EDUCATIONAL TEACHER-STUDENT COMMUNICATION DURING EMERGENCY REMOTE EDUCATION

COMUNICAÇÃO PROFESSOR-ALUNO EDUCACIONAL DURANTE A EDUCAÇÃO REMOTA DE EMERGÊNCIA

Hnezdilova Kira
Bohdan Khmelnytsky National University of Cherkasy
Cherkasy, Ukraine
kiragnez@gmail.com

Movchan Valentyna
Bohdan Khmelnytsky National University of Cherkasy
Cherkasy, Ukraine
valya_movchan_@ukr.net

Tkachenko Kateryna
Bohdan Khmelnytsky National University of Cherkasy
Cherkasy, Ukraine
kateche007@gmail.com

Nenko Yuliia
Cherkasy Institute of Fire Safety named after Chornobyl Heroes
Cherkasy, Ukraine
julia18016@ukr.net

Resumo. Com o advento da tecnologia de comunicação síncrona mediada por computador, a comunicação educacional online é possibilitada por vários aplicativos, plataformas online e sites de redes sociais que foram incorporados à rotina diária de professores e alunos. A pandemia deu origem a um aumento da comunicação educacional virtual. No entanto, nos últimos anos, tem havido uma forte preocupação com o potencial dos ambientes virtuais de aprendizagem para atender às necessidades de comunicação dos alunos. Dado que a comunicação está classificada entre as mais notáveis em termos da relação entre o aluno e o professor, o objetivo principal da pesquisa é explorar se a aprendizagem online tem um efeito negativo na comunicação entre professores e alunos através da lente de pesquisa recente. Os autores buscaram compreender os componentes básicos da comunicação educacional e suas características. O artigo é uma revisão narrativa da literatura utilizando fontes de pesquisa secundárias. Oferecemos a seguinte estrutura de componentes: transmissor/receptor (comunicadores), canal, mensagem, contexto, som, avaliação e feedback. O estudo concluiu que a qualidade da comunicação educativa online depende de múltiplos fatores: prontidão dos comunicadores para interação ativa; o nível de formação no uso da tecnologia; aprendizagem diversificada; e aplicação de tecnologia; adaptação do estilo de ensino ao ambiente online; obedecendo aos princípios de interação: máximas de qualidade, quantidade, relevância e forma; mecanismos abrangentes de avaliação e avaliação e uma sólida compreensão do processo de comunicação educacional; feedback contínuo; ambiente emocional, de apoio comunitário e de aprendizagem colaborativa; atmosfera de aprendizagem.

Palavras-chave: educação remota de emergência; e-learning; educação pandêmica; comunicação educativa; ensino superior.

Abstract. With the advent of synchronous computer-mediated communication technology, online educational communication is enabled by various apps, online platforms, and social networking sites that have been incorporated into the daily routine of teachers and students. The pandemic gave rise to an increase in virtual educational communication. However, in recent years, there has been a strong concern about the potential of virtual learning environments to serve the communication needs of students. Given that communication is ranked among the most noticeable in terms of the relationship between the learner and the teacher, the primary aim of the research is to explore whether online learning has an effect on communication between instructors and students in a negative way through the lens of recent research. The authors sought to understand the basic components of educational communication and their characteristics. The paper is a narrative literature review utilizing secondary research sources. We offer the following component structure: transmitter/receiver (communicators), channel, message, context, sound, assessment and evaluation, and feedback. The study found that the quality of the educational online communication depends on multiple factors: readiness of the communicators for active interaction; the level of training in using technology; diversified learning; and technology application; adaptation of teaching style to the online environment; obeying the principles of interaction: maxims of quality, quantity, relevance and manner; comprehensive assessment and evaluation mechanisms and a solid understanding of the educational communication process; ongoing feedback; emotional, community support and collaborative learning atmosphere; learning atmosphere.

Keywords: emergency remote education; e-learning; pandemic education; educational communication; higher education.

INTRODUCTION

As a product of modern civilization, digital reality has become an independent form of being. The global digital realm stands as an integral part of the modern educational environment, demanding new approaches to educational communication and providing unlimited opportunities for teacher-student interaction. The COVID-19 pandemic declared in 2020 gave rise to an increase in virtual educational communication compared to pre-pandemic times. Technology plays a significant role in online education since it enhances the course material and the teacher-student learning interaction. With the advent of synchronous computer-mediated communication technology, online instruction is enabled by Zoom Video Communications, WhatsApp, Instagram Direct Messenger, and other social networking sites and online platforms alike that have been incorporated into the daily routine of teachers and students for their perceived convenience and context familiarity. Eventually, this pandemic will become the accelerator for digital education transformation for many institutions in the world (KISWORO & OKTAVIANI, 2021).

Given the continued growth in online learning as well as reports of success in online programs, many students still face certain difficulties related to communication and academic challenges that may vary substantially from those they faced in face-to-face education due to different university environments and teaching methods (PAVIN IVANEC, 2022; AL-OMARI, 2020). For instance, students and teachers admit that lousy internet connections, unsolved technological issues, and a lack of knowledge on online pedagogy have become significant issues in the face-to-screen classroom.

Among the others are the problems of communication and interaction, which require a degree of flexibility in communicating, adapting, and dealing with the developments and requirements of university study. These difficulties constitute obstacles to their academic progress (AL-OMARI, 2020) and cause learning and self-regulation difficulties during online studying (Pavin Ivanec, 2022), impact the students' academic performance (IBDA et al., 2023) and motivation to learn, and may cause students to drop out of the course.

The findings by Sason & Kellerman (2021) reflect the students' desire and need for interaction with their teachers during emergency distance learning, describing this interaction as essential for learning, coping with distance learning, and succeeding in the studies.

However, in recent years, there has been a strong concern about the potential of virtual learning environments to serve the communication needs of an educational program. The interaction in online classes is a topic of debate, as electronic communication may not be as effective as traditional communication.

According to Baber (2020), an effective interaction in online learning will lead to students' knowledge and better learning outcomes. As stated by Tapsis & Tsolakidis (2014), dialogue is an important dimension of any distance learning program. Ultimately, meaningful interaction is a necessary tool for enhancing the effectiveness of learning (MEHALL, 2020).

The lack of educational interactions poses the question of the potential effects of the lack of the usual academic interactions on students' learning and adjustment to online studying. Namely, the lack of the usual face-to-face academic social interactions, delayed feedback or help due to the fact that teachers are not always available at the time students may need help while learning, etc. can contribute to the already-present sense of isolation due to the lack of physical presence of classmates generated by the other social distancing measures introduced during the pandemic (PAVIN IVANEC, 2022). Nonetheless, these obstacles can be overcome with the help of teachers, who should adapt their teaching strategies to the needs of students.

In a study conducted by Giusti et al. (2021), university students perceived the absence of direct face-to-face contact as the most notable disadvantage of distance education during the pandemic, followed by reduced interaction with teachers.

This finding is consistent with the results of the study by Popa et al. (2020), showing that among the main objections raised by students were: a lack of interaction with other students and trainers in an online format; a lack of possibility of receiving feedback immediately in an online format; a lack of feeling of belonging to a community in the online format; and a lack of learning efficiency because of complicated communication processes.

Social presence and enabling discussions with teachers and other students play important roles in students' satisfaction, learning, and performance in online classes. COVID-19-time studies demonstrate that one of the major obstacles to students' positive online learning experiences is a lack of social and academic contacts.

The findings of the study by EL Zein (2023) indicate that the study variables, namely the instructor, interaction, instruction, course structure, and technology, are significant predictors of student satisfaction with e-learning during the COVID-19 crisis in Lebanon. The study findings asserted once again that the interaction between instructors and students and between students and their peers is not only fundamental for the development and efficacy of the online learning experience during crises but also a major motivator and catalyst of student satisfaction.

Another study from the COVID-19 period by Sason & Kellerman (2021) found that the most common form of interaction reported by students was instructional communication based on questions and answers about teaching and the learning material. Many students reported interaction based on guidance and teachers' consideration for their needs during learning. This interaction is not directly related to the learning material but rather to guiding and facilitating learning activities. Social intimacy as a kind of interaction mentioned by the fewest students was personal interaction that was not connected specifically to learning, such as warm greetings or sharing personal information. Those who reported such interactions said that the teacher asked how they were doing and took an interest in how they were coping with the situation. The students who reported experiencing interaction in the form of instructional support, in which the teacher helped and supported the student with the academic material, said that the teachers were willing to help whenever asked. They said that the teachers provided detailed, educational feedback about the assignments handed in in order to constantly improve the learning process. In addition to providing feedback, teachers-initiated interaction by consistently sending material. Many students reported interactions that were connected to their perception of how present the teacher was in the learning process. They reported that the teachers noticed them and their participation in class. The students greatly appreciated the teachers' investment in this interaction.

In parallel, the instructor's interaction, knowledge, and facilitating ability remain indispensable for an online learning experience's success. Unfortunately, the pandemic has vastly affected the aforementioned instructors' roles in terms of the instructor's new responsibilities of facilitating knowledge in a virtual environment and the need for technical expertise to deal with the technological necessities of online learning platforms.

The effectiveness of educational online communication has been the point of study even before the start of the COVID-19 pandemic; however, such online courses are designed properly for the learners who are mentally and technically ready for such a learning environment. The sudden shift toward online learning has raised concern over the effectiveness of teacher-student interaction in the courses, which were designed for traditional classrooms.

PURPOSE OF THE STUDY

Given that communication is ranked among the most noticeable in terms of the relationship between the learner and the teacher (ZERRAF et al., 2019), taking into account that the lack of usual interactions with peers and teachers in an online learning environment could be a potential source of stress for students and affect their academic motivation, the aim of the study is to understand the basic components of educational communication and their characteristics.

To delve into online learning issues from a different perspective, this research aims to explore whether online learning has an effect on communication between instructors and students in a negative way through the lens of recent research.

METHODS

The paper is a narrative literature review utilizing secondary research sources. It involved several key steps: identifying the review questions, identifying relevant studies (or items), study selection, charting the data, summarizing, and reporting the results. We confined our search to articles published after the declared pandemic to capture the period in which educational communication was forcedly changed from face-to-face to virtual formats by evolving pandemic contexts.

Step 1: Identifying the Research Questions

To explore the literature on pandemic online educational communication in higher education institutions, the following research questions were generated:

1. What is the extent and nature of the academic publications on pandemic online educational communication in higher education institutions?
2. What insights about pandemic online educational communication in higher education institutions have we learned from the literature?
3. Does online learning have a negative impact on communication between instructors and students?
4. What are the basic characteristics of efficient educational communication?

Step 2: Identifying Relevant Studies

The literature search for relevant articles was conducted on seven significant databases: ResearchGate, Crossref, PubMed, MEDLINE, ERIC, PsycINFO, DELNET, EMBASE, and the Google Scholar search. The researchers first piloted an inclusive search string for database searching, which was subsequently adjusted according to the requirements of each database: "pandemic learning" OR "online communication" OR "educational communication" OR "pandemic education" OR "teacher-student interaction" OR "communication in online learning" OR "emergency eLearning" OR "classroom interaction" OR "e-learning". 100 potentially relevant items were downloaded. Duplicate articles were identified and removed. After selecting relevant articles, reference lists were hand-searched for any additional items. We undertook an additional hand search of the reference list of all selected articles.

Step 3: Study Selection

100 items for potential inclusion were screened against the inclusion and exclusion criteria. Peer-reviewed articles in the English language were included. Both primary (quantitative, qualitative, or mixed method) research and secondary documents (review article, position paper) published from April 2020 to April 2023 and relevant to virtual educational communication were included. Included study participants were students and educators. Correspondence, editorials, letters to the editor, commentaries, short communications, and other items were excluded. No country restrictions were applied. Two levels of screening were performed. Following initial piloting of articles at least 90% interrater reliability was achieved. A similar screening process was applied to the second-level full text screen, with discrepancy resolution completed by all the authors. Out of an initial set of 100 publications, a final sample of 54 key publications was identified, according to predefined inclusion criteria. The synthesis yielded the main components of online communication: transmitter/receiver (communicators), channel, message, context, sound, assessment and evaluation, and feedback.

Step 4: Charting the Data

Key information was extracted by categorizing the nature of the selected articles. The following information was extracted from each of the included studies: study aim and methods, sample type and size, period, location, and reported outcomes.

Step 5: Collating, Summarizing, and Reporting the Results

A thematic analysis was undertaken to identify the key issues addressed in each paper, which were then subdivided into themes. Information was tabulated and collated to gain insight into the features of educational online communication.

The information on data extractions is summarized in Annex A.

RESULTS

Educational communication is understood as an integrated, at the macro and micro level, set of usual language interactions and innovative communication practices and technologies, which, by their specific characteristics, are elements of the educational environment. The forms of interaction may be various, such as explaining, requesting, discussing, questioning, answering, etc. (WICAKSONO et al., 2022).

Investigating virtual educational communication, we offer the following component structure, containing the following components: transmitter/receiver (communicators), channel, message, context, sound, assessment and evaluation, and feedback.

In the following section, we present the results on the components of educational communication based on the information obtained from the reviewed studies.

Transmitter/receiver (communicators)

As any type of communication, educational communication is a complicated two-way process realized between a transmitter and a receiver (or a listener, talker, or communicator). In educational activities, the teacher offers the students the possibility to become transmitters and receivers themselves. The message conveyed can be achieved verbally or in a non-verbal or paraverbal way with the help of different learning strategies adapted to the intellectual stage of students and their individual features (VLAICU et al., 2022).

An educator should master pedagogical communication skills, develop his or her cultural level, learn to solve teaching problems by taking into account age differences and the types of learners being placed in various pedagogical situations, be able to apply various forms, methods, and means of communication, and know well the basic principles of modern didactics. Virtual educational communication is possible only if the teacher knows how to carry out communication in general. At the same time, an educator must possess specific communication skills to solve teaching problems (ZERRAF et al., 2019).

As a fundamental way of engagement between teacher and students, the efficiency of educational communication depends on the empathy of the listener or talker, on their opening towards each other, on the support granted in the act of communication, on the speaker's positive attitude, on attentive and active listening, and on creating a positive, warm, and pleasant environment (VLAICU et al., 2022).

The isolation of a learner in an online learning environment is considered inevitable; however, it can be reduced by enhancing the online interaction by the educators engaged. One of the success criteria for online learning methodology that helps to improve student learning outcomes and satisfaction is interaction. The interaction between learner and learner, which includes socialization, answering student questions, sharing and discussing ideas, group activities, and content-related interaction, has a better impact on student satisfaction and eventually the effectiveness of online learning. Baber (2020) conducted an across-country study and found interaction to be the most important determinant of student-perceived learning outcome and satisfaction in online learning during the COVID-19 pandemic.

Online learning is more effective when learners and teachers can communicate clearly. The presence of instructors makes it easier for students to engage in online learning and maintain effective communication. Instructors need to design online courses and teaching styles to communicate with learners. The design and facilitation of online courses could make it easier for students to engage in simple, easy-to-understand learning. A well-organized online course and clear guidelines play an essential role in helping learners communicate online. It will also connect learners and instructors to online learning. Besides, instructors need to take into account that learners have different platforms on which to deliver content (ABDUL WAHID et al., 2020). The lack of interaction is a challenge for students, reflecting on their progress and personalities.

The research by Popa et al. (2020) discovered the professors' and students' profiles. The following profiles of professors were discovered:

1. The anxious professor, who overwhelms students with homework and tasks and exaggerates the online and offline work amounts both for themselves and for the students, without empathy for their situation, is not adapted to their conditions.
2. The negligent professor, who uploads an impressive number of didactic and study materials to the platforms, waits for students to learn by themselves without being guided or accompanied.
3. The efficient professor, who harmoniously combines new knowledge with the number of assignments and modifies their online didactic behavior depending on students' feedback or following collaboration with colleagues. They use methods that stimulate collaboration among students, promote metacognition, and motivate students to develop self-regulated learning and engage in online interactions.

The profiles of students that were highlighted were as follows:

1. The student who procrastinates, fails to adapt to a new schedule or to new requirements, and speculates or refuses to observe the conditions and rules imposed by online education.
2. The conscientious student, with a high adaptability level and a high self-regulation level of learning or awareness of the needs of development in this respect, has good or improved time management (POPA et al., 2020).

Channel

In light of the COVID-19 pandemic, the channel for educational communication in the virtual learning process is crucial for establishing an efficient learning process. There is no direct encounter between teachers and students because they are in different locations. Given the importance of teacher-student interaction and the need to accommodate the needs and expectations of different students, when courses are taught from a distance, teachers should find new ways of connecting with their students and develop new communication methods that are well-suited for synchronous and asynchronous distance learning environments (SASON, 2022).

With the advent of synchronous computer-mediated communication technology, online educational communication is enabled by online collaboration tools and virtual classrooms, which help to continue the education and build up the relationship between the teacher and students. There are various online collaboration platforms for sustainable online education. Some of them are Google Meet, Zoom Video Communications, WhatsApp, Instagram Direct Messenger, DingTalk, Canvas Instructure, Hangouts Meet, Easy Class, Teams, Blackboard Learn, BigBlueButton, Digital Class, Hypersay, WeChat Work, and various social network sites and online platforms alike, which have been incorporated into the daily routine of teachers and students for their perceived convenience and context familiarity with conventional email writing (YEUNG et al., 2023). The professors share information, collaborate, and interact online by using chats, messages, video calls, and e-mails. Nevertheless, irrelevant information on social media, such as spam, advertising, and negative posts, tends to distract attention.

Ilieva et al. (2021) have surveyed 134 undergraduate and graduate students at Plovdiv University Paisii Hilendarski regarding e-learning systems applied during the COVID-19 outbreak. The results show that the majority of respondents (85%) use Google Meet to attend e-classes, followed by Zoom (6.8%), YouTube (5.3%), and Microsoft Team (3%). The students rely on different platforms to receive study materials during the lockdown period. It is noted that an insignificant part of the students (3.8%) received shared study materials by email. The majority of the respondents use Google Classroom and Moodle for this purpose, 55.6% and 36.8%, respectively (ILIEVA, 2021).

The study by Almahasees et al. (2021) scrutinized the faculty's and students' perceptions of online learning during COVID-19 in Jordan. The study found that the faculty used Zoom and Microsoft Teams in their online teaching, with 60% using Microsoft Teams and 40% using Zoom. Finally, most participants uncovered that they used WhatsApp with 70% as a medium of communication between the tutor and his students outside of the online class time. The second most popular platform is Zoom and Microsoft Teams chat and text options, with 28%. Moreover, Facebook pages occupied the third rank with 14%, while phone calls were used by 8% of the participants.

In the same vein, Haqien & Rahman (2020) discovered that the most used platform by universities in Indonesia is Zoom Meeting because it can combine video conferencing, chat, online meetings, and mobile collaboration with various interesting features.

Coman et al. (2020) in their study on students' perceptions regarding online learning, show that 69.4% of Romanian university students frequently encountered technical problems with the platforms provided by the universities (connecting to the platform, signal loss, delayed viewing of messages, the sound was not clear). For this reason, some teachers found alternative solutions by using other platforms, but this has generated stress among some students because there was no clear communication regarding when and where exactly the course will be held on other platforms (2.5% of students mentioned this aspect). Access to those platforms was sometimes poor, and there were connection problems here as well, especially when the number of students connected was high (COMAN et al., 2020).

With the increased and more common adoption of computer-mediated communication technology, a closer teacher-student relationship has been observed as communication is more often two-way and the distance between teachers and students has been narrowed (ARISTIKA et al., 2021). At the same time, instructors should be critical in selecting resources and channels to involve students in educational interaction when learning online. Educational communication conducted online, if well planned, delivered, and supplemented, might cater to the affective needs of learners better than presumed.

In order to test the effectiveness of computer-mediated communication channels, it is necessary to examine the technical affordances in transferring information (richness of the medium); the capability for synchronization of communicating parties; and participants' familiarity with the use of the channels (naturalness of the channel, or adoption among prospective users) (TAPSIS & TSOLAKIDIS, 2014).

P. Van der Straaten (2000) considers that interaction depends on the capabilities of the channel. If the channel transfers a small amount of information to and from the user, it can reduce the opportunities for interaction and perception. Some theoreticians suggest that online communication cannot transfer as much information as face-to-face communication; for example, the online interaction loses in non-verbal aspects (e.g., emotionality), although it wins in time flexibility, space flexibility, and content continuity.

According to Alawamleh (2020) the interaction in the written and spoken modes of communication is different because both modes of communication, such as spoken mode with Zoom and written mode with WhatsApp or any learning management system, facilitate communication differently. For example, Zoom meetings provide opportunities for the interlocutors to have the interaction in two ways of communication; however, in WhatsApp or learning management systems, most likely, the interlocutors can only conduct one-way communication (ALAWAMLEH et al., 2020).

Zoom can help students feel less socially isolated and develop a sense of community (YAMAN & MUHLIS, 2020). The classroom atmosphere is more live when there is a video conference meeting. Students can view their friends and teacher on the screen while listening to the teacher's explanation. While still satisfying the lesson's goal, video conferencing may increase motivation, engagement, and achievement by enabling autonomy and drawing on students' topical interests (HU & MCGEOWN, 2020). It can also be used to maintain a student's emotional connection.

Furthermore, online distance learning communication mediums should be well designed to encourage interaction between learner-learner, learner-instructor, and learner-content. In order for students to quickly use the communication medium to communicate with the course, instructors, and classmates, instructors and educational designers should make sure that it is well organized.

One of the drawbacks of online learning is that learners do not get private space with their peers, which may hinder the extension of social interaction. Fortunately, the Zoom platform, which is used by most educational institutions online, has a provision for breakout rooms, which may provide the space for learners to discuss and share their ideas. The instructors should use this feature of the Zoom platform to enhance social interaction in the online classroom, which will eventually lead to higher effectiveness in online learning (BABER, 2021).

Students often mention that the main issue they encountered was the lack of adaptation of the teaching style to the online environment, which had a negative impact on their ability to assimilate and understand the subjects taught during the courses. From the students' perspective, teachers frequently used a limited number of tools provided by the e-learning platform; they used only the basic tools, which were almost mandatory for conducting the courses. Teachers did not have the necessary technical skills, and they did not manage in such a short time to adapt their teaching style or to properly interact with students in the online environment in order to assure high standards in the teaching process. The technical skills of teachers can be represented by their ability to use different functions offered by the e-learning platform in order to adapt their teaching style to the online environment, for example, using the video conference function where students can actively participate because teachers have the possibility to make them moderators. These technical skills also refer to the ability to present topics through screen sharing, to use synchronous chat during presentations, to offer students the possibility to work in teams during seminars, to post various links on the platform with reference to various sources of information, to make short videos for certain laboratories or seminars, and to post them on the platform. (COMAN, 2020).

When analyzing student engagement with online education, Cranfield et al. (2021) revealed significant differences in students' engagement in educational online communication. The participating students studying in Hungary (53%) preferred the digital learning environment to in-person on-campus learning. In contrast, the participating students studying in South Africa (31%) and Wales (25%) preferred face-to-face teaching. Both Welsh and South African students missed the in-person interaction with other students more than the Hungarian students did. The majority of the participating students studying in Hungary struggled to concentrate and engage with the learning environment when a lecture or seminar video lasted longer than 15 minutes. Most students (77%) did not always have their video camera on when attending an online session.

Asynchronous communication is favored by teachers out of respect for classroom rules and order. The restrictions of asynchronicity, however, cause students' desires to communicate with the teacher or their peers to eventually weaken or even vanish. Asynchronous communication is favored by teachers out of respect for classroom rules and order. The restrictions of asynchronicity, however, cause students' desires to communicate with the teacher or their peers to eventually weaken or even vanish. The intended outcome is not always achieved by asynchronous communication due to the lack of teacher-classroom expertise, and

the low teacher-student interaction, hence, the establishment of efficient and stable virtual educational communication faces difficulties (LIU & ZHANG, 2022).

Message

In educational communication, the message conveyed is selected and logically structured by the educator in accordance with the syllabus and the educational purpose. Purposeful instructional messages are the core of educational interaction, created to cater to students' learning to understand specific knowledge. Through this kind of interaction, students can internalize the materials and expertise provided by the teachers. Thus, students cannot only respond to a straightforward conversation or answer. The students should deliver complex information or give difficult feedback to peers or teachers (MEHALL, 2020).

Effective communication occurs when a desired effect is the result of an intentional or unintentional exchange of information that is communicated by different individuals and performed in a desired manner. This influence also ensures no distortion of the message during the contact process. Effective communication will achieve the desired effect and uphold the effect, with the potential to improve the message's effect. Therefore, effective communication serves the purpose it was intended or built for. Possible objectives may be to make change, encourage action, create awareness, educate, or convey some idea or perspective.

Good communication means talking and listening. To succeed in online teaching, instructors need outstanding listening, interpersonal, written, and oral communication skills to promote comprehension of the teaching results and the ability to effectively fulfill their responsibilities.

Communication can go smoothly and effectively as long as communicators accept the principles of the interaction: maxims of qualitative, quantitative, relevance, and manner (AROFAH & MUBAROK, 2021; GULTOM, 2022; WICAKSONO et al., 2022;) analyzed the types of maxims that are flouted and violated by the teacher and students during online learning interaction, either in spoken or written communication, and the ways the speakers flouted and violated the maxim.

Gultom (2022) found that the flouting maxim of quantity is mostly flouted by the teacher in the spoken mode of communication because they want to convince the students about the lesson material or the answer to the question discussed in the learning process. In the spoken mode, a violated maxim occurs when the speaker purposely omits some information in their utterances in order to make the hearer not get enough information (AROFAH & MUBAROK, 2021). The researchers found the teacher violated the maxim by being circumlocutionary in responding to student answers and by providing uninformative information (GULTOM, 2022).

Based on the research data, Gultom (2022) concluded that students flouted the maxim dominantly. In line with teachers, students often flout the maxim to make a joke or use humor in the teaching and learning process to get the attention of the teacher "because they lack linguistic competence to respond to their teacher's question" (WAHYUDI et al., 2020), to give the other students the opportunity to answer the teacher's question, to provide detailed information, because of a lack of interest in the conversation, a lack of knowledge of the discussion topic, and the last avoidance (PUTRI, 2022).

The researcher revealed the strategies of flouting and violating the maxim of quantity by the students by giving too much or too little information or just keeping silence. The students flouted the maxim quality by giving an untrue statement because they lacked the knowledge to answer the teacher's question with the right answer due to a lack of understanding of vocabulary in English. Silence also becomes students' way to flout the maxim of quantity and becomes a big obstacle to teacher and student interaction as it makes the teaching goal harder to achieve. Meanwhile, in the research conducted by Putri (2022), she found that students flouted the maxim of quality because they wanted to contribute to class activities, namely by answering questions from the teacher, but answering the question incorrectly (PUTRI, 2022).

Then, the second maxim that is mostly flouted by the teacher is the maxim of manner. It indicates teachers are usually not brief in the interaction process or, in some situations, make the information obscure, such as by giving a new question as feedback to the student's response to the question, which is to guide the student to get the right answer or understanding that the teacher refers to. Further, the maxims of quality and relevance do not occur. It indicates that the teacher usually makes sure of the truthfulness of the information that they give and make sure they make a relevant contribution to the interaction process. For example, even if the teacher flouted the maxim of quantity and manner, it would still be relevant to the topic that was discussed in the interaction between the teacher and the students.

According to Dwi (2015), students flout the maxim of manner because they are being unclear, vague, hazy, or obscure in their utterances when they respond to the interlocutor during the interaction process.

According to Gultom (2022) the students flout the maxim of manner by being ambiguous and by not being brief and orderly. The students violated the maxim of quality regularly by distorting information, that is, by changing the element of ownership of someone's opinion as if it were their own.

Furthermore, Wicaksono et al. (2022) found that gender contributes to influencing how someone communicates by violating the maxim; male dominance in conversation leads them to flout the maxims more than females.

Nonverbal indicators such as body language, tone of voice, gestures, and posture are included in messages in addition to the spoken or written words. The understanding of a message that has been communicated may be enhanced by nonverbal clues. It might reveal more about the potential emotional states that underpin a speech's specific content. However, many of the verbal and nonverbal cues that support the development of relationships in traditional face-to-face encounters, such as body language, intonation of speech, and facial expressions, do not exist in distance learning situations. Even if all contacts are synchronous, the absence of non-verbal communication elements fosters a sense of isolation because there is no sense of communication (LIU & ZHANG, 2022).

Given the importance of teacher-student interaction and the need to accommodate the needs and expectations of different students, when courses are taught from a distance, teachers should find new ways of connecting with their students and develop new communication methods that are well-suited for synchronous and asynchronous distance learning environments.

That is why communicating with students in an online environment requires a little more thought and planning than communicating with students in a traditional environment because the online environment lacks body language. Instructors have the advantage of using body language and facial expression in a face-to-face class to help them connect and get their message across to their students. When interacting in an online class, instructors do not have the advantage of using body language to help their students communicate (ALAWAMLEH, 2022). Instructors need to be mindful of how they interact because communicating effectively will help instructors have a presence in the classroom that motivates students and encourages learning. They might send unintended messages if they do not know things about their own body language.

Also, educational communication takes account of the features of age and individuality of the students, a fact that allows the growth of understanding in an easy way of the message conveyed, increasing the efficiency of the whole process (VLAICU et al., 2022).

Assessment and evaluation

Due to COVID-19's suddenness, many higher education institutions lack comprehensive assessment and monitoring mechanisms and a solid understanding of student learning. Despite the growth in online learning, there is limited research on the design and implementation of online assessment and evaluation systems and their validity and reliability. With the rise in popularity of online learning, it has become increasingly important to follow a more rigorous approach to ensure such instruments are both reliable and valid, accurately measuring student learning and providing meaningful feedback.

Face-to-face teaching enables teachers to control the classroom. Attendance and question times are visible and simple to monitor. Due to network and technological limitations, the instructors must decide whether to reduce the proportion of marks given for attendance in online classes because of lagging and other problems. For instance, some students might not be able to respond in time to a roll call owing to a slow Internet connection or might even get stranded in the chat room, in which case the teacher might mark the student absent (LIU & ZHANG, 2022). Additionally, because teacher-student interactions are frequently asynchronous in online learning and more time is spent on the process of assessment, it is more challenging to analyze and provide feedback on interactions.

Assessment and evaluation are notoriously challenging to execute in online teaching. Due to poor teaching environments, low internal motivation and low levels of adaptation to online learning by both students and teachers, in practice evaluation and assessment often become an act of monitoring and controlling students' learning. A lack of control over the online classroom and a lack of maturity in how to assess and evaluate the students forced the lecturers to search online learning trends to proactively gain knowledge and skills in online teaching, test various software and improve the way assessment is carried out in online learning.

The act of teaching and learning involves more than just one continuous contact between the teacher and one student; rather, it is a multi-lateral experience that the entire class participates in. The dynamics of classroom learning are also driven by peers' rivalry and covert comparisons. Teachers can include assessments that ask students to offer feedback and suggestions on a peer submission to encourage peer engagement and collaboration. Web-based peer assessment tools are advantageous for online courses because they are affordable, adaptable, and, when used properly, guarantee anonymity throughout the process. As a result, it's critical to define evaluation criteria and offer a structure for peer feedback. Teachers can create online discussion boards to encourage collaboration by utilizing services like Slack or Discord. As the course advances, teachers can easily support beneficial debate among students by properly categorizing sub-channels to manage various themes.

In the online courses, student learning can be assessed formatively and summatively using different activities, and students are expected to demonstrate reflection on their learning. Faculty can use a combination of quizzes, discussion forums, student-created podcasts, blogs, Voice Threads, presentations, self-assessments, peer assessments, position papers, final papers, and exams.

By carefully planning continuous assessments, instructors can enhance online learning while also motivating students to continue communicating with one another. Using questions to start the discussion to spark students' curiosities and dividing students into working groups is undoubtedly helping to produce active interaction and engagement between students and instructor. This is because the students tend to keep asking for clarification from the instructor about the given tasks. The instructor encourages all students to get involved in the brainstorming in groups, which requires cooperation from all members. Instructors' continuous evaluation and assessment of the students' work and involvement in the virtual online class are also critical to keeping all students engaged without anyone being left out. The process of grading provides some feedback on the students' performance and understanding (REDDY, 2020). However, the aim of the teaching should not be focused solely on grading; instead, it should be to deliver understanding and clear instructions.

Chen & Chin-Mu (2023) compared the learning performance and engagement levels with the integration of two different formative e-assessment designs: plug-in design and built-in design. In formative e-assessment plug-in design, the instructors provided questions to check online students' understanding by adding another software application onto a presentation tool that they used during instruction, for example, adding Pear Deck onto a Google Slides presentation. With the plug-in tool, instructors could add interactive questions to their presentations to check students' understanding from the answers collected by the tool and provide immediate feedback during the presentation. Types of quiz questions could include multiple choice, true/false, fill-in-the-blank, drag-and-drop, and open-ended. Learners were able to use their hands to write, click, type, or drag and drop their answers to interact with the instructor.

Formative e-assessment's built-in design implied that instructors utilized the built-in features offered by a presentation tool to create questions for checking students' understanding during their online instruction. Built-in design also allowed instructors to add questions to their presentations and to check students' understanding from their answers in the tool function features offered by Zoom, such as chat, polls, white board, and audio. Instructors could provide immediate feedback during their presentations, too. Types of quiz questions could also include multiple choice, true/false, fill-in-the-blank, drag-and-drop, and open-ended. Learners were able to use their hands to write, click, draw, and type to show their answers and interact with the instructor or peers. In the formative e-assessment built-in design, there were three ways that the learners could provide their answers for formative assessment: via Zoom audio, Zoom whiteboard function, or Zoom chat. In this research, the instructor simply used the Google Slides presentation tool to present check-for-understanding questions throughout her instruction. Questions were directly typed into the presentation slides for the purpose of formative assessment. Students typed their answers in the Zoom chatroom or simply spoke out via Zoom audio (CHEN & CHIN-MU, 2023).

13% more interaction happened between the learners and the instructor, and 40% more interaction occurred among the learners and their peers in the online training with formative e-assessment plug-in design than in the workshop with built-in design. It was found that students tended to make more posts in both the Zoom chatroom and the social media group chat during the instruction with the formative e-assessment plug-in design than the one with the built-in design. Specifically, there was a 32% increase in discussion posts in Zoom chat and a 260% increase in instruction with plug-in design compared to instruction with built-in design. The instructors tended to provide more questions to check for students' understanding during the online instruction with the formative e-assessment plug-in design than the one with the built-in design (CHEN & CHIN-MU, 2023).

Theorists give their views on factors that influence communication productivity. For instructors, it is very important to guide students in their learning process; this can be done using three steps in the evaluation process. The first step is feed-up: give examples of what is expected during the evaluation; make evaluation criteria explicit; or have the students be transparent about the assessment. The second step is feed-back: give sufficient feedback to the students, allowing them to learn as much as possible from their evaluation. The third step is feed-forward: give the students input on how to go further in their learning process (ALAWAMLEH, 2022).

Feedback

A key element of effective learning is feedback, which helps to close the achievement gap between present and desired learning outcomes by guiding and improving both teacher and student performance. However, feedback only serves as a motivator and stimulant if it is given positively and is viewed constructively, i.e., if the teacher's comments are given on time, are not entirely critical (combined with praise and encouragement), relate to the outcomes of the activity rather than the specific student, and students are aware of what is expected of them, are able to compare their actual level of academic achievement with the expected level or standard, and are able to apply what they have learned when feedback is given. Then feedback becomes constructive.

Teachers will most likely not be available to respond immediately when students email questions regarding assignments or due dates; hence, posting the program on the course homepage would eliminate confusion, as students can assess the course homepage at any time.

Students in online courses must feel that teachers are approachable. Often, the demands on teachers are greater, so it is important to explore the variety of ways the teacher can send a message of availability. This means responding in a timely manner to individual questions or issues that are raised in discussion groups. One way to bridge the distance between faculty and students is to address students by name and praise student-initiated contact. Using a more informal tone. It also means making the teacher's presence known by participating in online discussions, giving students regular feedback on their work and their comments, and being flexible enough to make changes to the course based on students' feedback.

In a virtual classroom, not all teachers and students have the ability to turn on their cameras and microphones due to technical limitations and privacy factors (LIU & ZHANG, 2022), so neither the instructor nor the students have the visual cues of face-to-face communication. This means the students have fewer methods for determining whether their efforts are comparable to those of their peers and for assessing how they are doing in the class. Students will use the cues that are available (virtually all of them in writing) to help them understand the classroom climate. Therefore, the instructor shapes the course climate through written comments and the tone of communications with students.

Leaners in traditional classrooms get ongoing feedback through verbal and nonverbal cues, which is missing in online settings. Synchronous class meetings provide a good opportunity for online instructors to give general feedback to the class, while emails, podcasts, blog comments, and discussion board replies allow for individual feedback.

Feedback consists of messages sent back to the sender by the recipient, enabling the sender to assess how effectively the message was received as well as the recipient's response (GUTTERMAN, 2021). Both inadvertent and planned communications have the potential to provoke a response from the listener. Feedback may range from direct verbal utterances like "Say that again, I don't know," to subtler facial signals or posture alterations that may indicate to the sender that the receiver is uncomfortable with the material. Feedback allows the speaker to control, change, or replay the information in an attempt to improve communications.

A combination of synchronous and asynchronous modes of communication allows students to break the boundaries of the classroom wall and communicate, often more freely, about their authentic feelings, perception, experience, and expectation of learning. Teachers, on the other hand, can gather feedback without time or administrative constraints and therefore make necessary adjustments to the instructional strategies. Subsequently, teachers can provide more personalized and specific feedback in a less formal manner to better cater to the needs of individual students (YEUNG, 2023).

Positive reinforcement in teachers' feedback is indeed recommended as learners who are satisfied with their psychological needs are more motivated and are likely to persist longer in learning. From the authors' experience, the exploitation of communicative technology alone was far from adequate in ensuring students' positive total learning experience. Communicative practices such as responding in a timely manner to

narrow the communication gap and providing personalized feedback are expected to be incorporated into the day-to-day routine of both online and conventional face-to-face language teaching.

Context

Communication is influenced by the environment in which it occurs. In addition to evaluating the physical environment of where the contact occurs, such as a room, office, or maybe outside, the emotional atmosphere and the participants' expectations of the interaction will impact the communication. Stress and anxiety may affect the student, resulting in a greater need for emotional support to facilitate learning. The online learning environment should cater to supportive and encouraging interactions to ensure positive learning in distance education.

The study conducted by Armstrong-Mensah et al. (2020) found information on student academic needs due to COVID-19: improve faculty accessibility, communication, teaching (more engaging), and care for students during this time; acknowledge the situation; understand students; and be lenient with grading.

The asynchronous nature of the exchanges and the emotional obstacles to online communication had an effect on teacher-student and student-student interactions (LIU & ZHANG, 2022). According to Babicka-Wirkuset et al. (2021), seeking emotional support is among the dominant coping strategies for stress during the pandemic. However, it should be noted that the options for seeking emotional support are, due to social distancing measures, also somewhat reduced and less available than unusual, which could further reflect on students' increased senses of loneliness. This primarily refers to students who are more sensitive to the lack of social interactions, whereby faculty management and staff could invest additional efforts to introduce more interactive tools in the educational process and student networking. Additional efforts could also be invested in teaching students how to better manage and organize their time for academic assignments in these specific circumstances (PAVIN IVANEC, 2022).

The study by Sason et al. (2022) revealed that during times of emergency, students expect the teacher to play the affective role, which includes, for example, the expectation that they would form a warm, understanding, and empathetic relationship and tailor teaching more specifically to the student's unique needs to a greater degree than during routine times. The focus should be on cooperating with the students and supporting them, not merely on teaching the required material.

Well-executed emotional support aids students in establishing positive online learning experiences. Consequently, when emotional support does not spotlight the teachers in an online classroom, it creates a barrier that hinders the students from learning new knowledge from the teachers. Ultimately, social interaction among teachers and students is essential for an online classroom's teaching and learning process.

The community support factor is connected to the psychological state and well-being of the learners because of the sense of community that is formed through learner-to-learner engagement in the same online courses. An emotional sense of belonging can be part of the factor that helps students engage in the online class and prevent dropouts. In other words, instructors and peers try to develop more fruitful communication to enhance the retention rate so that learners can feel an emotional sense of belonging in the learning community. Students have the potential to support their peers in the class. Thus, chat sessions, discussion boards, wikis, blogs or group tasks, web-based applications such as Google applications, audio, video, and Twitter feeds are recommended to be used to promote learner-to-learner engagement in online learning. These kinds of activities help students build a sense of community and community support. Therefore, students' engagement in educational communication can be built on a sense of community belonging.

Teachers also need to promote a collaborative learning atmosphere to enhance educational communication. Collaborative learning is required in order to create a space that caters to interactions among students because they will heavily rely on their peers' feedback and thoughts.

The findings by Abdul Wahid et al. (2020) revealed that connecting with peers and helping and supporting peers was the most important thing that contributed to a real sense of learning community. Connecting with classmates through group work will create an opportunity for learners to work together. Learners tend to know each other and work together through various synchronous and asynchronous platforms. In addition, instructors may develop guidelines and designs for learners to work in groups. Moreover, the instructor may set up a medium for learners, such as discussion boards, to receive assistance and support from their peers who are more knowledgeable in the class. Thus, learner-to-learners motivated each other to engage in their online learning.

Recognizing the significant part that educators play in this process is critical. In particular, the teaching methodology used in online education is one of the stressors faced by university students. According to Armstrong-Mensah et al. (2020), students express the need for more engaging teaching, caring for students 'needs, and a more balanced workload during online education. Thus, certain teaching-related factors should also be included as determinants of online education's quality and academic interactions in further similar studies, as well as personal protective factors that could contribute to a better adjustment to online studying and reduce difficulties related to students' learning and academic functioning during these still unpredictable times of the pandemic (PAVIN IVANEC, 2022). Teachers should be attentive to the need for such support, invest in creating an empathetic relationship with the students, and be more sensitive to their needs than in routine times (SASON, 2022).

Sound

Audio is a potent tool for simultaneously communicating information and subtext. In reality, an instructor's voice can give students recollectible indications that aid in learning retention and retrieval. Even the most masterfully crafted text and images may fall short of accurately capturing the core of a notion or theory in comparison to spoken language. A teacher can offer more context to the subject matter through vocal inflection by changing the voice tone and speech pattern. Words can emphasize the deeper significance of an idea through variations in voice patterns and tonality.

Listening to an instructor allows students to digest not only the content (what is being said), but also the context (how it is being delivered and what it suggests), whereas reading material can come off as authoritative by nature.

Listeners are more likely to create an emotional connection with a voice than they are with reading text, especially if the voice is clear, persuasive, and articulate. These feelings may also play a crucial role in memory and retention.

Last but not least, some subject matter is inherently more suited to audio learning than it is to text-based teaching techniques. For instance, audio-based or audio-enhanced lectures are the most effective way to teach language skills, interpersonal communication, and other areas where vocabulary, pronunciation, and linguistic nuances are important.

Reading from a textbook or sitting through a boring presentation might not have the desired effect. Text may appear blatantly authoritative in general. Instead, students can better consider a topic by listening to a professor who is supportive. Students remain interested and involved by dissecting what is being said, how it is being stated, and the context it implies. The entire learning process can be made more satisfying and meaningful by engaging in such critical thinking.

Students may be deterred from raising pertinent questions if there is no dependable audio equipment available. In a real classroom, it is much simpler to raise a hand and ask a question. The unique challenge of turning on the microphone before speaking exists in virtual learning. This can enhance student involvement and classroom discourse.

Audio lessons are frequently easier for learners who have special needs to access than text. Nevertheless, an educator should offer a text copy of the audio content so that students with hearing impairments can read any lessons they might find difficult to hear.

Both teachers and students find that online learning is incredibly convenient and adaptable in terms of time and place. However, also has several drawbacks due to the flexibility of time and location. Online students choose comfortable venues for classroom activities, such as their homes or coffee shops. As a result, the surrounding environment is also a crucial consideration. Online classes are not always effective because it is impossible for students to call teachers and classmates at any moment due to privacy concerns, public order, etc. Some students also mentioned a "lack of learning atmosphere" (LIU & ZHANG, 2022).

The findings by Cabual & Cabual (2022) implied that the students are challenged by the noise and environmental distractions, technical issues, and slow internet connection. Since classes were held via the online platforms, the students in their respective homes were greatly affected by the noise and environmental distractions that may be caused by their neighborhood. Their respective family members were also felt to be affecting the students' studies, especially if there were children playing because they were living in a small house.

If the students are living in a rural area, the noise and environmental distractions are attributed to the means of living in the neighborhood. Most of the industries in rural areas are in poultry, piggery, hog raising,

and the like, which cause a lot of noise and environmental distractions when the students attend their online classes.

Therefore, clear and consistent audio is essential to the whole communication process in order to maximize student engagement. It is essential to be able to hear the speaker's speech in the absence of facial expressions and non-verbal clues. Poor or inconsistent audio can make it difficult to keep up with lectures. This lack of engagement and focus can lead to both physical and mental burnout. Such fatigue can easily be kept at bay with a reliable audio device. Beneficial to both students and teachers, steady audio can make the virtual classroom experience more fun and immersive. Choosing an audio device with noise cancellation technology in such circumstances is the best course of action for an educator.

While actual sound may cause communication to be disrupted, other aspects are also referred to as 'sound.' The usage of advanced vocabulary, inattention, indifference, and cultural variations are all examples of 'sound' in educational interactions. Any errors or irregularities that happen during a communication effort might be considered noise (BHATNAGAR et al., 2011).

CONCLUSION

The current study provides an insight into the extent and nature of academic publications on pandemic online educational communication in higher education institutions. 100 articles on e-learning published from April 2020 to April 2023 have been analyzed. 46 papers did not specifically mention educational communication but discussed online learning in general. The authors looked at online educational communication practices in 22 different countries.

The literature review allowed us to outline the basic components of educational communication: transmitter/receiver (communicators), channel, message, context, sound, assessment and evaluation, and feedback. It was identified by the authors that teacher-student interaction increased, possibly due to the novelty of online learning platforms, fostered a closer teacher–student relationship, and reduced formality in the educational process. Despite the potential benefits of synchronous computer-mediated communication technologies, challenges such as low adaptability of learning material, poor computer literacy of both students and instructors, technical issues, unclear instructions, a lack of feedback, etc. were observed.

Maintaining a high level of teacher-student communication is paramount to effective knowledge delivery and enhances the quality of teaching and students' learning experiences. The quality of the educational communication in the online environment depends on multiple factors, among which are: readiness of the transmitter and receiver (communicators) for active interaction, their communication skills and positive attitude; the level of training that teachers and students have in using technology for educational communication; diversified learning; and technology application; adaptation of teaching style to the online environment; obeying the principles of interaction: maxims of quality, quantity, relevance and manner; comprehensive assessment and evaluation mechanisms and a solid understanding of the educational communication process; ongoing feedback; emotional, community support and collaborative learning atmosphere; learning atmosphere.

The obtained result should have potential value for policymakers and educators to enhance communication strategies in the near future to overcome all the critical challenges faced by students and lecturers in particular.

REFERENCES

ABDUL WAHID, H.; RAHMAT, N.; DZURADEEN, N.; KADIR, N. (2020). Are students engaging in online classrooms?. *European Journal of Education Studies,* 7(12). DOI: 10.46827/ejes.v7i12.3408

ALAWAMLEH, M.; AL-TWAIT, L.M.; AL-SAHT, G.R. (2022). The effect of online learning on communication between instructors and students during Covid-19 pandemic. *Asian Education and Development Studies*, Vol. 11, No. 2, pp. 380-400. DOI: 10.1108/AEDS-06-2020-0131

ALMAHASEES, ZAKARYIA; MOHSEN, KHALED; OMER, MOHAMMED. (2021). Faculty's and students' perceptions of online learning during COVID-19. *Frontiers in Education*, 6. DOI: 10.3389/feduc.2021.638470

AL-OMARI, J. F. M., (2020). Educational communication skills and their problems among students of Princess Rahma university college at Al-Balqa applied university. *Cypriot Journal of Educational Science*, 15(5), 1337-1353. DOI: 10.18844/cjes.v15i5.5172

ARISTIKA, A.; DARHIM, JUANDI, D.; KUSNANDI. (2021). The effectiveness of hybrid learning in improving of teacher-student relationship in terms of learning motivation. *Emerging Science Journal*, 5(4), 443–456. DOI: 10.28991/esj-2021-01288

ARKSEY, H.; O'MALLEY, L. (2005). Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology: Theory and Practice*, 8(1), 19–32. DOI: 10.1080/ 1364557032000119616

ARMSTRONG-MENSAH, ELIZABETH; KIM RAMSEY-WHITE; BARBARA YANKEY; SHANNON SELF-BROWN. (2020). COVID-19 and distance learning: Effects on Georgia State University School of Public Health Students. *Frontiers in Public Health*, 20: 576226

AROFAH, S.; MUBAROK, H. (2021). An analysis of violation and flouting maxim on teacher-students onteraction in English teaching and learning process. Language Circle. *Journal of Language and Literature*, 15(2), 249–256. DOI: 10.15294/lc.v15i2.28148.

BABER, H. (2020). Social interaction and effectiveness of the online learning – A moderating role of maintaining social distance during the pandemic covid-19. *Asian Education and Development Studies*, 1(1), 1-16. DOI: 10.1108/AEDS-09-2020-0209

BABICKA-WIRKUS, ANNA; LUKASZ WIRKUS; KRZYSZTOF STASIAK; PAVEL KOZLOWSKI. (2021). University students' strategies of coping with stress during the coronavirus pandemic: Data from Poland. *PLoS ONE*, 16: e0255042

BHATNAGAR, V.; RANJAN, J.; SINGH, R. (2011). Analytical customer relationship management in insurance industry using data mining: A case study of Indian insurance company. *International Journal of Networking and Virtual Organizations*, 9(4). DOI: 10.1504/IJNVO.2011.043803

CABUAL, R.A.; CABUAL, Ma.M.A. (2022) The extent of the challenges in online learning during the COVID-19 pandemic. *Open Access Library Journal*, 9, 1-13. DOI: 10.4236/oalib.1108233

CHEN, LI-LING; CHIN-MU, CHEN. (2023). Formative e-assessment design in online learning environments. *International Journal of Education*, 15, 36. DOI: 10.5296/ije.v15i1.20580

COMAN, CLAUDIU; LAURENȚIU GABRIEL ȚÎRU; LUIZA MESEȘAN-SCHMITZ; CARMEN STANCIU; MARIA CRISTINA BULARCA. (2020). Online teaching and learning in higher education during the Coronavirus pandemic: Students' Perspective. *Sustainability*, 12, no. 24: 10367. DOI: 10.3390/su122410367

CRANFIELD, D.J.; TICK, A.; VENTER, I.M.; BLIGNAUT, R.J.; RENAUD, K. (2021). Higher education students' perceptions of online learning during COVID-19 – a comparative study. *Educ. Sci.*, 11, 403. DOI: 10.3390/educsci11080403

DWI, A. (2015). An analysis of flouting maxim in EFL classroom interaction. *Vision: Journal for Language and Foreign Language Learning*, 4(2), 243–259. DOI: 10.21580/vjv4i21592

EL ZEIN, AHMAD; HILAL, NISREEN; JIBAI, BILAL; ATTIEH, LATIFA. (2023). Factors influencing students' satisfaction in online learning amid the challenging COVID-19 pandemic: case study for Lebanese educational sector. *Res Militaris*, vol.13, n°1, 13. 2922–2931. Available at: https://resmilitaris.net/menu-script/index.php/resmilitaris/article/view/1858/1549

GIUSTI, LAURA; MAMMARELLA, SILVIA; SALZA, ANNA; VECCHIO, SASHA; USSORIO, DONATELLA; CASACCHIA, MASSIMO; RONCONE, RITA. (2021). Predictors of academic performance during the covid-19 outbreak: impact of distance education on mental health, social cognition and memory abilities in an Italian university student sample. *BMC Psychology*, 9. DOI: 10.1186/s40359-021-00649-9

GULTOM, RUTMIARTA. (2022). An analysis of cooperative principle maxim in the written and spoken mode of communication between teacher and students during online learning. *Journal of Advanced Multidisciplinary Research*, vol. 3, no.1. DOI: 10.30659/jamr.3.1.19-43

GUTTERMAN, A. (2021). *Developing a corporate social responsibility strategy*. SSRN Electronic Journal. DOI: 10.2139/ssrn.3813867

HAQIEN, D.; RAHMAN, A. A. (2020). Pemanfaatan Zoom Meeting untuk proses pembelajaran pada masa pandemi Covid-19. *SAP (Susunan Artikel Pendidikan),* 5(1). DOI: 10.30998/sap.v5i1.6511

HU, X.; MCGEOWN, S. (2020). Exploring the relationship between foreign language motivation and achievement among primary school students learning English in China. *System*, 89, 102199. DOI: 10.1016/j.system.2020.102199

IBDA, HAMIDULLOH; WULANDARI, TRI; ABDILLAH, AUFA; HASTUTI, ASIH; MAHSUN, MAHSUN. (2023). Student academic stress during the COVID-19 pandemic: a systematic literature review. *International Journal of Public Health Science (IJPHS)*, 12, 286. DOI: 10.11591/ijphs.v12i1.21983

ILIEVA, GALINA; YANKOVA, TANIA; KLISAROVA-BELCHEVA, STANISLAVA; IVANOVA, SVETLANA. (2021). Effects of COVID-19 pandemic on university students' learning. *Information*, 12, 163. DOI: 10.3390/info12040163

LIU, YAN; ZHANG, HONGFENG. (2022). Exploring the influencing factors and validity of formative assessment in online learning. *Journal of Education and e-Learning Research*, 9, 278-287. DOI: 10.20448/jeelr.v9i4.4288

KISWORO, ANGEN YUDHO & OKTAVIANI. (2021). Teachers' and students' perceptions of online learning interactions amidst the COVID-19 pandemic in Indonesian senior high schools. *International Journal of Recent Educational Research,* 2, 646-663. DOI: 10.46245/ijorer.v2i6.166

MEHALL, S. (2020). Purposeful interpersonal interaction in online learning: What is it and how is it measured? *Online Learning Journal*, 24(1), 182-204. DOI: 10.24059/olj.v24i1.2002

PAVIN IVANEC, TEA. (2022). The lack of academic social interactions and students' learning difficulties during COVID-19 faculty lockdowns in Croatia: the mediating role of the perceived sense of life disruption caused by the pandemic and the adjustment to online studying. *Social Sciences*, 11, 42. DOI: 10.3390/socsci11020042

POPA, D.; REPANOVICI, A.; LUPU, D.; NOREL, M.; COMAN, C. (2020). Using mixed methods to understand teaching and learning in COVID-19 times. *Sustainability*, 12, 8726. DOI: 10.3390/su12208726

PUTRI, A. E. (2022). Flouting conversational maxim by English department students at UINSunan Ampel Surabaya. *UIN Sunan Ampel Surabaya.* Available at: http://digilib.uinsby.ac.id/id/eprint/52648

PETER VAN DER STRAATEN (2000). *Interaction Affecting the Sense of Presence in Virtual Reality.* Available at: https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=1df87d4c206cfd6f04c552c4f8ff9780c9e28e36

REDDY, C. (2020). Grading system in education: advantages and disadvantages. *Journal of Education and Educational Development*, p. 3, 2016.

SASON, HAVA; KELLERMAN, AVICHAI. (2021). Teacher-student interaction in distance learning in emergency situations. *Journal of Information Technology Education: Research*, 20, 479-501. DOI: 10.28945/4884

SASON, HAVA; WASSERMAN, EGOZA; SAFRAI, MORDECHAI; ROMI, SHLOMO. (2022). Students' perception of the role of online teachers: comparing routine and emergency times. *Frontiers in Education,* 6. DOI: 10.3389/feduc.2021.767700

TAPSIS, NIKOLAOS; TSOLAKIDIS, KONSTANTINOS. (2014). Educational communication in virtual worlds and videoconference. *International Journal of Emerging Technologies in Learning*, 9, 64. DOI: 10.3991/ijet.v9i9.4190

VLAICU, CLAUDIA; BEATRICE, ALINA DINU; ALECU, DENISA. (2022). Educational communication and stress at preschool and primary teachers in the educational pandemic context. *Journal of Education, Society & Multiculturalism*, 3, 1-16. DOI: 10.2478/jesm-2022-0001

WAHYUDI, ABDI; YUSUF, SUHENDRA; LESTARI, ZUBAEDAH. (2020). Maxim's flouting: an analysis of classroom interaction. *Journal of English Education and Teaching*, 4, 219-231. DOI: 10.33369/jeet.4.2.219-231

WICAKSONO, A.; ANAM, S.; RETNANINGDYAH, P.; SETIAWAN, S. (2022). Grice maxims breaking in the teacher and students' online interaction. *Pioneer: Journal of Language And Literature*, 14(1), 101-119. DOI: 10.36841/pioneer.v14i1.1658

YAMAN, N.; MUHLIS, M. (2020). Students' social presence and perceived learning toward CCU course in online classroom (An evaluating of learning process during pandemic Coronavirus). *Elite: English and Literature Journal*, 7(1), 61-73. DOI: 10.24252/elite.v7i1a6

YEUNG, MELISSA; CHENG, HEIDI; CHAN, PETER; KWOK, DOROTHY. (2023). Communication technology and teacher–student relationship in the tertiary ESL classroom during the pandemic: a case study. *SN Computer Science*, 4. DOI: 10.1007/s42979-023-01667-7

ZERRAF, SOUFIANE; ZAIN, SIHAM; ABDERRAHIM, KHYATI; TRIDANE, MALIKA; BELAAOUAD, S. (2019). A pedagogical approach to educational communication in the educational context. *International Journal of Advanced Education and Research*, Vol. 4; Issue 1, pp. 01-04.