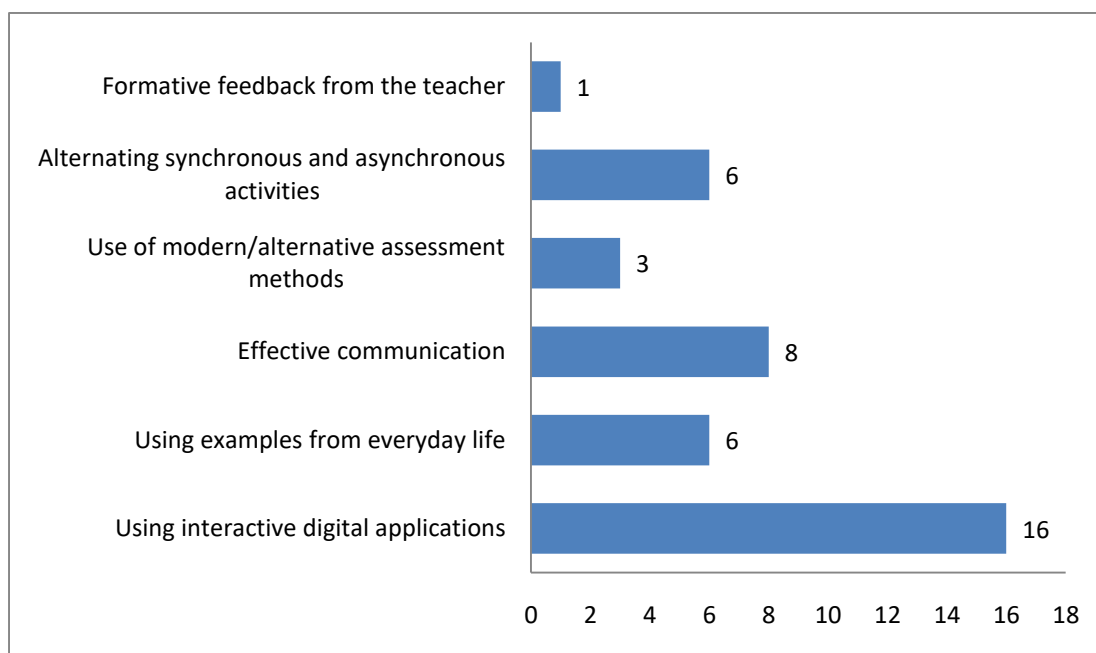
Fig. 4. Main aspects that boost students' motivation for learning in an online context

Another aspect that we considered in the context of this study concerned the respondents' views on the extent to which student autonomy in learning is developed in the context of online learning activities. As can be seen in the figure below, 13.3% of the respondents consider that this is achieved to a very great extent, 23.3% to a great extent, 46.7% to a moderate extent, 13.3% to a small extent and 3.3% to a very small extent. The fact that most of the responses are concentrated in the upper and moderate range of the rating scale leads us to conclude that the teachers surveyed tend to recognize that online teaching activities are a good environment for developing a learning approach characterized by independence and autonomy, with clear openings towards self-education and lifelong learning. (Fig.5)
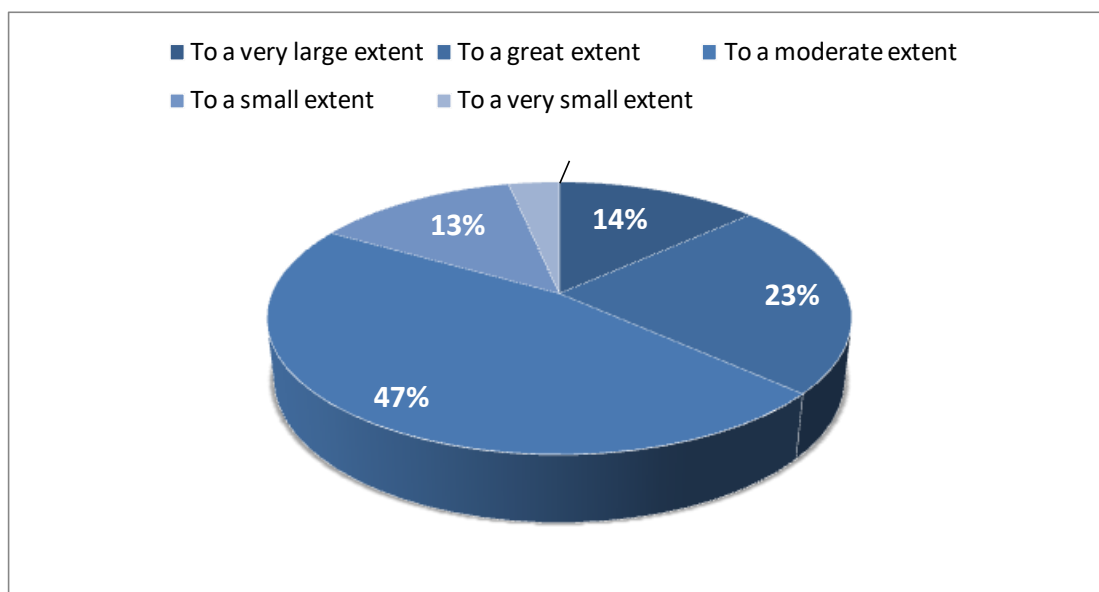
Fig. 5. Teachers' perception of the extent to which online learning activities develop students' autonomy in learning

The next item asked teachers to rate the extent to which online assessment is objective and accurately reflects student progress. The majority of the responses received were in the middle range, with teachers believing that online assessment is objective and provides, to a moderate extent (17 respondents), a clear picture of the real progress of the assessed student.

In the online environment, the teacher has little and limited control over the student's activity and behavior, which is why the evaluation methods must be diverse, adapted, exclude the possibility of fraud, have a formative character, place the student in the position of an active participant in the process of his/her training, indicating the level of performance and guiding the steps to be followed. Assessment in the online environment must be rigorous, following the same principles as in the traditional format, and assessment tools must provide immediate, objective, and comprehensive feedback so that students have a clear representation of their level of understanding and application of knowledge. Formative assessment involves self-reflection on the student's learning, self-regulation, and taking responsibility, but also on the teacher's part, for the effectiveness of the methods used in teaching, the teaching style, or how they all fit into the online context.

Assessment is a process closely linked to teaching and learning that should objectively reflect the student's progress, the extent to which he/she has acquired knowledge, and developed skills, and the decisions and remedial and remedial actions needed.

Also, the assessment is feedback for both the student and the teacher, reflecting the effectiveness of teaching and learning. Only one teacher of those surveyed believes that online assessment is objective and accurately reflects student progress, while 3 teachers place the answer at the opposite pole (Fig. 6).
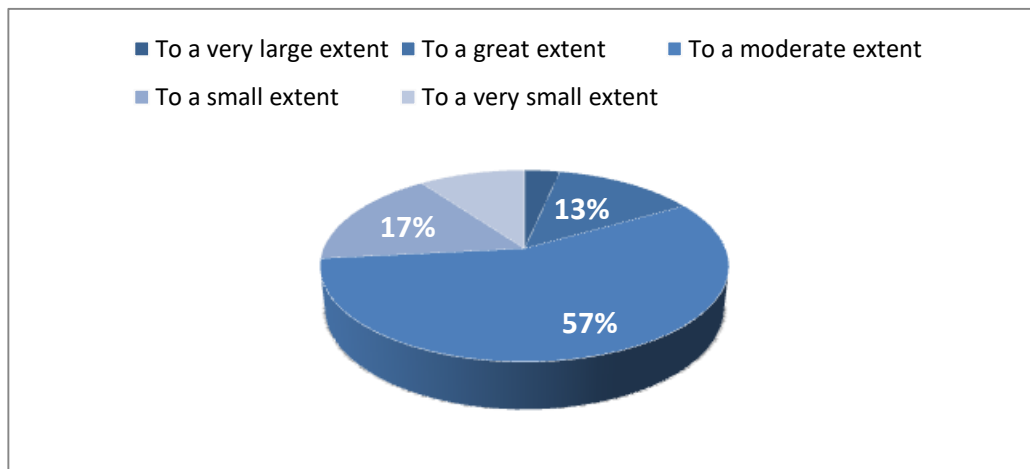
Fig. 6. Teachers' perception of the objectivity of online assessment

In addition to the previous item, teachers were asked to respond to the main difficulties in assessing students in the online format. As can be seen from Fig. 7, most of the respondents consider the prevention of cheating as the main difficult aspect to manage in the online environment; also, managing technical problems that may occur during an exam, selecting appropriate assessment methods, ensuring objectivity, measuring progress and guiding learning are answers given by teachers. We appreciate that the responses to this item illustrate the main risks associated with online assessment.
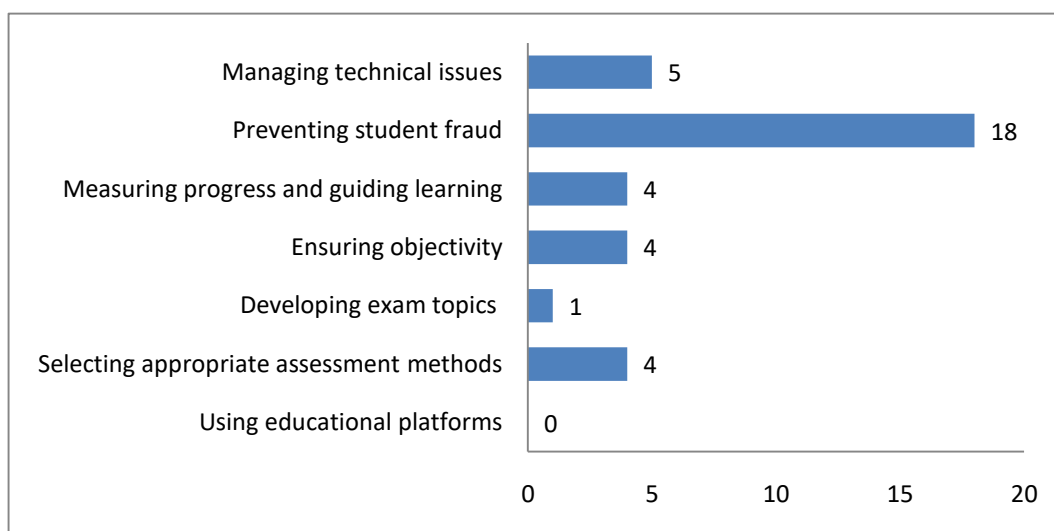

Fig. 7. Main difficulties in assessing students in an online format

Concerning the main assessment methods used by Valahia University teachers in the online context, we found that oral assessments, quizzes, and online questions were the most used, followed by portfolios and written assessments. Written assignments, essays, collaborative assignments, and seminar papers were used to a lesser extent for evaluation. It can be seen (Fig. 8) that teachers have tried to use as many different methods and tools as possible adapted to the online environment to achieve an effective assessment process. In this

respect, the used platform (*Moodle*) practically allowed a large variety of assessment options to be chosen by the teachers, having an important advantage.
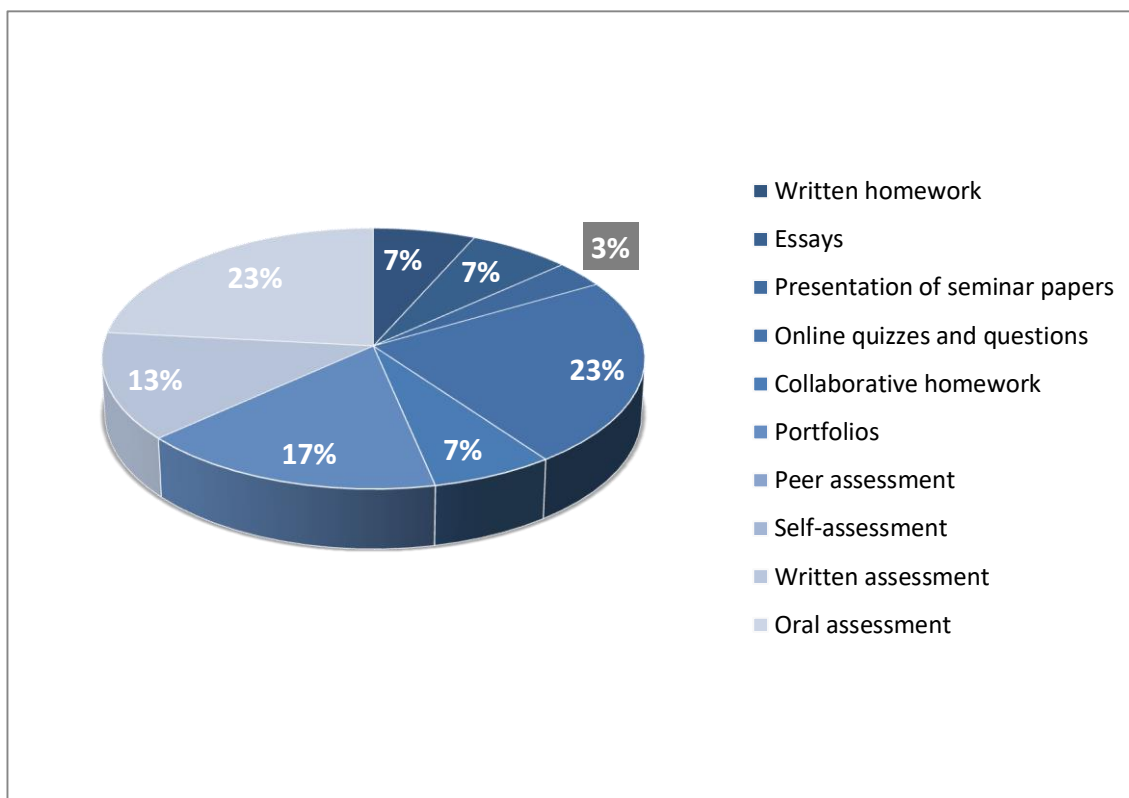

Fig. 8. Main students' assessment methods used in the online environment

The pedagogical relationship between teacher and students, as well as between students and students, is complementary to the instructional process and has important formative values. In traditional, face-to-face education, pedagogical influences are an important part of the educational group, helping to create a sense of belonging to a collectivity, of cohesion, facilitating socialization, acceptance, and integration of individuals into the group. The socio-affective climate created by the teacher and the students also has a significant influence on the well-being of the educational actors and on the mechanisms that contribute to the harmonious development of their personalities. All those aspects are difficult to achieve in the online environment. During teaching activities, social interaction is limited, communication lacks important components (the non-verbal and even para-verbal dimensions are undervalued), and many disruptive factors can intervene. Empathy, a supportive attitude, openness towards students, and student counseling are key elements in such a context.

In Fig. 9, it can be seen that 15 respondents highly value the fact that online education brings changes in the pedagogical relationship in terms of the depth, duration, and intensity of social interactions during lessons/teaching activities.
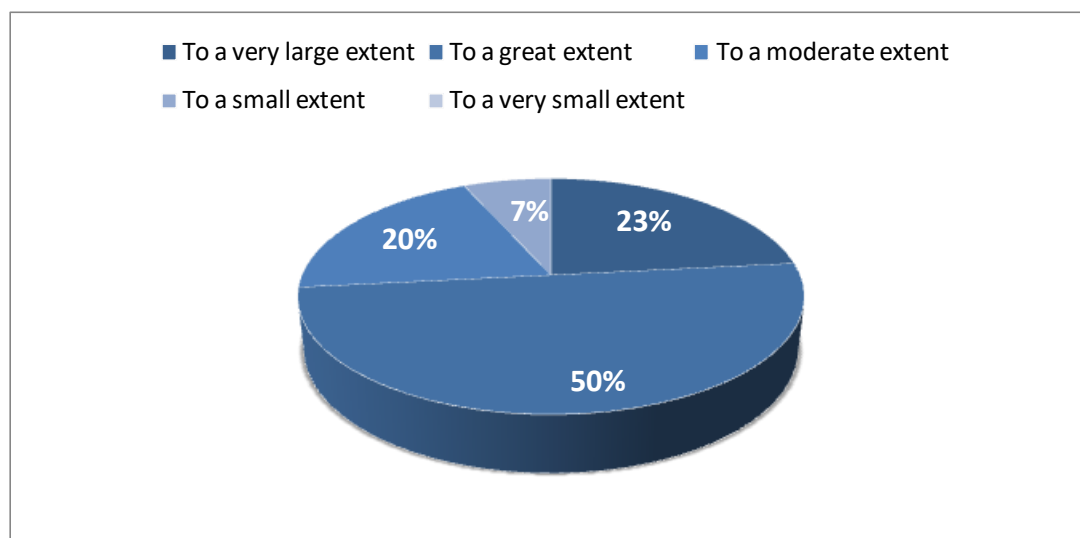
Fig. 9. Teachers' perceptions of the extent to which online education changes the pedagogical relationship

The next item (open-ended) complements the previous item, trying to clarify whether the online environment affects positively or negatively the educational relationship with students. Respondents gave diverse, polarized answers, as follows: some of the teachers interviewed consider that the educational relationship between teachers and students in the online environment is "generally good, open, fair", "based on cooperation and collaboration", with "good communication, although some elements specific to face-to-face relationships are missing", "even online the relationship with students is very good", it is "a constructive and effective educational relationship".

Other respondents think "not as good as physical interaction, the quality of communication is lower because the students' attention is diverted to other activities", or "the educational relationship with students online is reasonable, but it cannot replace the physical interaction in the classroom at a high-quality level".

Others consider that the relationship with students is "neutral, as it lacks the joy of face-to-face meetings", it is "a relatively good relationship" or "acceptable, but quite difficult to establish". A few respondents consider that the online environment "affects interpersonal relationships, diminishing the quality of the learning process", "students find it very difficult to mobilize themselves to relate both to the teacher and their colleagues ", "shy students have become even more inactive; some individual student-teacher relationships (with students who have asked for support) have been created for their benefit", it can be characterized as a "cold relationship", "a cumbersome, poor, predominantly one-way relationship". Another respondent argues that "it is not possible to establish a proper educational relationship between the teacher and the students, with notable effects in terms of their professional and human development". The range of responses given to this item reflects the diversity of personal and particular experiences and views of how teachers and their students have succeeded in building a pedagogical relationship in an online context. The different personalities of both teachers and students, their needs and wants, personal beliefs and coping mechanisms, teaching and relational styles, personal experiences, and how they relate to them, are important variables that affect the quality of interpersonal relationships, more so in online contexts.

The last item in the teachers' questionnaire concerns the extent to which they are satisfied with the quality of their online educational relationships with students. The responses received confirm the previous answers and indicate an average level of satisfaction felt by teachers with the educational relationship established online with students. These responses should be seen in the context of the pandemic that has forced the educational process to move online, a new, previously unexplored environment, with advantages and disadvantages.
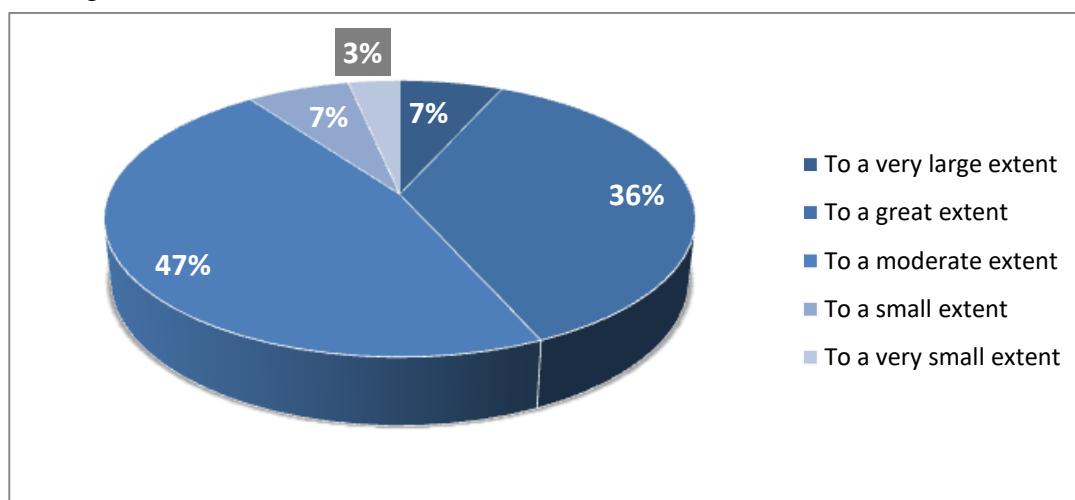

Fig. 10. Teachers' satisfaction with the quality of online educational relationships

CONCLUSION

The *Pedagogy of the pandemic* has generated several important lessons for all of us - teachers, students, institutional managers, educational decision-makers, and parents - to understand, accept, and integrate some important elements into post-pandemic pedagogy. Schools and teachers are stable pillars even in crises. The teacher has an important role, not only in transferring knowledge, but also in shaping harmonious personalities and skills for the future, and in the mindsets that can change the world. Even in the online environment, which dedicated teachers have managed to enliven, they have been close to students, offered advice and guidance, built complex educational experiences, and created educational relationships transcending the screen barrier.

The pandemic changed the world, society, and education systems. Good, dedicated teachers worked hard and succeeded in continuing the educational process, even if in some cases they lacked state-of-the-art facilities or poor internet connection, even if they had to adapt their courses quickly to the new format, spend endless hours in front of a screen to give feedback to each student, capitalize on every communication channel, knowing that otherwise many students would drop out.

Analyzing the perceptions and opinions of a part of the academic staff of Valahia University on the effectiveness of teaching activities carried out in the online environment, it can be concluded that teachers have managed to take advantage of the opportunities of the virtual environment, achieving quality teaching, adapted, attractive, motivating, creative, developing multiple skills of students. They reflected on areas for improvement, assessed objectively and responsibly, encouraged learning, and developed supportive pedagogical relationships, succeeding in motivating students and giving them hope.

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