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Remote learning during the COVID-19 pandemic in the opinion of academic teachers. Survey research

Jakub Młodawski¹, Anna Świercz ¹, Marta Młodawska¹, Aleksandra Piąta², Grzegorz Świercz¹, Barbara Gawdzik¹

1. Jan Kochanowski University in Kielce
2. "Eskulap" Student's Scientific Society, Jan Kochanowski University in Kielce

Abstract

During the COVID-19 pandemic, the academic community had to drop out of the full-time on-site education and switch to distance learning. After two years of this state of affairs and the current return to the traditional form, we would like to explore the opinions of academic teachers on this form of teaching. The study was a questionnaire-based survey, including 86 teaching staff members of the Jan Kochanowski University of Kielce, working at four faculties. The teachers assessed the level of distance learning as average, no different from the traditional approach. However, they pointed out that the involvement, activity of students, regularity of work, quality of the assignments completed, and the adequacy of the grades received is greater in the traditional approach. In the case of remote learning, in the group's assessment, the timeliness of performing the assignments had not deteriorated. The most frequently indicated advantage of remote learning was time saving, while the most common disadvantage was reduced contact with students.

In the teachers' opinion, the traditional mode of learning still has an advantage over distance learning. Studies assessing effectiveness in achieving educational goals are needed in order to objectify the results.

Keywords: covid-19, remote learning, distant learning, academic teachers, education

Introduction

The COVID-19 pandemic started unexpectedly in 2020. In Poland, the first case was recorded in March and in the same month the state of the epidemic was announced all over the country. (1) By May 2022, when the state of the epidemic in Poland was lifted by the council of ministers' regulation, 158 818 people/million of inhabitants became ill with COVID-19 and 3073 people/million of inhabitants died in our country. (2) (3)

As a result of the necessity to limit people-to-people contacts resulting from the regulations of the Council of Ministers, university education switched to distance learning in an emergency mode. In the literature, we can find many papers dedicated to the assessment of a new teaching mode among students, while the assessment of distance learning by teachers seems to be relegated to the background.

In our opinion, this is an important opinion for the entire education system, allowing it to evolve in a sustainable way, and in the event of other events forcing us to return to distance learning, making the system suitable for both sides.

In our study, using a questionnaire survey, we evaluated the perception of distance learning among academic teachers in a structured manner after remote learning had come to an end and the system had returned to the traditional form.

Materials and methods

The study was based on a survey. We used a questionnaire developed by Romaniuk et al. (4) in our own modification. The content of the survey can be found in appendix 1. In the study, we included academic teachers from four different faculties: Faculty of Law and Social Sciences, Medical College, Faculty of Exact and Natural Sciences, and Faculty of Pedagogy and Psychology. Statistical analysis was performed using the Statistica 13.1 programme (Tibco Software, Palo Alto, USA). We used the median as a measure of the central tendency for the data presented on the Likert scale; the spread was presented using the interquartile range. Qualitative variables were presented using a percentage share and an absolute number.

Results

86 teachers working at four different faculties of the Jan Kochanowski University in Kielce were included in the study. Among the respondents, women accounted for 63.6%. The characteristics of the group is presented in Table 1.

question No./parameter	
1/age (median, IQR)	45(12)
2/sex (f, %)	49 (63.6%)
3/academic degree	master's degree - 16.8%
	PhD - 58.4%
	habilitated PhD -20.7%
	professor - 2.59%
5/assessment of one's own IT competences (median, IQR)	4(2)
6/increase in one's own IT competences	4(1)
7/technical capability to participate in classes	88% - I own a computer for my own use
	9% - I share my computer with other users
	9% - I use mobile devices
8/the way of connecting with the Internet	68% - cable modem/optical fibre
	42% - Wireless Internet
	19.4% - sharing the Internet via smartphone
9/use of university support	48% - no
	31.16 % - technical assistance
	28.5 % - training
	10.3% - shared equipment
10/type of classes conducted	98.7% - virtual meetings in a group of students
	66.2% - sending scans of photos and original presentations
	58.4% - links to important content
	48% - instructions describing the issues sent to students
	41.1% - group work on projects
	40%- chat
	38.9% - virtual individual meetings
	10.38% - individual phone calls
	15.5% - sending scans of photos and non-author presentations
	5.19% - lecture recordings

The most common type of classes were virtual meetings in a group of students, which was conducted by over 98% of teachers. Individual types of classes conducted together with the percentage share of respondents who taught them are shown in Table 1. The remaining survey summary information is provided in Table 2. Half of the teachers used the university's technical assistance during distance learning. The teachers assessed the level of distance learning offered by the university, as well as their own level of commitment to work as moderate.

question No./contents summary	median	IQR
11/distance learning level	3,000000	1,000000
12/degree of one's own involvement	3,000000	1,000000
Assessment of the differences between the traditional and distance education for the elements below		
12a/student involvement	1,500000	1,000000
12b/student activity	2,000000	1,000000
12c /contact with the lecturer	2,000000	2,000000
12d/consistent manner of work	2,000000	2,000000
12e/timeliness of performed tasks	3,000000	1,000000
12f/task performance	2,000000	2,000000
12g/adequacy of the grades awarded	2,000000	2,000000

The teachers rated most of the elements of education below 3 points, i.e., in favour of traditional education. The exception was the assessment of the timeliness of performed tasks, which was assessed as not different from that in traditional learning in distance learning. Students' involvement was rated the highest in favour of traditional education (median = 1.5). The results of the open-ended questions were difficult to qualify due to the high heterogeneity of the answers. Time savings (48%) and lower costs of performing the profession (38%) were mentioned as the greatest advantages of distance learning. The main disadvantages indicated in the open part included the lack of physical contact with the student (67%) and encountered technical problems (31%).

Discussion

Europe had not been haunted by a pandemic since the beginning of the 20th century. Therefore, no social system was prepared for the new operating conditions. Most of the research focused on the functioning of the health system, but the effects of the COVID-19 pandemic were visible at every step. Changes in the education system were mainly related to the necessity of limiting interpersonal contacts and the absence of both students and teachers at work. This absence was caused by illness, imposed isolation and quarantine, as well as the need to care for sick people. At that time, a considerable part of education in Poland transitioned to the form of distance learning. This situation lasted 2 years until the start of mass vaccination.

In the literature, most authors assess students' approach to distance learning. Of course, students are a key link in the education system, for whom the whole system was created, but we must not forget about teachers and lecturers either. The opinion of lecturers is not burdened with the students' cognitive error consisting in the difference between personal satisfaction with the progress of teaching and the achievement of didactic goals. Not everything that students are satisfied with translates into their achievements and educational goals.

Our study shows that distance learning also contained an educational element for teachers. Despite the above-average assessment of one's own IT competences before the pandemic (median = 4), we noticed that in their opinion, these competences underwent further progress. The transition to emergency online teaching required an extremely rapid adaptation to new conditions and a change in the teaching mode to which teachers had been accustomed for years.

Teachers are quite critical of distance learning as our research shows that most of them notice the superiority of traditional teaching. In a study published in 2021, the perception of distance learning by lecturers in the scope of 3 scales of learning effectiveness and comparison with traditional science was investigated. The average of the lecturers' answers regarding these scales was neutral, which meant that the respondents did not advocate any

form of education. (5) However, some papers indicate that the perception of the aspects of distance learning varies depending on the profession of the lecturer. (6) In our study, we assessed mainly the subjective approach to remote learning. Objective works do not indicate the advantage of any of the methods in achieving didactic goals. The data available in the literature indicates the effectiveness and advantages of both the traditional (7) and remote form of teaching (8).

In the open part of the survey, however, lecturers noticed the advantages of this form of teaching, such as saving time and cost reduction. Similar advantages have already been put forth in the literature. (9) Nevertheless, lecturers indicated that adaptation to remote learning is time-consuming and stressful during the transitional period. (9)

During the pandemic, the lecturers who were also serving as a medical staff were particularly burdened. They had to combine teaching with caring for COVID-19 patients. Moreover, the workload was frequently beyond the scope of their professional competences due to the excessive number of patients and secondment to new positions. Meanwhile, the work of an academic teacher and a health care worker are both associated with a high risk of burnout. (10) Studies indicate that the level of professional burnout among lecturers in medical faculties reached 41.2%. The reason of burnout in this group of people was, however, twice as frequently, their professional work compared to working with students. (11)

Despite the advantages of working from home as an academic teacher, an in-depth analysis of the problem indicates that this kind of teaching may lead to a lower work-life satisfaction (quality of work-life - QWL) among teachers. (12) In addition to the psychological impact of the pandemic itself, the main causes of this situation are: the frustration associated with the use of electronic equipment and the new software, as well as decreased work-life balance (12).

The limitation of our study is the fact that it was conducted in only one academic centre, while the organization of distance learning itself differed between centres, so the possibility of extrapolating our study may be limited, at the same time, we did not find studies that assessed the attitude of teachers towards remote teaching in the Polish population.

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References

1. Polskiej Dziennik Ustaw Rzeczypospolitej. <https://www.gov.pl/web/gsse-warszawa/odwolanie-na-obszarze-rzeczypospolitej-polskiej-stanu-epidemii>. [Online]
2. Ritchie H. i inni. Coronavirus Pandemic (COVID-19). . <https://ourworldindata.org/coronavirus>. [Online] 2020.
3. Czuba B Młodawski J, Kajdy A, Sys D, Cnota W, Młodawska M, Kwiatkowski S, Guzik P, Wielgos M, Rybak-Krzyszkowska M, Fuchs A, Swiercz G, Borowski D. *Implementation of the Publicly Funded Prenatal Screening Programme in Poland during the COVID-19 Pandemic: A Cross-Sectional Study*. . Journal of Clinical Medicine. 2022; 11(5):1317. <https://doi.org/10.3390/jcm11051317>.
4. Romaniuk M. W. i Łukasiewicz-Wieleba, J. Zdalna edukacja kryzysowa w APS w okresie pandemii COVID-19. *Edukacja hybrydowa. Warszawa*. doi:10.13140/RG.2.2.30338.35524.
5. Shambour MKY Abu-Hashem MA. Analysing lecturers' perceptions on traditional vs. distance learning: A conceptual study of emergency transferring to distance learning during COVID-19

pandemic. *Educ Inf Technol (Dordr)*. 2022;27(3):3225-3245. doi: 10.1007/s10639-021-10719-5. Epub 2021 Sep 16. PMID: 34548840; PMCID: PMC8444535.

6. Alshangeeti A., Alsaghier, H., & Nguyen, A. (2009). Faculty perceptions of attributes affecting the diffusion of online learning in Saudi Arabia: A quantitative study. In *Proceedings of the international conference on e-learning*, 10–24.

7. Arias J. J., Swinton, J., & Anderson, K. Online vs. face-to-face: A comparison of student outcomes with random assignment. *E-Journal of Business Education and Scholarship of Teaching* 2018, 12(2), 1–23.

8. Narayan N., & Singh, S. K. (2020). Online learners' experiences and views towards online courses: A case study of the University of the South Pacific. . *Journal of Educational Studies*, 34(1), 29–41.

9. Ní Fhloinn E Fitzmaurice O. Challenges and Opportunities: Experiences of Mathematics Lecturers Engaged in Emergency Remote Teaching during the COVID-19 Pandemic. . *Mathematics*. 2021; 9(18):2303. <https://doi.org/10.3390/math9182303>.

10. Carlotto M.S. . A síndrome de Burnout e o trabalho docente. *Psicologia em Estudo* 2002, 7, 21–29. [CrossRef].

11. Miguel C. i inni. Impact of COVID-19 on Medicine Lecturers' Mental Health and Emergency Remote Teaching Challenges. . *Int. J. Environ. Res. Public Health* 2021, 18, 6792. <https://doi.org/10.3390/ijerph18>.

12. Susilaningsih Francisca Sri, et al. Quality of work-life among lecturers during online learning in COVID-19 pandemic period: A scoping review. . *Malaysian J Med Health Sci*, 2021, 17: 4.

13. Ozcan H.C. Ugur M.G., Kutlar I., Conjoined twins in a triplet pregnancy. *Saudi medical journal*, 38(3), 307–309. <https://doi.org/10.15537/smj.2017.3.16103>.

14. Mutchinick OM Luna-Muñoz L, Amar E at al. Conjoined twins: a worldwide collaborative epidemiological study of the International Clearinghouse for Birth Defects Surveillance and Research. . *Am J Med Genet C Semin Med Genet*. 2011 Nov 15;157C(4):274-87. doi: 10.1002/ajmg.c.30321. Epub 2011 Oct 14. PMID: 22002822; PMCID: PMC4457318.

15. Osterman MJK Hamilton BE, Martin JA, et al. Births: Final Data for 2020. *Natl Vital Stat Rep*. 2022;70:1.

16. Baken L Rousian M, Kompanje EJ, Koning AH, van der Spek PJ, Steegers EA, Exalto N. Diagnostic techniques and criteria for first-trimester conjoined twin documentation: a review of the literature illustrated by three recent cases. . *Obstet Gynecol Surv*. 2013 Nov;68(11):743-52. doi: 10.1097/OGX.0000000000000000. PMID: 24193193.

17. Bega G Wapner R, Lev-Toaff A, Kuhlman K. Diagnosis of conjoined twins at 10 weeks using three-dimensional ultrasound: a case report. *Ultrasound Obstet Gynecol*. 2000 Sep;16(4):388-90. doi: 10.1046/j.1469-0705.2000.00189.x. PMID: 11169318.

18. Usta IM Awwad JT. A false positive diagnosis of conjoined twins in a triplet pregnancy: pitfalls of first trimester ultrasonographic prenatal diagnosis. *Prenat Diagn*. 2000 Feb;20(2):169-70. doi: 10.1002/(sici)1097-0223(200002)20:2<169::aid-pd768>3.0.co;2 ;2-c. PMID: 10694695.

19. Castro P Werner H, Matos AP, Ribeiro G, Lopes J, Araujo Júnior E. Antenatal Diagnosis of Parapagus Conjoined Twins: 3D Virtual and 3D Physical Models. . *Rev Bras Ginecol Obstet*. 2021 Dec;43(12):985-987. English. doi: 10.1055/s-0041-1739297. Epub 2021 Dec 2.

20. Heuer GG Madsen PJ, Flanders TM, Kennedy BC, Storm PB, Taylor JA. Separation of craniopagus twins by a multidisciplinary team. *N Engl J Med* 2019; 380 (04) 358-364 DOI: 10.1056/NEJMoal805132. .

21. Liu H., Deng, C., Hu, Q. et al. Conjoined twins in dichorionic diamniotic triplet pregnancy: a report of three cases and literature review. . *BMC Pregnancy Childbirth* 21, 687 (2021). <https://doi.org/10.1186/s12884-021-04165-x>.
22. Goldberg Y Ben-Shlomo I, Weiner E, Shalev E. First trimester diagnosis of conjoined twins in a triplet pregnancy after IVF and ICSI: case report. . *Hum Reprod.* 2000 Jun;15(6):1413-5. doi: 10.1093/humrep/15.6.1413. PMID: 10831580.
23. Gao Q Pang H, Luo H. Conjoined twins in a spontaneous monochorionic triplet pregnancy: A case report and literature review. . *Medicine (Baltimore).* 2021 Jan 29;100(4):e24490. doi: 10.1097/MD.00000000000024490. PMID: 33530268; PMCID: PMC7850647.
24. Talebian M Rahimi-Sharbat F, Shirazi M, Teimoori B, Izadi-Mood N, Sarmadi S. Conjoined twins in a monochorionic triplet pregnancy after in vitro fertilization: a case report. . *Iran J Reprod Med.* 2015 Nov;13(11):729-32. PMID: 26730249; PMCID: PMC4695689.
25. Sepulveda W Munoz H, Alcalde JL. Conjoined twins in a triplet pregnancy: early prenatal diagnosis with three-dimensional ultrasound and review of the literature. . *Ultrasound Obstet Gynecol.* 2003 Aug;22(2):199-204. doi: 10.1002/uog.185. PMID: 12905520.