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Remote Learning During the Covid-19 Pandemic in the Opinion of Polish University Students

Abstract

Universities around the world have overwhelmingly switched to online teaching and e-learning, necessitated by social distancing measures due to the COVID-19 pandemic.

In order to provide education as effectively as possible and achieve the required educational objectives, people involved in the teaching process at the university have taken a number of steps to give students access to materials necessary to obtain the intended learning outcomes in a particular subject.

In this article, we present the results of empirical research on remote classes at Polish universities during the COVID-19 pandemic. The research focused on methods and forms of distance learning.

Keywords: *University Study-Oriented System, Covid-19 pandemic, university students, online education*

> *Tell me and I forget.*
> *Teach me, and I will remember.*
> *Involve me and I learn.*
> – Xunzi (paraphrased)

Introduction

Since March 2020, higher education has experienced disruptions due to the COVID-19 pandemic. All public and private institutions of higher education have started implementing distance/remote learning to protect students from the

COVID-19 virus. Often, the teaching staff had to quickly decide on how to adapt their classes to remote learning with little experience and no training. Therefore, to ensure a successful distance learning process, universities conducted professional training for teachers. In addition, educational platforms were launched and guidelines and instructions were developed to manage the behaviour of teachers and students during distance learning.

Remote learning breaks down educational barriers such as the place of residence or fixed class hours typical of in-person learning set by universities. The educational media can be all means of communication that present the educational content as well as university educational platforms.

Remote learning generally maintained the same educational strategies as those used during in-person teaching and learning (Lederman 2020 and Supiano 2020). Many teachers also reported a change in the way students were assessed, for example by changing the form of the exams or reducing the number of assignments (Lederman 2020, Lederman 2020). Some of the lecturers changed the form of classes from asynchronous to synchronous, allowing students to navigate the content of the subject more independently. Students had to adapt to these new forms of classes and overcome barriers impeding the teaching process. Research has shown that technological problems quickly emerge, such as lack of reliable Internet access and finding appropriate technology or own place for work, which has a significant impact on participation in synchronous meetings, such as those held via web conferencing software, e.g. Zoom (Flaherty 2020; Lederman 2020).

The implementation of remote education should be diversified in terms of the forms of teaching and should be based on online resources and take into account various individual and group projects.

It is therefore important that, in the face of the COVID-19 pandemic, teachers should be able to change their current habits and design a distance learning process that would give satisfactory results.

The success of distance learning is based on three key elements:
1) Technical capabilities on the part of both the teacher and the student, i.e. equipment, good internet access, and remote education management software;
2) Educational resources;
3) Skills of the teaching staff in organizing distance education (Koludo, 2020).

Distance learning can draw on a variety of digital tools that should inspire teachers to use them. The educational process should not be just a series of computer-based tasks; it should also arouse curiosity in students and motivate them to work creatively. This raises the question of teacher competencies and motivation to

transfer new educational trends into virtual space. Among the many possibilities, the following three are particularly noteworthy:

1) the WebQuest method,
2) the flipped classroom method, and
3) the constructivist learning model (Koludo, 2020).

In order to improve the efficiency of remote learning, universities organize various types of courses and training. YouTube has many videos on how to use collaboration software such as Microsoft Teams, Kampus, Moodle, Google Classroom, Zoom, and Skype.

E-learning classes should not be regarded as an imperfect substitute for in-person classes – their curriculum should be consistent with the syllabus guidelines but taking into account the specifics of working in a virtual environment.

In addition to collaboration software and other application programs, there are many websites that offer remote learning guidance, for example the recorded webinars by Microsoft on distance learning, which contain a collection of useful tutorials to improve the learning process.

During distance learning, it is advisable to:

- introduce, in consultation with students, short breaks during 90-minute classes and establish rules on turning camera on/off by the participants in synchronous classes;
- use student activation methods that will strengthen the sense of belonging to the group;
- include independent, individual student work in synchronous classes (e.g. reading a text, completing a task, or preparing a short speech on a given topic);
- use different forms of interactions between students, including working in pairs and subgroups (e.g. the so-called rooms), which largely allows the achievement of social competence written in the syllabuses;
- use spiral learning, which is based on previous content, for example by asking questions about knowledge (e.g. 'What is the connection between this issue and the one we discussed previously?'), skills ('Which theory will you use to solve this problem?'), and/or social competence ('What and how can be changed?');
- carry out so-called debriefing—talk about feelings and emotions related to the performed task, read text, work in subgroups, etc.;
- jointly analyse the progress of the classes and their effects (e.g. 'What worked?', 'What failed?', 'Were the goals achieved?', 'If not, why?');

- introduce elements of formative assessment, focused on highlighting the results achieved (Janiak-Jasińska, 2020).

At universities, the transition to remote learning has resulted in the creation of teaching materials and enhancement of the educational process through the use of distance learning methods and techniques, i.e. a gradual shift from traditional support of the teaching and learning process to the use of various online materials to activities involving work on an e-learning platform. For example, the University of Wrocław regularly hosts webinars (Nowicki, 2020) on the following topics: the basics of planning teaching work; activation of students during classes; support for developing social skills and competences during remote classes; importance of communication during remote classes; motivation tools during remote classes; multimedia projects and tasks as an alternative to traditional tests; and learning the functionality and use of the e-EDU platform and the Office 365 suite, which are useful when conducting tests and exams.

Nowadays, when the use of computers and the Internet is becoming common-place, traditional teaching methods must be adapted to new technologies and meet the expectations of the current generation. The young generation uses new information technologies from an early age, quickly adapting to the new educational situation and therefore has specific expectations of teachers using collaboration software and web applications for distance teaching. Therefore, it seems necessary to get to know the opinions of students on the implementation of the teaching process at a university in order to constantly improve teaching.

Methods

The aim of this research was to show how learning is being carried out in such unprecedented times. It seemed interesting to examine the methods and forms of remote teaching, student assessment of teacher competencies, and learning barriers of students related to distraction, increased anxiety, and decreased motivation during the Covid-19 pandemic.

Each scientific discipline, as part of institutional science, is inherent in the macro-structural order of the social system and is functionally linked to it in many ways, thus imposing specific research strategies (Malewski, 1998). Own research was based on the positivist paradigm.

The research employed quantitative methods, i.e. a diagnostic opinion poll using a survey as the technique and an online questionnaire as the instrument.

The main research problem was formulated as follows: what are the opinions of university students about the implementation of remote learning? This main problem implies the following specific problems:

- What differences do students see in remote learning in the summer term 2020 and the winter term 2021?
- Which student activation methods were used by the teachers?
- What kind of learning do students prefer?
- What are the opinions of university students about the effectiveness of remote learning?

The research was conducted by means of a diagnostic opinion poll using an online questionnaire. The survey was attended by 208 people, representing all years of Bachelor's degree studies, supplementary Master's degree studies, and five-year Master's degree studies. The surveyed research sample consisted of 67.6% women since the survey was most popular at pedagogical faculties, where most students are women. The vast majority of the respondents studied in Wrocław but there were also individuals studying in Katowice, Brzeg, and Polkowice.

Results and Discussion

Efficient implementation of remote learning depends on good organization of classes, competence of teachers and students, and a functional Internet connection. Therefore, it seemed interesting to examine what disrupted remote learning, especially in the first months of the COVID-19 pandemic. In their comments, 77.7% of the surveyed students reported various technical and organizational problems arising during the classes.

At the beginning of the pandemic, i.e. between May and June, synchronous classes often could not be held due to problems with audiovisual equipment and Internet connection on the side of both students and teachers. Presentations would not load, both teachers and students could not be heard, and exam sheets were received with huge delays. Learning was also disrupted by poor quality and dropped connections as well as problems with microphones and cameras.

According to students, the first two weeks of the pandemic were marked by cancelled classes. During the classes, a malfunctioning collaboration software was replaced with another one, e.g. Zoom, Google Meet, or Skype.

The biggest problem was slow connectivity due to poor coverage or overloading of servers and networks. As a result, students got disconnected from classes, their voices were echoing (feedback loop issue) or distorted, groups were not visible, and

the image was blurry. There were often problems with joining classes; sometimes, the classes were interrupted by crashes.

The students had reservations about the IT skills of the teachers and their behaviour in the new learning mode, which resulted in their dissatisfaction with participation in classes.

Some teachers did not know how to share presentations and multiple unsuccessful attempts took up class time. The students objected to the requirement to turn on webcams on a given platform during testing on the e-portal and students at technical universities did not have enough time to solve the tasks. The collected factual material shows that there were a lot of technical and organizational problems and not all of them could be efficiently resolved.

The survey asked students what differences they perceive between remote learning in the Summer 2020 and Winter 2021 semesters. The vast majority noticed an improvement in the quality of education, and the perceived changes are included in the table below.

Table 1. Differences between evaluating the quality of distance learning in the summer 2020 and winter 2021 semesters – the most frequent statements. Own study. (Percentages do not add up to 100)

No.	Differences between evaluating the quality of distance learning	Number of answers N-208	Per-centage
1.	Better organization and contact with the instructor, more involvement of both sides of the teaching process;	179	86.2
2.	Greater order and tidiness;	150	72.0
3.	Changes in the way of transferring knowledge; more interesting didactic ideas;	142	68.3
4.	Increased ability to use distance working tools;	128	62.0
5.	Increase in the number of classes conducted synchronously according to the schedule;	110	53.4
6.	Activating class participants; working in rooms;	108	52.2
7.	Less technical problems;	104	50.3
8.	On-line practices; videos of lab experiments; video meetings; videos of exercises;	101	48.8
9.	Adaptation of content and teaching methods;	85	41.2
10.	Clearer requirements; checking and evaluation methods; more oral forms of exams;	79	38.4
11.	Better content preparation of instructors; instructors making available their own scientific materials;	73	35.4

The questionnaire also asked students what changes they would propose in remote learning if this form of study was to continue in the following term. This was an open-ended question, so the respondents were free to present their suggestions. Most people indicated the need for greater activation of students in non-lecture classes (56,7%). Being unable to participate actively, the students relatively quickly became weary, which lead to a fall in concentration and attention. The lack of the ability to ask questions and participate in discussion made students feel deprived of a very important element of study, namely dialogue. The respondents also pointed out that this way of conducting classes enabled the kind of behaviour where, after logging in to the subject channel, some people did not participate in the classes at all, doing something else.

Another need expressed by the students, partially related to the need for activation discussed earlier, was the expectation of more attractive classes. Students suggested that classes would be much more interesting if they included elements of edutainment (learning through play), such as quizzes, educational games, cooperation in creative problem-solving, and tasks requiring innovative thinking.

Many students demanded that laboratory classes be restored in the classroom mode. They were very critical and emotional in their assessment of remote implementation of this type of classes, considering them completely pointless. In addition, the following factors contributed to the unfavourable opinions: technical problems, unavailability of certain materials necessary to write a report, and replacement of demonstrations with oral presentations.

A large number of students indicated that it was necessary for the teachers to provide class materials. The respondents complained about too fast-paced practical classes, laboratory classes, or lectures but also about recurring technical problems that made it impossible to take notes in real time and often resulted in incomplete knowledge gained from the classes. In the context of sharing it is worth noting that some students mentioned the opposite situation, where they received a huge amount of material from the teacher. In the future terms, the students wanted to see a clear distinction between the content required for an exam, evaluation, or test and the content constituting supplementary material.

Another change recommended by students was to standardize the software used. The implementation of classes on different platforms was assessed as burdensome and needlessly confusing.

There were repeated calls for greater understanding and tolerance on the part of teachers. As the students emphasised, the situation we find ourselves in is just as difficult and new for the teachers as it is for their students. One of the issues particularly often mentioned by students was the mistrust and suspicion of the teachers regard-

ing whether or not the student really had technical problems, actually attended the classes, did not cheat during testing, and their work was done independently. This lack of trust often resulted in the use of sophisticated supervision strategies and, above all, deterioration of the atmosphere during classes and reluctance towards the teacher. As regards changes expected from academic teachers, there were also calls for acquisition and improvement of their skills in the use of media in education (it was even suggested that universities should impose this obligation on their academics under threat of punishment) and greater involvement in individually assisting students who do not understand the material or cannot cope with a task.

For many respondents (38,7%), the only expected change was the return to universities, but. Even when they had no major reservations about remote learning, they expressed great desire to return to 'traditional' learning conditions and be members of the academic community. Slightly over 50% believe that some classes should be continued in a remote form, also after lifting the restrictions resulting from the pandemic

Despite listing the problems that should be addressed in the future, the students also saw a number of advantages of remote learning. The most frequently mentioned advantages were the time and money saved. The lack of need to rent accommodation for the period of study and to travel to and from the university are undoubtedly great positives of remote learning, especially when travelling by public transport or when the student commutes from outside the city. The respondents also stressed that it was important for them to be able to plan other activities during the day much more freely and manage their time more efficiently. Other advantages included the lack of need to get up early or move between different university buildings and the ability to rearrange at least some study hours to the time of day when the students were most productive. The flexible time budget made it possible to reconcile studies with work, family life, and everyday matters and duties. Many respondents emphasised that this was invaluable for them ('I have a small child and if I were not able to learn online, I would probably have to stop my studies, but at present I don't need to worry because I can stay with my baby and keep studying'). The students also observed that they saved money due to the reduction of 'unplanned' expenses, which are sometimes difficult to avoid while living in a big city, tempting with a multitude of offers. In addition, they pointed to the lower cost of meals eaten at home.

Informal mode of learning allowed for casual attire. The feeling of comfort resulted from the ability to stay in a familiar place, adopt a comfortable body position, and even eat meals. It was also important to the students that they could attend the classes even when they had minor medical problems.

In their comments, the students emphasised the importance of being able to repeatedly return to the studied content thanks to the rich and varied materials provided by the teachers and the fact that they could use it at any time and place. In their opinion, this latter aspect influenced the class attendance, which 'during in-person learning' was not as high as it is today. Almost all students agreed that lectures should remain online even after universities resume in-person classes.

Another advantage noticed by the students was the ability to strengthen their skills in using modern technologies and software while acquiring knowledge. They considered the acquisition of these competencies to be valuable because, in their opinion, they made the learning process easier and more attractive; they also saw the possibility of using these skills in their future work or private life. A small group of the respondents felt that remote learning offered no advantages and the only effective form of study was in-person learning.

For most academic teachers, the sudden need to switch from in-person learning to remote learning created a situation where they had to acquire skills in the use of new technologies in the teaching process. In response to this situation, universities organized dedicated training for their staff and provided the necessary hardware and software. In addition, the Internet offers a huge number of videos and training materials on the use of various software in the teaching process, so anyone interested can easily find clear instructions. The survey results show than only a few individuals did not conduct online classes. Almost all teachers were coping (with better or worse results) with the new form of teaching and communication with other university staff. Academic teachers not using e-learning platforms implemented the curriculum in a different form. This was most often done by sending the necessary content via e-mail in the form of presentations or Word documents. In the case of teachers who took up the challenge of using new educational solutions, the most popular platforms were Microsoft Teams (83,9%),, university e-learning websites (56,9%), and Zoom (55%)[1]. Other, much less popular tools included Google Drive, YouTube, and Moodle, while the least popular solutions were OneDrive, live chat services on websites, Google Classroom, TeamSpeak 3, Facebook Messenger, Internet Relay Chat (IRC) clients, Discord, Microsoft Forms, Padlet, Mentimeter, and Miro.

Although virtual reality is well known to the young generation, it also required assistance in the new situation. Comments from the respondents suggest that most of the students (77,7%) were satisfied with the assistance in remote education received from the universities. The main form of support was organisation of

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[1]   Percentages do not add up to 100 because more than one answer could be selected.

training in the use of media and various programs in the learning process. Some universities provided their students with the necessary equipment and helped them gain access to high-speed Internet.

Another form of help offered to students was the provision of various materials (presentations, audio and video recordings, notes, PDF or Word publications, and links to relevant sources). Comments by the respondents showed that only over 2% of the teachers did not support the students in this regard while around 4% of the students believed that the sent materials were of little use. The majority of the respondents welcomed this type of support, stressing that it was of great help to them, allowing them to avoid the stress of having to work under time pressure. Despite partially limited access to libraries, students were very successful in accessing the necessary materials using the sources available to them-as shown in the table below.

Table 2. Sources used by students in the implementation of remote learning. Own study. (Percentages do not add up to 100)

No.	Sources of student's knowledge	Number of answers N- 208	Percentage
1	Internet	201	96.7
2	Materials provided by tutors	187	90.0
3	Materials provided by colleagues	138	66.6
4	Library	47	22.9

Conclusions

The sudden shift in work mode related to the lockdown forced the academic community to immediately modify its methods, teaching and learning tools, syllabuses, and teaching materials. The lack of prior experience in distance learning certainly did not help to make this change go smoothly and efficiently. Most students and teachers faced challenges due to the pandemic, including technical difficulties, distraction, anxiety, and decreased motivation. A year has passed since the introduction of online learning. During that time, we have got somewhat used to the new reality, we are now navigating the world of virtual education with more confidence. The respondents noticed favourable differences in the quality of teaching between the university terms. However, they feel that many aspects of distance learning require further improvement.

The survey shows that further work on the quality of distance learning should focus on creating a space for discussion, natural (although virtual) interactions, problem solving, group work, edutainment, and other forms of student activation giving a sense of participation in the educational process. The students called for avoiding excessive use of verbal forms and large chunks of scientific texts for imparting academic knowledge. The expectations of the students concern the selection of the materials, their categorization according to specific requirements, and forms of knowledge verification. Despite the limitations resulting from the virtual method of interactions, the students want to achieve a sense of empowerment and development of mutual trust. The challenge is therefore to develop the soft skills of the participants of the educational process who, despite the lack of direct contact, want to fully experience two-person interactions.

Regardless of these demands, it should be noted that remote university education is merging with best practices and may become their integral part.

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