Video Conferencing Integration at Universities: Challenges and Opportunities

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Abstract: As teachers who experience challenges with delivering classes online and finding relevant ways to teach students, we suggest our practical recommendations on video conferencing tools integration at universities. This synchronous online tool is an efficient method of class delivery that provides practicing four key language skills, maintaining communication and facilitating digital competence development. The study involved 34 teachers from two universities to share the experience, expectations, and perception of the technology. Having analyzed the results of questionnaires, we worked out a strategy on the successful implementation of the technology in the teaching process. Among the main challenges, teachers indicated class management, educational materials transformation for the online mode, working with mixability groups of students, and assessment. We found out that supplementation of asynchronous online tool might add interactivity to lessons or find a way to assess students, knowledge of the technology tools helps with class management, and possibilities to personalize tasks through the chat, breakout rooms, and partial screen sharing help manage with mixability groups.

Keywords: *video conferencing; assessment; class management; flipped classes; interaction.*

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1. Introduction

The concept of distance learning is not new, however, only now it has become a unique resource to satisfy the educational needs of students. There is a great variety of asynchronous digital tools to provide distant learning and we used some of them to enrich the learning environment and make it more engaging. But these tools cannot be used in real-time. Therefore, synchronous teaching and learning in a real-time provide more opportunities for beneficial educational outcomes.

Today's reality demonstrates that social isolation due to present circumstances causes the feeling of solitude and segregation. Thus, modern digital technologies allow us to satisfy our educational, informational and communicational needs, nevertheless just writing messages or sending emails is not enough either to compensate face-to-face communication or to adapt to live in restricted circumstances. And exactly real-time communication and immediate feedback eliminate anxiety and feeling of segregation. Through digital tools, teachers are able to create a convenient environment that resembles students their usual life and provide a feeling of stability.

However, with great respect for all interactive online educational strategies, we have to admit that without social interaction such learning turns into an interactive book. Social presence makes the online environment more engaging and resembles usual interaction. So, even out of classes students and teachers do not feel disconnected from a course or each other. One of the technologies that can provide teachers with online interaction is Zoom or MS Teams video conferencing tools.

The significance of social presence was discussed in Garrison, Anderson, and Archers (2000) research. The authors studied the features of computer-mediated teaching and developed a model of a community of inquiry in which performance occurs through the interaction of three factors: teacher presence, social presence, and cognitive presence. According to their research, the creation of the community of inquiry contributes to the development of a meaningful and productive learning environment. With this in mind, we can state that online videoconferencing accomplishes all three factors in a course: new information, rules, research, ideas, articles (cognitive presence); instructions, assessment, class management (teacher presence); emotions, self-disclosure, group cohesion (social presence). Among other beneficial outcomes of video conferencing researchers mention: communication and collaboration enhancement (Kent & Simpson 2010); creation of learning environment that goes beyond the bounds of simple reflection (Drexhage, et al., 2016); supporting of inclusive education,

especially for those students who feel the anxiety of public speaking (Hwee, 2007, Tabak & Rampal, 2014), peer-assessment skills development (Lavrysh, 2016) the authenticity of interaction and educational materials (Reaburn & McDonald, 2017); self-initiated learning in asynchronous mode afterwards (Fischer, et al., 2017).

Our paper aims to share the experience of implementation of these tools and suggest recommendations on how to deal with some challenges that teachers might encounter.

2. Methodology

2.1. Participants

The participants of the study were 34 ESP teachers from two Ukrainian universities Igor Sikorsky Kyiv Polytechnic Institute and Lviv Polytechnic National University. As we teach the same subject and encounter the same challenges nowadays, we decided to cooperate and share the experience of using some synchronous technologies. Among participants 10 teachers were novice in teaching (1-3 years of teaching experience); 17 teachers with more than 3 years of experience and 8 teachers with more than 20 years of experience. Only 7 teachers experienced the use of video conferencing before our study.

2.2. Data collection

The video-based online lessons were carried out by teachers for students of engineering faculties. The topic of lessons and ways of material introduction differentiated according to curricular. All lessons were 90 min of duration. In total, each teacher held about 7 -10 Zoom or MS Teams supported lessons for the last three weeks. The teacher's first post-session questionnaire was implemented after first 2 lessons to identify teachers' perception of the technology, challenges, and benefits. The second questionnaire was carried out after the next 5 lessons to find out what changes were introduced, how teachers dealt with challenges and whether sessions met teachers' expectations or not. Both questionnaires were created through Google Forms and included questions about effectiveness, expectations, perceptions, challenges, and forms of content presentation, methods of assessment and interaction, suggestions about the improvements.

2.3. Data analysis

The Likert-scale was employed to analyze questionnaire answers and content analysis of the results of open-ended questions was used to identify keywords and themes.

3. Results and Discussion

We have been holding synchronous immersion classes through the use of Zoom video-conferencing tools. It allows live interaction with students combined with utilizing interactive books and numerous online teaching tools. Our choice is substantiated by innovative features of this tool that provide students with a more engaging experience and possibility to practice all four language skills. Also, this tool allows presenting content in various ways. Its function of screen sharing makes open opportunities to use those resources that were impossible during the usual face-to-face lessons due to a poor Internet connection, time-consuming registration processes, or simply lack of necessary equipment. Other useful functions are “Co-annotation” when students can perform collaborative writing on the shared screen; “Breakout rooms” permits the distribution of students into small groups for discussions or dialogues that are similar to in-class pair work; compatibility with lots of other platforms and online tools; a polling function can be used to create single choice or multiple choice polling questions for rules drilling or getting feedback from students.

At our lessons we are able to work with students of all levels and make our lessons: travel using Google Maps, have a tour around a museum or describe memorable day showing pictures from Google albums – for intermediate level; articles summarizing and writing for students who are taught English for Academic Purposes; conversation with a special guest right in the classroom to make lessons more relevant to students interests.

Regarding the questionnaires, the findings of the first and second one were different. The results of the first questionnaire demonstrated that the majority of teachers had favorable responses to the integration of this tool. However, there were a lot of challenges that teachers experienced, especially those who did not use technologies much before. Among challenges teachers mentioned: technical problems – 58% , time-consuming preparation of all materials – 89%; converting exercises and books into interactive mode-43%; assessment techniques adjustment -79%; problems with class management – 63%; teachers did not feel confident during the lesson and lost control over the lesson procedure- 37%. Positive answers

highlighted: easy and quick installation -75%, interactivity- 95%, speaking practice -100%; engaging learning environment-78%. The results of the first questionnaire indicated more negative answers and immediate measures were taken.

The results of the second questionnaire demonstrated more positive feedback; however, questions remained the same. Teachers explained that they got support from students who were helpful and patient. In order to extend the Zoom application and create a more engaging learning environment, teachers suggested using Quizlet for vocabulary learning. In case s more collaborative work and perform a summative assessment, students are assigned to perform their project in Padlet to demonstrate acquired knowledge. As a warming-up activity, we use Mentimeter to create word clouds or word search exercises by employing a “co-annotated” tool. With this in mind, we have analyzed a lot of tips suggested by experts and developed some recommendations for our teachers on more efficient working in Zoom: inform students with agenda of the lesson with all activities at the beginning of the session and then attach the file in chat, so students can see it and follow the lesson progress if they were suddenly disconnected or had some technical problems; teach students online etiquette and create your class etiquette wall in Padlet or a slide to demonstrate in case of necessity; ask students to utilize the function “raise hand” if they want to say something; do not spend too much time reading or searching the information during the session, prepare beforehand or it would be better if students got necessary texts or articles before the lesson; do not hold a lesson alone, allow students to share their presentations, comment projects by sharing screen and communicate with each other; create an additional chat or use a messenger service for communication in case of technical problems; carry out classes clearly and comprehensively to avoid students’ distraction; if there is a mix ability class, set up tasks in different groups, or give different instructions: students with higher-level can write in a chat and students with lower-level might answer orally or vice versa; student who knows more can correct mistakes and help teachers in a chat; sent files with scaffolding exercises privately only to students who need it; think over activity at the beginning of the class while students are entering the session, do not start immediately with the topic; explain how the assessment is going to be conducted whether through peer assessment, portfolios, or online tests afterward, take into account that some students might be shy in front of a camera or do not feel confident with technology, so do not assess only online participation.

Synchronous video tools are a mainstream in today's pandemic situation all over the world when, despite all circumstances, teachers have to endorse students in their educational needs. Teachers of all countries and different subjects can apply our recommendation while using video conferencing tools as Zoom and MS Teams are rather widespread technologies and they are user-friendly, easy to install and operate. Besides, any students or universities globally can be connected through these tools that allow holding international scientific Olympiads, experts meetings, conferences, projects, other cities or museums tours, share the experience of learning and entertaining sitting at home from different countries in real-time. Thus, video conferencing is an efficient tool to enhance the globalization process at universities.

4. Conclusion

The process of teaching is evolving. We have to be adaptable and be an example for students to accept challenges, create new formats and keep progressing despite any situations. Synchronous learning through video conferencing tools facilitates the social and cognitive engagement of students. The new practice accomplishes the course goals and outcomes, enhances the development of language, managerial and digital competences. Moreover, by keeping teaching, we will bring some stability and support. And in our future teaching practice, we are going to use these tools as a supplementary method for traditional lessons.

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