Hybrid lesson - a reality between two extremes

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Abstract— **This article aims to analyse the essence, the specifics and the importance of the technical means that are used and applied in a hybrid lesson. Also, the arguments of the implementation of the hybrid model for full and part-time studies. In addition, the briefly analysis of the basic components of hybrid lesson such as, students, the teacher, teaching methods and technical means that are used for.**

Keywords— Hybrid lesson, Technical means, Teaching-learning model, Study method

I. INTRODUCTION

After nearly two years, we can say that the COVID-19 pandemic has significantly affected many aspects of socio-economic life. It defined the new perception of the reality. We witness the change of social norms in both negatively and positively way, the awareness of the importance of natural human values.

The education system has not remained intangible, it has also undergone transformation. Some levels have been negatively affected, others have been reconfigured and updated.

The pandemic situation forced unconditionally all educational institutions and the teaching staff to test and implement the delivery of educational content in online format. Talking about our community, the teaching-learning online practice has been unexplored. The pandemic has pushed the entire academic community to think about new ways to deliver distance learning and drastically transformed the way we teach, learn and interact with each other. For now, as a result, we can affirm that in a short space of time, the educational reform was forced to take place. Due to the pandemic period, students and teachers had not only to master software, acquire new teaching-learning platforms, but also to get access to computers. All three components, educational institutions, teachers and students have adapted efficiently to the new existing conditions. In this way, different models, techniques and methodologies of online learning were tested, evaluated and implemented. [1]

Among a large variety of models for organizing online educational process, there is a specific one model, called hybrid, which essentially combines the online with the traditional way of teaching.

II. HYBRID LESSON. ARGUMENTS

The term hybridity has its roots in Latin and essentially refers to the field of biology, cross-fertilization or the fusion of separate parts or species into a new one. The hybrid is a result of the offspring of two varieties, different species of plant, animal and it is composed of the fusion of existing parts.

In pedagogy, the hybrid model is a teaching method that uses technology to create a variety of learning environments for students. The hybrid model is a combination of traditional personal training with digital distance learning; is a type of blended learning that refers to the implementation of synchronous lessons that are taught simultaneously on site and online.

The hybrid method consists of a complex interaction of four components: technology, pedagogy focused on new methods and techniques, interactive teaching-learning and between teacher and student. These components describe the following interactions: teacher-student, student-student, student-context, the space that is online and offline and finally the technological component that links their interaction.

Hybrid pedagogy not only describes an easy mix of on-site and online learning, but refers to bringing the types of learning that happen in a physical place and the types of learning that happen in a virtual place into a more engaging conversation and dynamics. [2]

It is clear that in a hybrid class, face-to-face activities are often combined with technology-mediated activities. Teachers and educational institutions that use intentionally

the hybrid method try to incorporate technological means and tools in order to improve and expand making it more interactive and accessible delivery of the teaching content but also, to improve students learning, respond to their interests and learning preferences. In previous work on hybrid education and hybrid learning highlighted a change in the structure of education just as in teaching and learning towards connectivity, networks and collaborations. [3-6]

Hybrid learning environments are similar to traditional classrooms in that they both include the presence of teachers and students, and some research on distance education has found that technology-supported distance learning is at least as effective as traditional distance learning in classrooms and has led to more effective instruction.

In order to ensure the delivery of the content, the achievement of the proposed objectives, the assurance of the interactivity of the teaching-learning activity, the tasks and assessments in the classroom and outside the classroom, it is necessary to plan in details the whole course before its launch. It is clear that a hybrid lesson requires changes in institutional practices, the arrangement of educational spaces and the assessment of new ways of learning and teaching methods.

Arguments. The straightforward benefits that a hybrid lesson can provide for students and teachers are the release from the constraints of place and time. Within the Faculty of Computers, Informatics and Microelectronics, a survey was conducted among the part time students. To one of the questions: "Which of the following options do you think is the best regarding the student-university interaction during a pandemic?" their answer is the following, out of the whole University, 67% preferred the online form and 25% offline one. The students of this faculty not always can be physically present when teaching activities are carried out, some of them are at work, others abroad, some have chronic illnesses and are not allowed to social exposure, or in situations of natural disasters, etc. Following the discussions with the full-time students of this faculty, some of them, year I or II were determined to continue distance learning, i.e. some students for various reasons, predispositions were not happy and are not willing to give up the traditional way learning while third and fourth year students on the contrary, were prone to conduct online studies.

In both cases, it appears that some students may be potentially excluded from the traditional teaching process. For this reason, we can consider that a solution would be to adopt the hybrid learning method.

Being constrained by the created pandemic situation, but also by the wish to try the new type of lesson with the launch of the program - UTeach 2021, within Tekwill Ambassador we take the challenge to achieve the study, teaching activities (lecture, seminars, laboratory) and the curricular analysis in order to carry out hybrid lessons and

to integrate the Year I full time and part students, also, to include students with disabilities and at last but not least to test the teaching methods and techniques for a possible application to FCIM on distance learning. In addition, to analyse the effectiveness of teaching methods and techniques applied during the lesson, from "Digital Approach project of mixed teaching activities" which provides two components: planning and testing on the specific subject "Communication and Academic Writing" and for "Discrete Mathematics". These are two distinct areas both in terms of content and methods used.

Of course, the transition to an audience during hybrid lesson requires a shift from teacher-oriented methods and techniques to students-centered (online) where they are given autonomy and independence in learning. Again, the situation with COVID 19 leaves its stamp on the strategy of the ongoing lesson, although the purpose of this project is to take advantage of the situation to ensure and achieve the synchronous integration of students who for various reasons, cannot be present physically in classrooms.

III. TECHNICAL MEANS

Technology must be seen in a hybrid lesson as a way to improve teaching-learning for all types of lessons. Technology has the potential to create dynamic learning environments that connect students to the real world, making learning more interactive and more effective. During these lessons, technologies play an important role, for those online they ensure connection and inclusion, for those offline it highlights the presence and perception. We can consider that many traditional teaching methods are effective for hybrid learning if there is the right technology. Online students can use the wireless microphone and the teacher will connect the computer to the speaker, so that the dialogue takes place between them. Thanks to a teleconferencing system, students can see the teacher and colleagues online, students offline, they can see colleagues through a TV placed on the wall or mobile stand. The new audio systems allow discussions with a clear sound, the teacher acquires unconditional mobility, he can move freely. Sure, a 360-degree room would fit in, covering the entire classroom; are sensitive microphones and speakers that would exclude echoes and other disturbances, noises, there would be a mobile TV, an interactive whiteboard and projector, each student would have a laptop connected to the wi-fi network.

Any additional equipment (microphones, cameras, secondary devices, etc.) are simply extensions of this basic model described above and serve to make audio and video better for online students. To use the equipment effectively, teachers should learn how to program the equipment and operate it during lessons.

Online lessons are expressed through the teaching-learning experiences that teachers design. We keep in mind that technology does not involve students only, they have an additional impact, however teachers are who do it.

The technical means are essential, but we find that they are not sufficient. We bear in mind, that each component such as students, teachers and the used teaching methods should not be excluded from the process of carrying out such a type of lesson.

Obviously, the target of achieving the teaching objectives is the student. We can see that in essence the student's person is doubled (online and in the classroom). We must always keep in mind that the online student must not feel isolated, we can easily lose him or he can exclude himself. It follows that he must whenever possible to be included in direct contact, communicate and interact interpersonally with his colleagues and the teacher. To accomplish this, the teacher must use specific teaching methods and techniques. An active student will depend on the following components that can contribute in organizing a successful development of a hybrid lesson - the number of students engaged in the audience, social and psycho-physiological characteristics, student moral maturity and responsibility, level of training, knowledge and culture gained, skills and abilities possessed and of course motivation. We need to train our perception of responsibility. It serves as an orientation compass through which the student assumes the observance of the duties, of some internal norms and after the fulfillment, the observation of which is effectively included during the study process.

The student must be trained to use the real cases of use of the achieved knowledge. He must learn immediately and consistently.

Students must be involved in solving real cases in social-professional life, they should be introduced into social interaction, creating a space and an atmosphere in which their new knowledge are discussed, evaluated and applied into practice. For some students, the hybrid method makes studies less expensive. International students can be exempted from paying tuition fees, visas and tickets, rent and consumption, etc.

The teachers must move from the role of instructor and sole provider of teaching materials to that of co-participant with students, to adapt their techniques, methods, professional skills in the teaching process in order to help students to develop their skills, abilities, knowledge and the mentality to achieve a social and professional success. Teachers seriously need to prepare the lectures or seminars. They must provide students with individual tasks and projects. They do not have to be quantitative, but qualitative. The lesson must unfold like a movie script, everyone is in action, the sequences are changing.

Methods used in a hybrid lesson. Taking into account the above, the methodological arsenal of the teacher must be diversified, to include tasks and involve both the student and the group, to be in line with the topic objectives, to facilitate interactions, to ensure student evaluation, etc.

The case study method allows a discussion between students on the topic suggested topic by the teacher or student. The teacher is perceived as the leader of the discussion developing critical thinking in students. Game-based learning develops social thinking, competitiveness, cooperation and critical thinking during the game. Role model teaching involves demonstrating the solution of a task by dividing it into small sequences. The 7-minute presentation involves students making a speech on a topic prepared in advance or a topic proposed during the lesson. The student has 7 minutes to demonstrate oratorical skills, persuasiveness, arguments, demonstration of a mental and emotional state, etc. Online students can easily make presentations on a chosen topic. Fishbowl as a method involves dividing the audience into two corresponding groups online and offline, where one group is granted participant status to the other observer status with limited rights of intervention. A topic is proposed that is lively discussed by a subgroup. The other listens carefully, after the analysis and group discussions take place. Project-based learning is an excellent technique for a hybrid lesson. Students are given the opportunity to participate in a TV news show. We can use two subgroups, one online and one offline. In time, each student in a subgroup prepares a topic for news, another presents the sports section, and respectively the other political news, weather, economic news, one being a presenter, etc. In the end, each subgroup presents its news, the others are spectators. Brainstorming, Detective, me against myself and many other techniques can be used skillfully in a hybrid class.

IV. THE HYBRID TEACHING-LEARNING MODEL HAS ITS ADVANTAGES AND DISADVANTAGES

One of the most beneficial components of the hybrid lesson is their alignment with differentiated instructional models that offer personalized learning activities for various groups of students - with disabilities, abroad, mobile difficulty or attending classes, etc. Each student can choose the environment and comfortable place, they can participate in synchronous and asynchronous learning activities. While planning teaching activities, the teacher take into account students' learning preferences. Another positive factor is that students could record lectures online, they can review some of the course content as often as necessary for a better understanding. The classroom of a hybrid lesson through technological arrangement, offer a transition step for testing new teaching tools, methods and pedagogical techniques. Subsequently, their impact on student learning can be estimated. Taking into account the university autonomy that is represented as an economic entity, the costs are reduced by the increased maintenance of infrastructure, staff, services, etc. can be found as a benefit. The teacher can use the asynchronous assessment method as a virtual environment in a live environment. Strengthening

integration, cohesion, co-participation and the competitive spirit in the audience. The hybrid learning method offers more freedom for recreation, independence, through which online are creating for students the feeling of distance or estrange. For online students, the hybrid lesson saves time, money, etc. The hybrid teaching model could serve as an effective strategy for the partial reopening of educational institutions.

The disadvantages of a hybrid lesson could be the lack of skills among teachers regarding the use of modern technologies, the other way, the same, the lack of skills within students regarding the use of modern technologies. Physical overwork is another disadvantage that occurs from the time spent in front of the computer. Investments in hybrid learning are essential for institutions, arranging hybrid learning spaces is expensive. Teaching methods and strategies for a classical lesson may not always be effective for online teaching - learning. During the online lesson, there may be a tendency not to comply with educational standards.

In order to avoid the potential disadvantages of the hybrid model, the following recommendations must be taken into account: in order to follow where students have deficiencies in the assimilation of the material, we must use technology; we design the lesson plan, they must be structured and include interactive teaching methods, provide as needed the course material and the seminar material; the teacher must take the position of mentor and come in to help students; give students a clear vision of what to do and what is expected of them, do not come directive, rather be a support in the assimilation of knowledge; design asynchronous activities with the academic group or a subgroup of it; test the technical means before the start of the lessons, in case of technical problems, or temporary lack of electricity, transfer the subgroup online in solving tasks asynchronously; collect information through questionnaires from students about the teaching process and in particular about the methods and techniques used; ask students to have the room lit, it gives a sense of direct presence; the hybrid method of the lesson, as well as the others caused by the pandemic is a new one for our teachers so we cannot exclude various types of challenges or mistakes, test the technique and capitalize on its potential, apply for new teaching methods, software and educational platforms; engage students in their learning, they must be autocratic, they are not visionaries, they must be involved in the choice of content, interaction; build a strong culture and a strong and cooperative academic community by avoiding the syntagma "we- they" and replacing it by the new one "we".

V. CONCLUSIONS

In the traditional situation, the hybrid lesson is an efficient way to carry out teaching activities during the pandemic period. The hybrid lesson gives the opportunity to adapt and combine elements of different models (online and mixed) to find something that works best for your own unique set of circumstances - technology support, the specific of the subject, etc. For part-time education this method is a necessity, it gives the sense of individual maturity and the possibility of flexibility and also, of the assumed freedoms.

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