# Online Communication Simulating Spaces for Teaching Effective Foreign Language Communication

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### Abstract

The digital era of online foreign language learning soared with the complete shift towards distance communication under pandemic, and for Ukrainian education further on with the start of the Russian war in Ukraine, and is in its full swing nowadays. A team of scholars from two Ukrainian-based universities joined their efforts in analyzing and developing innovative computer-mediated technologies to provide efficient and sustainable online education.

This paper is the third in a row following two previous studies of online communication, namely, of multimedia technologies and communication simulation published in 2021 and 2022, and examines the impact of introducing newly developed simulating platforms in the domain of foreign language learning.

The article presents the results of the conducted experiment based on the use of digital simulating tools to improve effective communication online. It describes in detail the two surveys conducted at the end of the semester and compares the extent to which the new simulating platforms raised communicative competence in a foreign language of both students and teachers and conditioned the positive academic outcome despite various global- and national-scale challenges.

The hypothesis put forward at the beginning of the semester that teaching of effective communication in foreign languages online can most efficiently be achieved through modern digital tools that the young generation is so familiar with was completely supported by the survey answers at the end of it. Furthermore, the research revealed some important issues to be given a deeper insight, like ecolinguistics, non-verbal communication, generation gap and media competence that outline the prospective research in the given area.

### Keywords

Communication simulating spaces (CSS), digital tools, ecolinguistics, edutainment, effective communication, E-learning, foreign language communicative competence, movement

## 1. Introduction

Online communication is a multiple indicator of the modern technological era in education, business, and country development. It is an indispensable element of all spheres of human development and is an absolute must to be considered by governments, academics, and technicians alike. 'Communication' as such has been long ousted in scholarly studies by more detailed and sophisticated 'effective communication' in all spheres of human activity and is now being studied and developed on a par with the constantly evolving digital tools to support its numerous needs in teaching and learning at large.

Our primary concern in the present study is to analyze how digital tools can facilitate and provide for further development of effective online communication in dangerous environments, namely, under recent pandemic [1] and the current most challenging for Ukraine war-time period of the Russian aggression. In fact, the present study continues the previous research in the field of developing mass-media technologies by a team of collaborating scholars in Ukraine of National Technical University 'Kharkiv Polytechnic Institute' and Vasyl Karazin Kharkiv National University, both Ukrainian-based and doing research predominantly in the field of foreign language learning.

Both universities have been fully immersed in online learning for quite a number of years due to the challenges of the Covid isolation only to continue online education even on a greater scale with the start of the Russian invasion which dispersed both teachers and the students throughout Ukraine and the European Union.

However, the shift from blended learning or combination of traditional and online [1, 2] to complete distance learning (E-learning) has been nothing but smooth and less painful than before just as a result of the previous experience of extensive use of modern digital tools under the Covid pandemic.

The issue of effective foreign language learning continuously arises in the course of technological improvement of digital tools and online platforms and the development of innovative teaching methods alike. Consequently, the study under question tackles the spheres of modern educational activities to identify both breakthroughs and shortcomings in the merge of tangible (digital tools) and intangible (human relationships in communication) worlds.

To be more exact, the present research being the continuation of the previous explorations of 1) **multimedia technologies** integrated into traditional and blended learning [3] and 2) the introduction of newly-developed **simulating platforms** [1] is due to concentrate further on the nature and the assignments of incorporating real-life and online effective communication features aimed at **building up-to-date scholarly approach of facilitating online foreign language learning with the help of digital simulators**.

It was also important to support the vision of innovative blended approaches (media communication, online communication simulation and the development of simulating digital platforms) with the results of students' and teachers' surveys on the subjects of the study. All of the above allowed us to create **the new approach and teaching technology of effective communication skills described below.**

## 2. Related Works

To start the description of the present state of affairs in the modern trends of effective communication research, that is nowadays closely connected with different interdisciplinary fields of science like ecolinguistics, or multimodal studies covering non-verbal means of message transmission as well as their simulation in online academic environment, be it via such applications like SpatialChat, or others, it is of paramount importance to specify what exactly is meant by 'effective communication' in this paper.

As a matter of fact, all of the environments and domains mentioned here adhere to the principle of cooperation by H. Paul Grice [4], supplemented by 4 maxims of communication:

- The Maxim of Quality (you should only say things you believe to be true; you should not say things that you cannot back up with evidence).
- The Maxim of Quantity (you should make your contribution to the conversation as informative as necessary; you should not make your contribution more informative than necessary).
- The Maxim of Relevance (you should only say things that are relevant to the conversation).
- The Maxim of Manner (you should avoid obscurity or ambiguity; you should be brief and orderly; you should try and be as clear as possible).

For successful communication, these maxims must be observed by all participants in the communicative situation.

Modern theories of practical business communication [5] point to 7 principles, based on Grice's maxims and ensuring successful interaction in a professional environment. This is the aim of teaching students at the Department of Business Foreign Language and Translation of the University.

'The 7Cs of Communication' (alliteration as a memo-technique allows students to easily remember these rules) are:

*Clarity.* The communicators have to be clear about the goal and the purpose of their message and deliver it in a right understandable way.

*Conciseness.* The communicators have to keep to the point and keep it short and simple without using unnecessary words and structures.

*Concreteness* can be achieved by using enough detail to get the message across. Using less detail than necessary makes the message ambiguous, too much of that produces communicative noise and distracts the recipient from the point.

*Correctness.* The content of the message must be transparent for the recipient, so that the addresser has to avoid grammar, spelling, or pronunciation mistakes.

*Coherence.* The message must be well-structured and laid out logically, its tone remains the same throughout.

*Completeness* of the message means that the recipients have everything they need to understand the message and are not left with many questions to ask. It is important for the addresser to check for understanding.

*Courtesy* means the message is polite, friendly, professional, open, and honest. The addresser should check the message from the recipient's point of view to be empathetic towards the recipient's needs.

Following the 7Cs of communication makes delivering the messages much more effective.

Compliance with these rules in their combination leads us to the 'eighth C' – *Communicative Competence.*

Generally speaking, the competence itself as both the scientific term and phenomenon has long been debated within the specialized scientific literature [6, 7, 8]. Being a real scientific issue, it attracts numerous scholars to solve the main problem about its final definition: whether it is a part of something bigger that can be roughly called professionalism, or is it professionalism in any given area itself but dubbed in another way [8]?

In this paper, we will refer to the competence as a sum of all the knowledge and skills (both hard and soft ones) that can be applied in a particular area to achieve a positive result. We do not level professionalism and competence for it is our firm contention that professionalism is a skill of using your competence in an adequate way. On a par, it becomes clear there is a very long list of competencies that are connected with various spheres of human's life. For us, however, the most important one is the aforementioned communicative competence.

Recently, both foreign and national scholars alike have widely covered the subject in their works [9, 10]. Still, there is something that can be deduced from the great variety of viewpoints. First, it is the language that basically affects the formation of communicative competence, since a big part of communication is done verbally. Second, the definition of this competence is obviously very clear and easy to conclude: this is a skill of communication (N.B.: not the ability to communicate). Consequently, provided we speak about students mastering a foreign language, then they participate in the process of their foreign language communicative competence formation being done by university specialists via honing learners' skills which condition positive communicative outcomes.

The skills that ensure following the principles were included in the teachers' and students' surveys with the analysis presented below.

The 7Cs were further implemented in a number of training practical courses for all interested but in a reduced form of 5Cs: clear, correct, complete, concise, and compassionate, as recommended by one of the most up-to-date practical courses of effective communication [11]. It is clear there is no contradiction between the two definitions, however, strengthening of the 'courtesy' principle and even extending it to 'compassion' or even 'empathy' seems more appropriate for analyzing challenging or dangerous environments, as in our case of the war-time emotions of both communicating sides, or even previously under pandemic.

The C-principles unavoidably examine and foster human behavior which in its turn involves the tone of voice (even in telephone conversation) [12]. The same author cites S. Ober's view: "Tone in

writing refers to the writer's attitude towards the reader and the subject of the message. The overall tone of a written message affects the reader just as one's tone of voice affects the listener in everyday exchanges" [13]. Your tone can be brusque or subtle, courteous, respectful or indifferent, and in this paper we mostly refer to our written comments on the students' ensuing essays in the corporate emailing or oral communication in computer-mediated classes. Both serve as communication simulation and suitable practical tools for the students themselves as well.

As a rule, scholars normally point out the differences in the peer and teacher-student communication, as online learning involves both: when teachers talk to students, and when communication among students occurs either sporadically or under the teacher's guidance. According to the authors of studies in this field, control, trust, and intimacy are essential in any kind of interpersonal relationship [14]. In addition, the development of teacher-student relationship is closely linked to a number of factors:

1. whether they met before online learning face-to-face;
2. whether they feel comfortable with each other online;
3. whether they have contacts outside online classes (by email correspondence or under their teacher's guidance for their internet home-based work or to prepare online presentations);
4. whether the teacher and the students are participants of any kind of out-of-class activities which is of crucial importance to establish trust, control and intimacy in their mutual efforts to achieve the results ;
5. whether the peer relationships in a class are healthy and productive;
6. and, finally, whether both students and the teacher enjoy identical proficiency of using digital tools.

Here, the fifth factor reflects the state of affairs when communication in any environment must be harmonious.

**The harmony** within the communicative environment is currently being studied by the new linguistic discipline formed by blending linguistics proper and ecology which is known under the umbrella term '**ecolinguistics**'. Although disputed concerning the differentiation of various terms, in this paper, we will refer to this new interdisciplinary scientific flow as both ecolinguistics or the linguistic ecology. As visible from the name of ecolinguistics itself, this science is concerned primarily with studying the connection between ecology and communication, for the language (*lingua*) is the main instrument of its construction.

The research area of ecolinguistics is very broad covering issues from cognitive underpinnings of human's perception of the world which then results in their practical attitude towards the nature (cf. global warming triggered by enhanced human activities) [15] to analyzing media framing of the nature which conditions the position of environmental safety in the system of human values (cf. anthropocentrism vs. ecocentrism) [16].

It is noteworthy that one can see an interesting division of research strands in the modern ecolinguistics that can be easily described as the binary opposition the West vs. the East (the latter, namely, Post-Soviet countries). The former flow of the linguistic ecology is mainly connected with the analysis of how the nature is mirrored in the system of human language [17, 18], whilst the latter discuss the processes in the language itself holding that it is also an ecosystem where natural laws and principles can and, more importantly, are to be observed [19].

 In this regard, especially important becomes the nature of ecological communicative contact that can be achieved precisely by using effective communication maxims [ibid.]. Such a shift towards the analysis of the language in its own environment seems to be the revival of the initial research strand in ecolinguistics when Einar Haugen was studying the correlation of different languages within the mind of a bilingual person. Also, it demonstrates the cyclical nature of scientific investigation signifying that ecolinguistics is a dynamic and developing linguistic discipline.

The ecological focus of communication and learning is impossible without taking into account its material basis – the neurophysiological characteristics of a human as a biological species. The implementation of the ecological (harmonizing) approach to the communication problems also means a need for humanists and linguists to work with scientists such as biologists and ecologists [20]. In our study, we use the achievements of neurophysiologists who suggest that motion is one of the factors of a person's well-being, their motivation, activity, and happiness – respectively, harmony.

Many learning activities (especially in online classes during the pandemic) are now carried out sitting with just little movement or totally still. On the one hand, this leads to numerous painful consequences for a person's health in the long-term perspective; on the other hand, it provokes the feeling of monotony, lack of concentration right away, which causes an early loss of motivation to study. These effects make **movement** a necessary part of the learning process.

In addition to other known motivation-enhancing teaching tools, the movement activities create a physiological balance, activate blood circulation, increase blood oxygen, stimulate thinking activities through the production of the BDNF protein (brain-derived neurotrophic factor), and bring competition into play [21, 22].

Movement in the broadest sense not only trains the body but also develops the adaptability and thus the plasticity of the brain [23]. Numerous experiments on animals [24, 25] have shown that physical activity significantly increases the release of the neurotransmitters (messenger substances) serotonin (happiness hormone), dopamine (reward hormone), and noradrenalin (stress hormone). Thus, the brain processes dependent on the transmitters are positively influenced. These study results can also be transferred to humans. The described positive effects of physical activity on various neurobiological processes in the brain make it clear how important regular body exercise is for emotional processes, memory, and learning performance [26, 27, 28].

The sixth observation, according to [29, 30], is of paramount importance, since "…the needs and desires of today's students tend to be more pleased with the use of technology because they have become part of the digital generation…so…the role of educators to update technology should be pursued as seriously as possible…" [30]. This statement calls for realization of the 'generation gap' pointed out by a number of authors [29, 30, 31] as a result of communication among representatives of the following groups of people:

- The Baby Boom generation (born 1946-1964);
- Generation X (born 1965-1980);
- Generation Y (born 1981-1999);
- Generation Z (born after 2000).

It goes without saying that there is a substantial gap in different generations' skills of handling up-to-date digital tools, so that the further the distance between the generation of the teacher and their students, the bigger the gap in their ability to skillfully operate the modern technological tools. For example, the Baby Boom generation would have to take much more effort in mastering online platforms than, say, even generation Y.

However, there are other important factors to be taken into account in predicting how big the gap might be. Among them is the motivation of the older generation, their values to stay in the job, and the environment they are working in, which may be either supportive of their strive to master new technologies and competitive, or suppressive. Another factor is the kind of environment they are working in.

The motivation may stem from the institution authorities and the equipment available in the working place, either at work or at home. The environment is made up of the country's development and the individual's own experience and access to the up-dated tools. Thus, the generation gap might shrink with the favourable factors for overcoming the teacher's lack of necessary skills of digitally-mediated performance: namely, positive orientation and requirements of the authorities, the availability of the equipment, the individual's personal environment and the teacher's motivation.

In Lancaster and Stillman's view, it is the Y and Z generations that are characterized by specific learning styles, namely, learning from experimentation, preferring visual learning, preference of team work, multitasking and educational fun [30]. From this study it is obvious that students representing generations Y and Z, require the same or higher mastership of computer proficiency from their educators, as well as interactivity and fun games. These requirements found complete confirmation in the students' survey described later on.

Furthermore, communication between teachers and students can be extended beyond online classes in the written form which involves other digital technologies (email, chat-rooms, text messaging, telephoning, etc.).Each of the types mentioned makes communication more complete and efficient: "What I hear, I forget; what I see, I remember; what I do, I know" [32].

From what we have mentioned above, communication among students, or **peer communication**, belongs to an environment completely different from the adult world with different values, both online and the real world. No wonder that the researchers of adolescent values claim that "…for today's youth, media technologies are an important social variable and that physical and virtual worlds are psychologically connected; consequently, the virtual world serves as a playing ground for developmental issues from the physical world…" [33].

Even though online communication levels up a number of differences, they persist in the background of any form, oral or written, and cannot be ignored if educators aim at efficient **teacher-student communication**. The generation gaps (mostly between Baby Boom /X and Y/2000 generations) are to a great extent different in placing importance on intrinsic values, such as Achievement, Altruism, and Autonomy by the youth that comes in contrast with Comfort and Status values for senior people [29].

This conflict of values among representatives of different generations reflects the impact of age on the participants' skills and abilities in using digital tools as well. In order to adjust to the challenges of the digital era, "…the role of educators to update technology should be pursued as seriously as possible" [30]. Moreover, this is the responsibility of the academic community to lead in this pursuit of using updated technology and include in Foreign Language programmes to achieve the desired results in students' mastering effective foreign language communication. The efforts taken to this effect are presented here in the form of new educational digital platforms later on.

It is quite evident that the teaching process may either enforce or disrupt the principles of effectiveness, and in this way serve the starting point in analyzing what exactly is needed for effective communication in the real world (even though communication simulation online is a **'playground'** for generations Y and Z).

## 3. Materials and Methods

## 3.1. Research Design

The methodological basis of the study is formed by three groups of theories – the theory of communication, the theories of linguistic ecology, and the basic provisions of neurophysiology.

The design used for this research study is a mixed method approach based on modeling a communicative environment with the help of digital tools combined with communication simulating spaces providing close-to-life communicative environments. The survey results contain qualitative data in form of CSS toolkit and quantitative data obtained from 2 questionnaires (students' and teachers' ones) of a survey carried out in two stages.

## 3.2. The Context of The Study

The scientific approach in [29] emphasizes the need in foreign language effective communication learning for methods in the form of:
- observing (watching multimedia pieces in the practices described below);
- questioning (or problem-solving) advisable to be used as much on the part of the students as the teachers themselves;
- reasoning (not so frequent in our practices but can be substituted by online after-presentation discussion);
- experimenting (the study of the material can be completed by home assignment of writing an essay on the basis of active vocabulary);
- networking (creating special chat-groups for out-of-class teacher-student communication).

Here, we stand by the simplified definition of effective communication as "…the process of exchanging ideas, thoughts, opinions, knowledge, and data so that the message is received and understood with clarity and purpose. When we communicate effectively, both the sender and receiver feel satisfied" [11].

So far, we have outlined the possible online communication environments of online classes and beyond. No less important is mentioning the two major formats of communication, verbal and non-

verbal. The importance of the latter, according to Albert Mehrabian [34], communication is 55 percent non-verbal, 38 percent vocal (tone and inflection), and 7 percent words. Despite the fact that modern scientists dispute these figures [35], everyone agrees that the share of non-verbal communication is high, and its factor should be taken into account. As the authors in [36] stress, "Communication can't be effective with one form excluding the other, that is, both forms of communication (verbal and nonverbal) are extremely needed to carry out communication successfully… Very much often, paralinguistic characteristics like stress, intonation, volume, passion, and rate convey different types of meanings without involving words per se".

How to further develop skills in the non-verbal domain is also presented in the description of innovative online teaching platform SpatialChat which proved that, surprisingly, effective non-verbal communication found its place among the traditional studies of the verbal communication forms.

In sum, the present study reduces the range of communication environments to two major areas of **teacher-student and peer communication** multiplied none-the-less by oral (presentational) and written forms and verbal vs. non-verbal communication, each of them possessing their own specificity in teaching effectiveness. In addition, the areas mentioned should also be studied from two other perspectives: teaching effective communication in a particular foreign language (either English or German in our case) and improving communication between educators and learners, as well as among the peers themselves. The former involves rules and patterns which are tangible, while the latter to a great extent is based on psychology and **human relationships** which are intangible. And these new challenges unavoidably "…refocus our scholarship from the devices to the human-based processes being explored." [37].

One of such intangible patterns is the ecology of communication. We hold that communication is ecological, that is harmonious, when it bears no harm or malice to its participants. Deriving from this, one can observe strict connection between the state of homeostasis in the organisms united in an ecosystem (and we consider communicators to be such ones in the whole environment of communication) and harmonious outcome of effective communication when all the goals of the communicative interaction are reached via enriching the interlocutors, not depriving them of positive nature of communication itself. This contention is supported by the aforementioned thesis that both interlocutors find communication to be a pleasant experience [11].

Thus, in this paper, we will adhere to ecological communicative paradigm of analysis which stipulates usage of the following ecolinguistics method emerging from it:

To determine whether the communication is effective, one needs to process the utterance through a sieve of ecology which operates based upon the mechanism of logical implication and can be pronounced the following way: 'Should an utterance adhere to all the 7Cs, then it is ecological, id est, it allows for effective communication'. In a formalized way, this operation can be described using such a formula:

**If** $U = 7Cs$ **then** $U = UEco = UEcoEff$, where

*If/then* are logical operators of implication,

*A* is an utterance,

*Eco* signifies the feature of the utterance, its being ecological,

*Eff* marks that the utterance is effective.

Nonetheless, the ecology of an utterance, according to our viewpoint, is merely its feature, not the default mode. It can be easily explained by taking into account the fact that sometimes blunt speaking, which can have a lower level of courtesy or lack it at all, still preserves its effectiveness. However, if we speak of the academic communicative environment, then the ecology of an utterance conditions its effectiveness by default for correctness, and politeness of the academic speech is inherent in this functional style. In short, the ecology of communication correlates with the effectiveness of communication on a meronymic basis.

Still, as we know that communication is simultaneously happening in different ways (various modes), it is our strong belief that non-verbal mode of communication, that is primarily connected with movement, can also be part and parcel of its ecology provided we focus on the very pragmatic feature of effectiveness – the message can be clearly understood and reproduced since memory catches it easily and quickly.

The effects of movement on learning performance initiated the emergence of TPR technique in the 1960s. TPR stands for Total Physical Response, and it was developed by James Asher and his

adherents [38]. His basic idea is that new words and phrases are better remembered if new knowledge is reinforced with actions. The practice of TPR outlined the classes of language units that can be successfully learned with the help of this technique: verbs (mainly denoting movement), adverbs and adjectives, tenses (past/present/future, simple and continuous aspects), classroom routine phrases, imperatives (instruction routines). Also storytelling and reading, songs and chants can be practiced. Despite sustainable positive results, TPR technique demonstrates a number of disadvantages and restrictions while using it: not all necessary words and structures can be transferred through movements (especially abstract ones), the implementation takes a lot of time in the classroom with much space needed; besides, the technique can provoke a negative psychological response by adult learners.

The advantages of TPR can be used even under pandemic and state of war in terms of online classes (E-learning). To answer the question how it is possible to reach motion brain centers without moving we must appeal to the term mirror neurons, first mentioned by neuropsychologist Giacomo Rizzolatti in 1992. His observations confirmed by the following experiments demonstrate paradox ability of human brain: certain cells in the motor and premotor cortex discharge not only when performing an action, but also when one only observes the same movement in others [39]. This function of mirror neurons makes it possible to simulate movement online by watching/ listening video/ audio files during online classes. Using elements of virtual reality constructed on co-working online platforms makes it possible to involve the participants deeper and more impersonally into action.

To overcome the disadvantages of TPR the teacher can use elements of **edutainment** (education plus entertainment). This approach implicates a wider range of educational elements you can learn with, and more brain structure involved, first of all those responsible for hedonistic effects.

That reduces the problem of low motivation and static during E-learning. So, edutainment as a modern method of the educational process, focused on the entertainment component, helps the students independently satisfy their needs in learning without losing interest in the subject [40]. It has been systematically implemented at the National Technical University "Kharkiv Polytechnic Institute" since 2020 with the start of blended learning. While implementing the method and conducting the research on its effectiveness, we followed such principles as: variability of means, psychological comfort, and the principle of systematicity.

## 3.3.   The Material of the Study

The edutainment activities during **the classes** included the use of multimedia boards, audio and video files in the original language, numerous presentations and quests made up for deeper immersion in the material, division into session rooms, which enabled students to freely perform creative tasks. The most interesting for the students was the processing of the material with the involvement of interactive online platforms. The conducted experiments outlined the 5 most effective platforms for the edutainment principle, which serve to practice the material when learning a foreign language: *LearningApps, Quizizz, Padlet, Quizlet* and *ThingLink* [41], but its number constantly grows and is enhanced by newly emerged platforms. The material of the study was learning activities on these and other educational platforms like *Virtual Speech, Small Talk, Explain Everything, Word Wall* etc.

## 3.4.   The Sample of The Study

All the samples (total 77) belong to the EFL-community at the National Technical University 'Kharkiv Polytechnic Institute' and form two focus groups: English major students and English teachers at the Department of Business English and Translation. There were 59 1st-5th year students (bachelor and master level, English as the first foreign language and German as the second foreign language), aged17-22, and 18 teachers, aged 24-69 with 2-45 years of work experience. All the teachers have more than 2 years of online teaching experience, and all students have more than one year of E-learning experience.

## 3.5.  Research Instruments

The instruments of the research are both modeling and evaluative. The methodic-didactic potential of the online educational digital tools like *Quizlet, Quizzizz, LearningApps, Kahoot* etc. was used to construct exercises or tasks integrated into CSS aiming at the development of the students' communicative skills. The input data for constructional steps is obtained from the students' and teachers' interviews before using modeled CSS (September 2022) in the first part of the research. The second part of the survey was conducted after CSS classes during the winter semester 2022/2023 (January 2023) to prove the effectiveness of the method.

Both interviews were conducted asynchronously via Google Forms. All the data are used with the permission of the participants. All the interviews were taken by the authors of the research.

## 4.  Experiment
## 4.1.  Initial data for the experiment

With the total change of a learning format from traditional via blended (traditional and online combined) to complete digitally-mediated learning, there appeared a new image of communication channels (hearing, sight and touch [12]. Although the roles of listening and visual image have retained their paramount importance, non-verbal communication in the form of spatial cues has disappeared. The lack of the spatial cues, however, immediately launched the search for its replacement online on the part of educators and their technical counterparts alike, and finally resulted in communication simulating spaces (CSS) like SpatialChat, Wonder.Me, HyHyve, which have already been widely used in the project under discussion [45, 46, 47].

To receive the initial input data, there was conducted the first stage of the survey when both educators and learners were offered to answer multiple choice questions altogether with writing their own opinion. As has been stated above, there were 59 students (ranging from freshmen to seniors of the $5^{th}$ year of study) majoring in English and German as well as 18 professional educators who specialize in teaching these languages, translation, and interpretation, and other language- or area-related disciplines. It is notable that many educators hold PhD in philology or are working as senior lecturers. For readers' convenience, we are attaching the full list of questions below (see Table 1). Here, we will dwell upon the most prominent results of the initial questionnaire that are closely connected with further parts of the paper as well as the problem under scrutiny.

Thus, the majority of educators rendered by figure of 50% have stated that provided they had the opportunity to choose the teaching mode, they would choose blended classes which combine online and offline educational activities. If it goes down further, 27.8% voted in favor of online classes only with 22.2% of those for whom it does not matter. The last figure is noteworthy, for it shows a moderate adaptivity level of educators which is of paramount importance since one of the key competences selected for survival in a rapidly-changing world is the ability to put up with fluctuating circumstances.

Talking about students' answers, one can see that when answering  question o, the main aim of foreign language acquisition, 74.6% of those asked said it is merely interesting, a little bit smaller number responded that it could help them succeed in life. Only 5.1% stated they have to do it. Should we judge by the numbers, it becomes crystal clear that modern youngsters are highly motivated to reach success in life, and foreign languages are to help them in this matter. They connect the concept of SUCCESS with the concept of FOREIGN LANGUAGE ACQUISTION.

However, going deeper into the analysis of the learners' answers, we encountered a problem which later we tried to solve: motivation for communication. Although 45.8% of students say that online classes motivate them to communicate, 44.1% stated they are not sure – the gap between definite 'yes' and vague 'no' is very narrow meaning there can be a fragile balance, and any of the opposite parties can take the majority at any moment. To give the full picture, only 8.5% said they are definitely not motivated. This situation is very close to elections: these 44.1% are 'swing states' in the run for superiority.

Generally speaking, the aforementioned challenge has provided us with one of the starting points of the second stage of our experiment that is described in-depth in a further section of this paper.

**Table 1**
List of questions

| Students' Survey | Teachers' Survey |
|---|---|
| How long do you experience online classes in foreign languages? | |
| What is the aim of your studying foreign languages at the university? | |
| Can you say that the current online communication under E-learning is harmonious*? *Harmonious means ecological that is full, adequate, and effective | |
| Can you say that online communication under E-learning can still prepare for real life conversation? | |
| Do the current online classes at the university motivate you enough to communicate? | How would you rate the following characteristics of students' communication skills at the beginning of the current academic year? (5 - superior, 4 - good, 3 - satisfactory, 2 - low pass, 1 - low failure) * *repeated after the winter semester |
| How much time does communicative interactivity among the students during an average class take? | How would you describe your experience with online platforms? |
| How much time does communicative interactivity between the teacher and the students during an average class take? | Which online platforms do you find more efficient for communication? |
| Are you bored during an ordinary class under E-learning? | |
| What kind of classes would be preferable for you if you would be able to choose at the moment? | |
| What aspects of the classes in a foreign language would you change to achieve better results for improving your communication skills? | What could level up the motivation of the students to communicate in foreign languages? |

## 4.2.  Digital tools involved in the experiment

The application of the results of the research on the effectiveness of interactive platforms [1, 3, 41] in blended learning under the pandemic/ E-learning under the state of war allowed us to use these tools to improve the communicative competence in its aspects taken separately. The most effective online tools applied to the 7 C's are as follows in Table 2:

**Table 2**
Digital tools for developing communicative competences

| No. | Competence | Skills | Digital tools (e.g.) |
|---|---|---|---|
| 1 | Clarity | right word and structures choice, clearness about the speech purpose | ThingLink, Mind Maps and Flowcharts apps (Coggle, Mind Meister) |
| 2 | Conciseness | mindful word choice, using few words, sticking to time limits | Virtual whiteboards (Padlet, Explain Everything), tools with time or symbol restriction options (Tricider) |
| 3 | Concreteness | choosing arguments based in solid facts | Data search vehicles (Google search etc) |

| | | | |
|---|---|---|---|
| 4 | Correctness | following the rules of the language norms | Testing tools (Quizzizz, Kahoot, LearningApps, Word Wall) |
| 5 | Coherence | logical flow of speech, public speaking topics | Virtual Speech App, Small Talk App |
| 6 | Completeness | giving all the information needed, high level of detail | ThingLink, virtual whiteboards |
| 7 | Courtesy | following the rules of the social interaction | Avatar platforms (ReadyPlayer.Me etc) |

The latter point of courtesy must be emphasized because of the specifics of the mentioned tool. Creating avatars that visually replace participants in virtual communication helps to overcome the language barrier, relieve stiffness in communication, but it can not solve the problem of politeness holistically. The development of this skill is not possible with the help of a single tool, apart from other skills, and most importantly, in isolation from the communicative context.

The novelty of our approach lies in the integration of well-known tools into simulators of the communicative environment, represented in the study by three CSS platforms: SpatialChat, Wonder.Me, HyHyve (see below)

## 4.3. Communication Simulating Spaces

Online workspaces built on the principle of dynamic circles with close to life backgrounds are a relatively new phenomenon becoming popular since the pandemic in early 2020. The first platform of the kind acknowledged worldwide and used by remote teams to get synchronous work done anywhere, anytime is SpatialChat (2020, Limassol, Cyprus), followed by Wonder.Me (2020, Berlin), HyHyve (2021, Berlin) with similar functions and interface. The creators of the SpatialChat suggest that their innovation helps to overcome the problems of static one-to-one or one-to-all communication offered by other communication platforms like Zoom, Skype and others [42]. A distinctive feature of the service is that the volume of the sound you hear depends on the distance of your avatar from its source, such as a posted video or the avatar of a speaking user (proximity sensors automatically adjust volume levels).

The other advantages include customized settings including changeable 3D backgrounds, expressive and personalized avatars (a feature developed by SpatialChat in cooperation with the gaming platform ReadyPlayer.Me), messaging and presentations, adding information to profiles, embedding static images and gifs, videos, and even separate browser tabs into a common space.

In SpatialChat for educational purposes the teacher can create a virtual space where invited students navigate using their avatars in a themed space with different areas or 'rooms' set up for exercises, quizzes, quests or discussions, as well as open zones for more free-flowing interaction, so as the participants move their avatar icons around and leave/join conversations to focus on the chat needed at the moment. The teacher can arrange a lexical or grammatical, country-study oriented quest so that in each room a mini-test or a riddle awaits the participants, and the correct answer is the password to enter the next zone. SpatialChat is very convenient for online speeches with reports and presentations. The speaker can go up to the virtual stage, display an image of his screen for those present and demonstrate any media content It is possible to arrange performances of the student theater in it, especially using the function of customizing avatars which can become the nearest objective for the departmental out-of-class activities with the still functioning Theater of English miniatures at the Department of Business Foreign Languages and Translation.
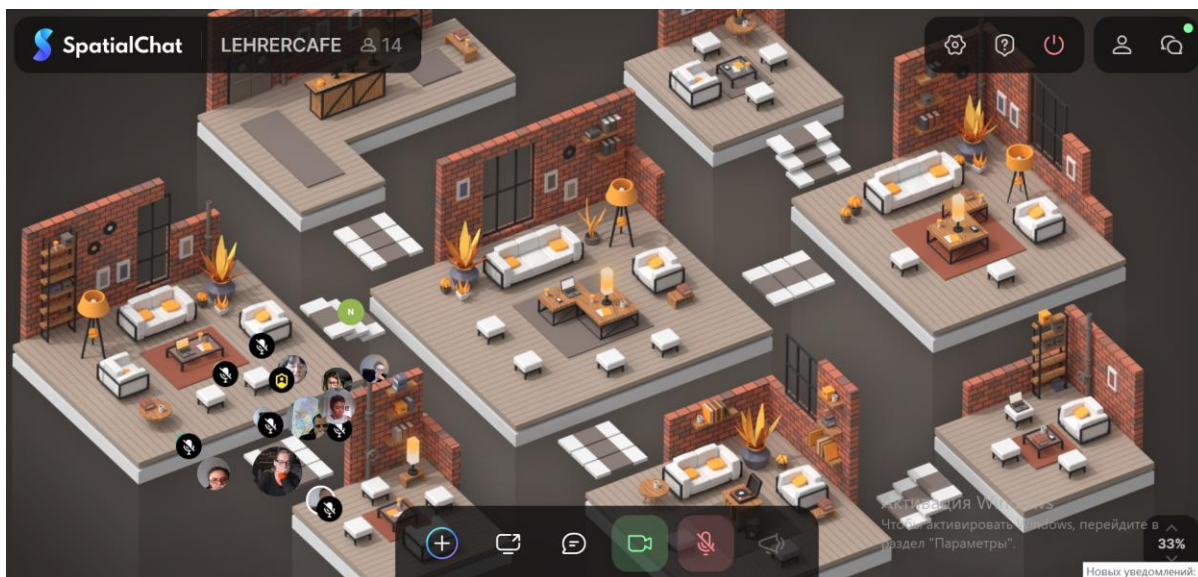
**Figure 1:** Customized 3D backgrounds in SpatialChat

A normal SpatialChat séance includes up to 50 participants which is the company's policy: the developers claim, handling even 50 simultaneous video connections (and video circles moving) is a technology challenge ("hard to decode so many video streams by average CPUs or handle video data streaming on non-5GHz WiFi connections" [42]). Nevertheless, newer SpatialChat's counterparts offer their solutions for up to 100 in HyHyve or even 500 participants in Wonder.Me.
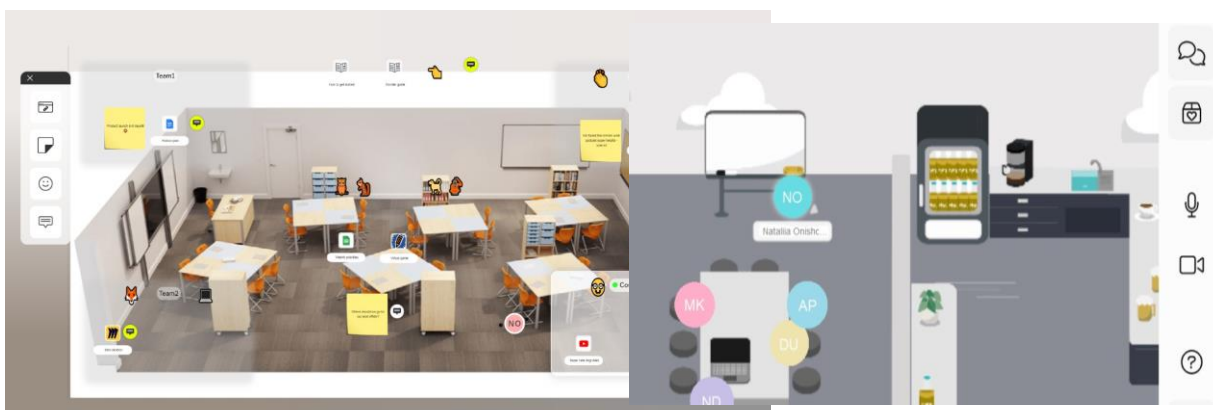


**Figure 2:** Coworking areas in Wonder.Me and in HyHyve

Still, on smartphones and tablets, CSS features are significantly limited. So, from a mobile device the user will not be able to watch videos, attach media files and share the screen.

Despite the cons CSS offer close to a real-life experience – they recreate "the feeling of being in a room, milling about and choosing who you'd like to talk to, and for how long. It enables spontaneous flow and is much less formal and controlling than other platforms" [43].

## 4.4. Modeling effective communication training in CSS

The experimentally proven model of communication skills training (CSS based toolkit) includes edutainment exercises that are effectively used in offline learning and cannot be implemented on static online platforms (or can be implemented with some restrictions). The CSS tools can be divided into 3 groups according to the stage of the class:

CSS on the warming up stage

*"Ice Breaker Bingo".* For a limited period of time students must interview the maximum number of interlocutors and write down the players' reaction to the statements. In the CSS it is important for

participants to think over the trajectory of avatars in order to interview the maximum number of participants in a limited time without interfering with the communication of other pairs and groups, formulating the question as briefly and clearly as possible.

*"Letter Salad"*. Each team member is assigned a letter of the alphabet by renaming the participant's avatar or via a built-in chat. The participants must make words from this set of letters either on a given topic (active vocabulary training) or as many words as possible (spelling training).
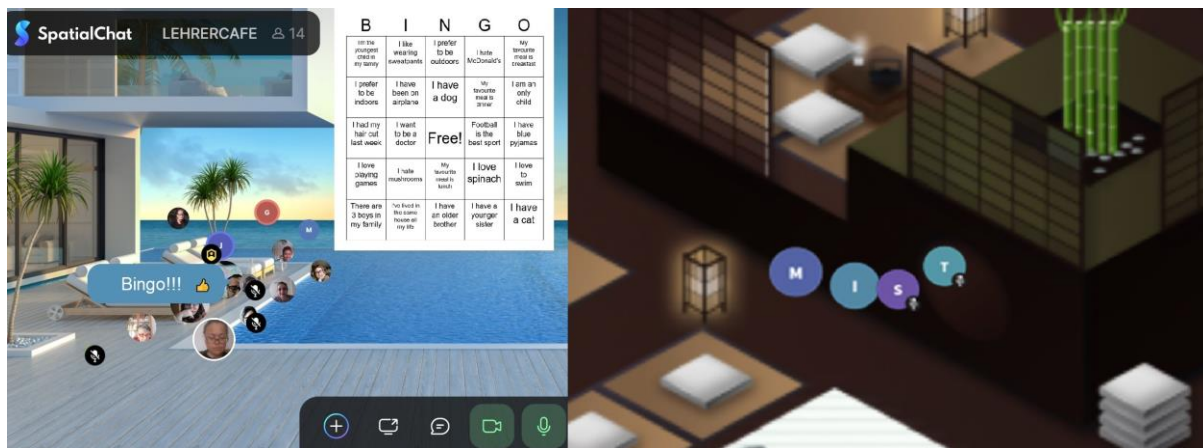


**Figure 3:** "Ice Breaker Bingo" and "Letter Salad"in SpatialChat

Reproductive stage

*"Pick Up Words"*. The basis of the exercise is a set of language units, active lexical or grammatical phenomena that are included in the media text (audio or video) chosen by the teacher. When playing the media file, students must identify the words they heard with those written on the cards. In the online version of CSS, they must move their avatar to the desired card first.

*"Fly Swatting"* is another test for checking active units. In the online version of CSS, the answer is selected by rapidly moving the avatar towards the answer suggested to be correct ("hitting" it with a "fly swatter").
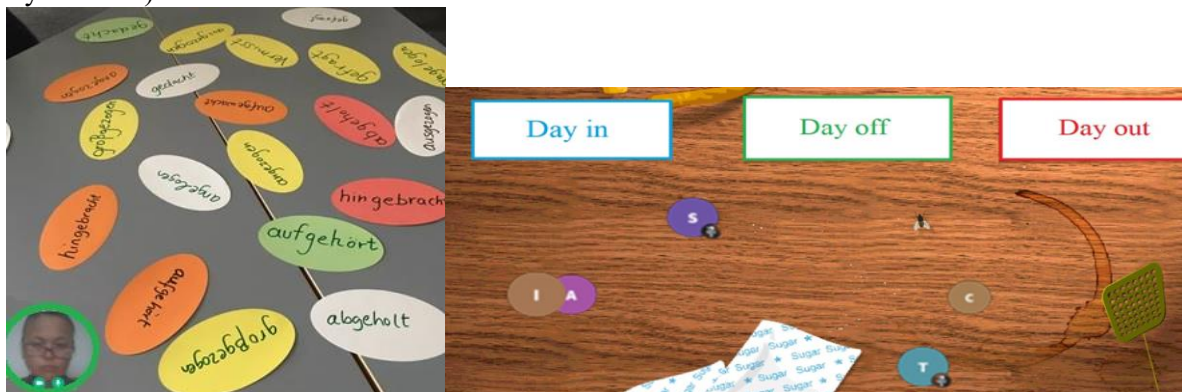


**Figure 5:** "Pick up words" (training Participle II via listening comprehension) and "Fly Swatting" n SpatialChat

CSS on the productive stage

The exercises mentioned above are primarily receptive in their nature, and training the communication skills for reproduction. However, more complex, multi-stage communicative actions are also possible in CSS.

*"Speed dating"* means conducting a dialogue on a given topic in a given period of time with different interlocutors. To do this, the participants (in the online version – their avatars) form 2 circles – an internal motionless and an external, moving clockwise. After the first set period of time, the outer circle moves and the participants get a new interlocutor. *"Four Corners"* can act as a tool for forming teams (groups of interest), as well as independent activity in the lesson. The teacher offers a discussion question and 4 possible answers. Each answer has its own corner of the offline room or its

own subspace of the virtual platform. Adherents of one or another point of view gather in "their" corner and discuss the strengths and weaknesses of their position, in order to defend it later in a plenary discussion or in the jigsaw groups (see below).
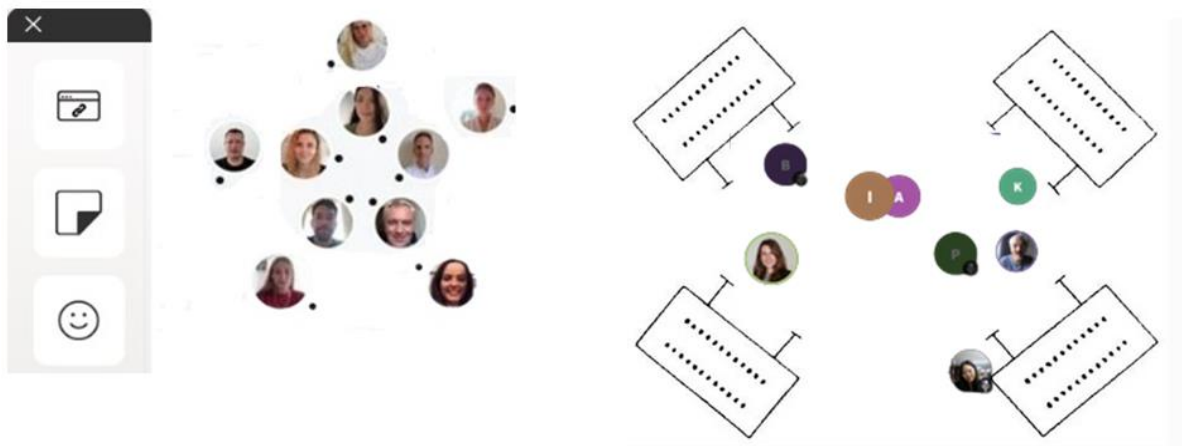


**Figure 6:** "Speed dating" in Wonder.Me and "Four Corners" discussion in SpatialChat

The integrative technique of *"Jigsaw groups"* develops a set of reading and/or listening, speaking, summarizing skills. At the initial stage of this activity, primary groups (jigsaw groups) are formed, their number and the number of their participants are determined by the size of the academic group, but the number of participants must be equal. The groups get a text to read or listen to, divided into segments according to the number of participants. After working on their segment of the text, "experts" on the same segment of the text from different groups are gathered in temporary expert groups, where they discuss the learned information. At the third stage, the experts return to their jigsaw groups and present their part of the information. The task of the jigsaw group is to restore the complete picture of the original text. Control of understanding of the entire text is carried out using a quiz or test.
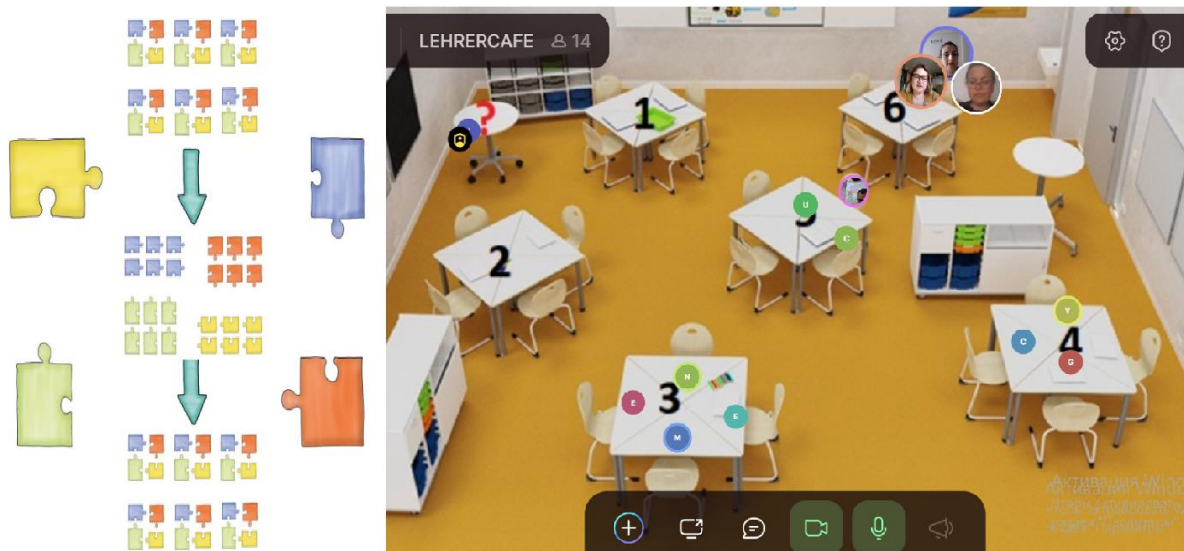


**Figure 7:** "Jigsaw groups" schematic [44] and in SpatialChat

# 5. Results

To prove the effectiveness of the CSS based toolkit, there was the second stage of the surveys featuring transformed versions of students' and teachers' questionnaires among both groups of participants (students and teachers). The students' after-questionnaire contained items 3-5, 8 from the before-questionnaire plus an additional item: "How do you rate your digital competence after winter semester 2022/2023?" The teachers' after-questionnaire contained a transformed version of item 4 "How would you rate the following characteristics of students' communication skills after the winter semester of the current academic year? (5 - superior, 4 - good, 3 - satisfactory, 2 - low pass, 1 - low failure)".

In brief, most educators – 66.7% – stated that online communication under e-learning can still prepare for real-life conversation with 27.8% denying it. If we talk about whether the online communication under e-learning is harmonious, 67.8% of students and 88.9% of lecturers claim it is; however, a third of both educators and learners add that it might be better leaving room for improvements to follow. At the same time, the absolute majority of teachers (94.4%) say their experience of using online platforms is positive with the others dubbing it as neutral, and nobody (!) as negative. Nonetheless, 71.2% of learners state they feel bored during an ordinary online class. We consider this figure to be a warning signal for us as teachers because being interested in the very process of learning is one of the key triggers of aspiration for knowledge.

Also, there was a question with no limitations for the answers: students were supposed to write themselves what their contention is. Basically, when looking through students' response on how they see the process of improvement of their communicative skills, one can note five main strands of their opinion: a) they are completely okay with education they receive and see no need in alterations; b) students say they would like to have classes with native speakers; c) they would like to have more modern textbooks because they think their input is obsolete; d) learners want more interactive authentic input such as films, books, and songs; e) students merely want more speaking practice that involves slang and everyday language, not only its literary standard.

Educators, when asked what techniques they use to boost students' motivation during online classes, share different ideas; however, in some points they are literally unanimous: regular training and challenging tasks. On a par, they name the following: usage of multimedia tools, additional tasks like home reading or film watching, showing career prospects rooting from knowledge of foreign language. In addition, amongst the very few but still existing are the following motivation techniques: setting small goals, involving native speakers, fostering students' own research, etc.

Table 8 below shows how educators assessed their students' communicative skills at the beginning of winter semester before the application of CSS. As you can see, there is no indication of low failure signifying that students still are able to communicate to this or that extent, if we consider their initial proficiency. At the same time, the superior level is also a rare thing to encounter, with the majority having 'good' or at least 'satisfactory' grades. Nonetheless, it is noteworthy that the correctness of students' communication is quite high, reaching 10 points of 'good' score making it the maximum. However, there are skills that lacked proficiency at the beginning of the semester, namely – coherence and completeness being evaluated as 'satisfactory'.

When compared to the aforementioned initial data to the result at the end of semester, one can note a significant increase in all of the parameters as demonstrated in Figure 9. It is important that students' skills rose in the areas where their advanced proficiency ('superior' grade) was initially very low: clearness, conciseness, and concreteness (cf. 1 'superior' grade in Figure 8 in clearness vs. 8 'superior' grade in Figure 9 within the same skill). Coherence and correctness also enjoyed a moderate boost. It is interesting that in after-the-term assessment 'satisfactory' grades nearly disappeared, appearing occasionally in a very scarce number. 'Low pass' was almost reduced to zero level as well. Overall, after the implementation of CSS into the process of teaching effective foreign language communication the gap between advanced proficiency of 7Cs skills and 'good' level of their usage narrowed (cf. e.g. Figure 8 clearness skill vs. the same skill in Figure 9).

How would you rate the following characteristics of students' communication skills at the beginning of the current academic year? (5 - superior, 4 - good, 3 - satisfactory, 2 - low pass, 1 - low failure)
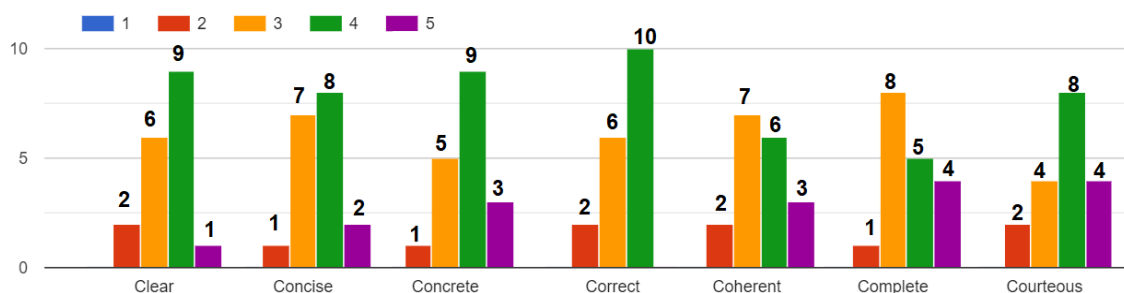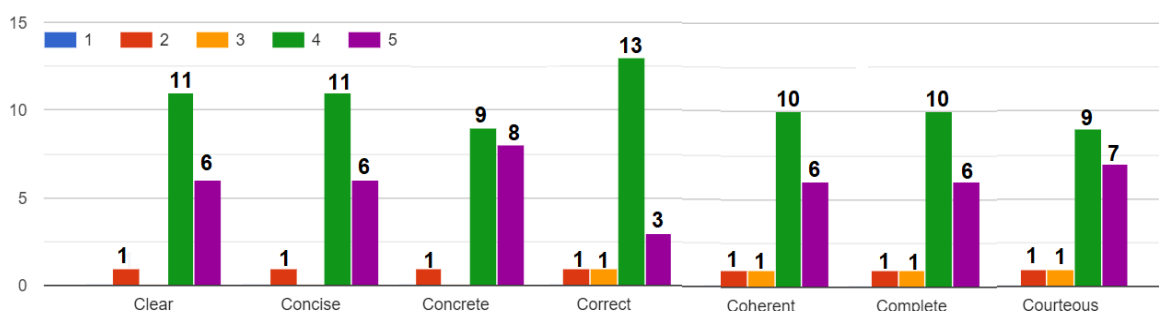
**Figure 8:** Teachers' evaluation of students' communication skills at the beginning of the winter semester 2022/2023, Teachers' Questionnaire 1

How would you rate the following characteristics of students' communication skills after the winter semester of the current academic year? (5 - superior, 4 - good, 3 - satisfactory, 2 - low pass, 1 - low failure)

**Figure 9:** Teachers' evaluation of students' communication skills at the end of the winter semester 2022/2023, Teachers' Questionnaire 2

## 6. Discussion

The results of the CSS toolkit implementation during the English classes featured above show that some typical difficulties emerging during E-learning can be overcome with the help of the offered digital tools. First of all, the difficulties in communication in any language, but primarily in a foreign one, arise at the stage of acquaintance in a new team, or after a long break in communication (for students, for example, after holidays). For such cases in the practice of offline communication there are icebreaker exercises designed to mediate the exchange of personal information between communicants in a game form. The digital game "Ice Breaker Bingo" represents a field with personal questions prepared in advance by the teacher taking into account the specifics of the audience (age, level of knowledge, personal background).

Icebreaker-type exercises develop the ability to plan communication, form the skills of courtesy and clarity. Warm-up exercises such as "Letter Salad" provide a wide field of variation in the number of participants and the skills developed with their help. These games develop the communicative aspect of correctness, make it possible to transfer a passive vocabulary into an active one, and contribute to forming the skills of teamwork and brainstorming. Reproductive exercises such as "Pick Up Words" develop listening skills and the speed of perlocutionary reaction to a language message,

"Fly Swatting" trains the speed of the language reaction, creating a waking up effect due to active movement or movement simulation.

Productive activities like "Speed Dating" serve to train communicative formulas, promote the conscious use of language variability, the development of soft skills of cooperativeness, and empathy to individualize the approach to the interlocutor. "Four Corners" helps to maximize the sensitization of the principle of cooperativeness in communication. The most complex activity of "Jigsaw Groups" develops not only language skills, but also the general communicative ability to clearly and briefly convey a piece of information. Also, students develop their soft skill of personal responsibility – each of them is in his or her jigsaw group the only expert on his/her piece of information.

When analyzing in a critical way the result of the survey, one can see that some points provide for a wider discussion. For instance, it is the educators' viewpoint that online communication training prepares for real life conversation. Valuable indeed is the fact that it is the teachers' viewpoint, and there is a significant reason for it: it is quite obvious that educators are much older than their students, and it means teachers possess a wider experience of real-life conversation in everyday routine for they could practice it for a longer period of time (some of them – for almost all of their life). Thus, they could compare the modern situation with something they used to experience before which is no longer available for the youth. The enormous numbers from 67.8% to 88.2% of those who claim their learning process is harmonious and they are satisfied with the usage of online platforms offered denotes that the firm basis set by previous scientific investigations [1, 3] is operating correctly and shows a high level of resistance towards numerous challenging factors.

In addition, even though the number of students who feel bored **sometimes** is rather high (71/2%) when in a virtual classroom, the percentage of those who say it occurs **often** is incomparably low – 13.6%. This allocation is really meaningful because it is a big gap between 'often' and 'sometimes' both in the language itself (cf. grammar theme 'Adverbs of frequency') and in the consciousness of the student. If we reframe it, learners are rather bored sometimes than often. Such a formulation provides for a further logical conclusion: sometimes is not permanently; thus, most of the lesson time the students are engaged and not distracted. This is another advantage to the approach applied and tested.

Surely, when asked about improvements, obviously everyone will say something because the question itself contains a presupposition: if one needs to improve something, they are not content with the current state of affairs. Naturally, there were numerous answers that partially coincide and partially vary. Nonetheless, there was something quite peculiar about these responses that drew our attention: amongst the most popular strands of students' opinion there was the following one – 'I am okay with what is being done right now.' We know that modern generation is far more demanding than most of us used to be, for they are far more aware of their rights and opportunities. Still, they say that they are satisfied and merely offer some variants of alterations to be made. This designates that university lecturers did succeed in not only maintaining the level of education under martial law, which cost them a great deal of efforts, but also in boosting it higher. They managed to adapt to the new circumstances, and this is one of the most positive outcomes.

If we talk about 7Cs skills, we can observe that the students' proficiency level is rising, while the number of those who are assessed as 'low pass' or 'satisfactory' is decreasing dramatically leaving room for changing for the better. This can be concluded by looking into the frequency of 'superior' and 'good' grades: good results can be easily turned into superior provided teachers keep on going. Although the stability of the growing trend can seem a bit debatable, we are sure of the future growth, for the frequency of failures is going down with success growing much faster.

The majority of those who answered the questions about the platforms for E-learning and "boring effect" of online classes recognized the advantages of CSS saying that the authors' hypothesis about high efficacy of CCS as an instrument that triggers students' interest is right. When looking for cause-and-effect connection between the increase of interest and E-learning, we reckon this is significantly conditioned by a boost in students' media competence that has rocketed since 2019.

Partially, it can be accounted for by the aforementioned typical feature of the new generation that acquires practical skills of using digitized tools more quickly. In the world full of electronic media used for gaming, exchanging messages, and so on, it is quite obvious that for the youth surrounded by all of this digital matter at home and beyond the classroom – be it an offline regular classroom or a virtual one – it would be easier to use the same technology in learning new material, foreign

languages, for instance. Thus, they will be involved in what all of us are aspiring after – lifelong learning and sustainable education.

As it can be observed from the diagrams shown below in Figure 10, in the year 2019, the media competence slightly exceeded 2 points because, like any skill regardless of its character, media competence takes time to master. It took one year to skyrocket up to 8.48 points in 2020; the Covid-19 pandemic contributed to it as well with those quarantine restrictions and first full online mode worldwide ever.

The year 2021 demonstrated another increase but a bit moderate one that can be explained easily by general laws of education: when a person solidifies its basis in any area under scrutiny, he/she becomes a professional. After that, they can continue professional development which might not lead to a very big boost if compared to the initial, pre-basis level; however, it can happen provided the subject or profession changes completely. Hopefully, CCS remained rather stable giving both educators and learners time to adapt. Finally, as the war began, the dynamics did not stop; on the contrary, it developed and reached almost half a point during the wartime. The war did not manage to ruin the firm and resistant educational environment. Of course, it is thanks to educators' professionalism and students' eagerness to learn because education is a bilateral process where only the cooperation between teachers and students can show the highest result.

**Dynamics of student's media competence 2019-2022**
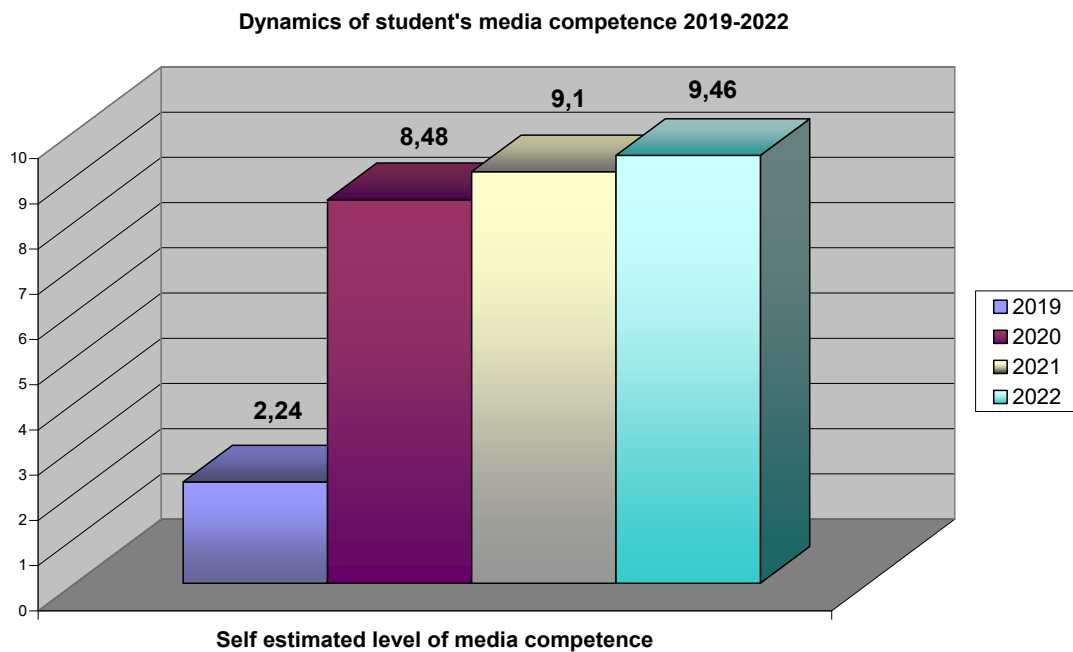


**Figure 10:** Students' self estimated media competence, Students' Questionnaire 2, in comparison with previously obtained data [1, 3]

## 7. Conclusions

Given the scope of attention to the results of the surveys conducted among teachers and students involved in the introduction of the new digital products online, the preliminary observations are as follows:

1. The majority of both students' and teachers' answers stress the improvement of effective communication skills at the end of the experiment (1 semester – 85%)

2. The teachers' surveys emphasized their preference of blended to overall to acomplete online forms (80%).

3. The analysis of particular students' answers to the question 'interesting – boring" revealed that the percentage of students' negative attitude (;being bored','bored sometimes', or, more interestingly, 'I am bored but I have to learn') are strongly connected to their typical classroom face-to-face communication: too shy to speak up, frightened to make mistakes, 'leave me alone'

types, indifferent to any kind of activities or those whose performance used to be unsatisfactory due to low foreign language proficiency and inactive stand in life.

4.   On the other hand, all those who performed brilliantly,or were active learners in face-to-face or blended learning, overwhelmingly revealed strong positive attitudes (100%) emphasizing 'harmony', lack of boredom', excitement/fun' features which strongly reflect their psychological behavior in real life.

5.   This fact calls for further research of effective communication as part of learners' relationships (soft skills) and generation gap values (reflecting their  motivation and eagerness to become achievers as compared to their senior counterparts' in communication online (teachers) whose aims online are different of being strong leaders, active, armed with effective communication skills (teachers) or' confident-unconfident', 'interested – uninterested, bored, 'leave me alone' type, or just low –rate learner who may well turn into a an active learner with high prospects of command under the teacher's guidance.

6.   It is obvious, though, that provided the teacher is well equipped with the soft skills of differential approach to all types of students' behavior, he/she can adopt the appropriate attitude to solving the above-mentioned problems.

7.   This is a long-range objective of the study under question still unsolved including generation gap values and their differences, ice-breaking the former typical students' behavior in class (the relationship issue), and the search for innovative technologies to be used online in order to make a breakthrough in the students' attitude to learning, whereas most of the students are fast learners of new digital tools and challenging them would play the trick.

To summarize, effective online communication has been studied in the two major areas of the actual teacher-student and peer communication, with concentration placed on the contents of the online courses in foreign languages with rules and recommendation of conveying the right tone, the right vocabulary selection, the knowledge of the proper sentence structure and stylistic cues. Nonetheless, the aims of improving communication in the two areas are different. Communication among teachers and students may serve a practical pattern by itself and is focused to a greater extent on effective human relationship or interpersonal relationship among the peers themselves online in challenging times, whereas teaching foreign language communication involves other tools beside choosing the right tone: sentence structure, grammar pragmatics, vocabulary choice, bits of cross-cultural knowledge and indispensable fundamentals of country-study in learning foreign languages. Thus, intelligent computing systems are incorporated in interpersonal communication to achieve and teach effectiveness in online communication to assist students in the most challenging time of all, the war-time, in particular.

When drafting perspectives for the future scientific investigations, we are of the opinion that determination of media competence level of teachers may be of great interest for it will provide for the opportunity to compare the results of educators and learners because lecturers are to have more in-depth knowledge in order to teach others.

Also, more attention ought to be paid to the ecology of communication amongst teachers and students with special attention being paid to the process of ecological communicative competence formation – the sixth 'C' in Grice's taxonomy called 'courtesy' – within the framework of different learning modes. Still, there remains one point that gives a starting point for involvement of all the aforementioned ideas – the dialogue of generations and generation gap. It is natural that the time of peer communication during the lesson should be expanded. However, the question n whether leveling the time spent on teacher-student vs. student-student, or even alteration to the lesson structure when a teacher speaks less leaving more time for students' communication, will be more efficient, remains a very promising issue for further research.

Another perspective study is the assessment of teachers' media competence and their pace of mastering new technologies; it would unavoidably involve the study of the generation gap in terms of their differences of values and in digital skills.

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