Edukacja zdalna i efekty uczenia się

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Distance learning and the quality of academic education in the COVID-19 period

Zdalne nauczanie a jakość kształcenia akademickiego w okresie COVID-19

Słowa kluczowe: szkolnictwo wyższe, jakość kształcenia, nauczanie zdalne.

Streszczenie: Artykuł koncentruje się na tematyce jakości zdalnego kształcenia na poziomie szkolnictwa wyższego. Dynamice rozwoju tej formy edukacji sprzyjał rozwój technologii cyfrowych i coraz powszechniejszy dostęp do szerokopasmowego Internetu. Istotną rolę ma tu również przenoszenie (i powszechna akceptacja z tym związana) wielu sfer aktywności człowieka do cyfrowego odpowiednika realnego świata.

Wybuch pandemii wywołanej COVID-19 masowo zmusił do implementacji szkolnictwa w ten wirtualny świat. Umożliwiło to realizację programów kształcenia bez naruszania jego ciągłości. Jednakże gwałtowność oraz ogromna skala tychże działań stawia pod znakiem zapytania poziom ich jakości. W publikacji dokonano prezentacji zgromadzonych wyników badań w niniejszym zakresie. Autorzy mają świadomość, iż zamieszczone treści stanowią jedynie zarys poruszanej problematyki.

Key words: higher education, quality of education, distance learning.

Abstract: The article focuses on the quality of distance learning at the higher education level. The dynamics of the development of this form of education was fostered by the growth of digital technologies and the increasing access to broadband Internet. An important role is also played by the transfer (and universal acceptance related to it) of many spheres of human activity to the digital equivalent of the real world.

The outbreak of the COVID-19 pandemic has massively forced the implementation of education in this virtual world. This made it possible to implement educational programs without disturbing its continuity. However, the violence and the huge scale of these activities call into question the level of their quality. The publication presents the collected research results in this field. The authors are aware that the posted content is only an outline of the issues discussed.

Introduction

The demand on the labour market and the expectations of employers have drawn a new shape of the profile of the employee. "All transformations we are dealing with nowadays shape a new model of human life, in which each individual is a kind of "individual" – unusual, but able to adapt to the general public. Functioning in the modern world requires, first of all, a change in thinking about the need for security, durability of choices, educational plans, and life plans. The constantly changing labour market, in some way, forces an individual to look differently at the current goals, assumptions and the manner of their implementation. He or she expects flexibility, mobility and creativity. A young person has to come to terms with it and try to meet the requirements of a globalised economy".[1]

This forced changes in educational services, especially at the level of academic education. A significant change relates to the increasing and more frequent use of new technologies. These, in turn, favour and, in a way, force the development of distance education. Along with the development of e-science, the attitude of the young generation to the aspect of studying also evolves. This affects its pro-quality pre-orientation and "modernity", which more and more often become part of the list of student expectations.

This modernity can be related to the use of the potential of new information technologies and multimedia techniques for the purposes of higher education (and not only). Universities introduce the so-called *blended learning* (combining classic forms of learning with distance learning), and during the COVID-19 pandemic, they were forced to completely transfer the education process to the virtual world. Not all universities (especially private ones) were ready for such sudden changes. The source of the problems here was not only the lack of resources, but also the resistance or insufficient training of the teaching staff in the efficient use of educational platforms.

Few words about the quality of education

The concept of quality of education is understood in various ways. It cannot be described with a single indicator, and different entities point to different elements determining its quality.[2] Relating the term quality to the aspect of academic education, quality can be seen as the optimal preparation of an individual (student) to function in a constantly changing reality. And therefore, high-quality education favours the adaptation abilities of an individual in terms of social functioning in the period of constant changes.

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1 W. Duda, *Mobilność edukacyjno-zawodowa uczniów szkół zawodowych*, ORE Publishing, Warsaw 2018, pp. 13–14.

2 Y. C. Cheng, W. M. Tam, *Multi-models of quality in education*, „Quality Assurance In Education" 1997, Vol. 5, No. 1, MCB University Press, p. 23.

Polish education has already struggled with difficult situations. The current shift towards the quality of education is a welcome change from the 1990s. The demographic boom of that time universalised education by lowering its quality. It was then that didactic tourism developed dynamically. The conditions of education have also deteriorated. Moreover, the uninteresting situation was aggravated by the lack of standards, especially at private universities. [3] Then, after the period of the educational boom, the number of people willing to study decreased along with the demographic decline. Thus, many universities have kept admission requirements to a minimum. Once treated as elite higher education, today it is perceived in terms of masses. At the same time, one should remember about not entirely correct decisions regarding subsequent reforms of education at lower levels.[4]

The above-mentioned factors determining the quality of education do not, of course, cover their entire spectrum. They only signal the complexity and multiplicity of these determinants. At the same time, difficulties brings the definition of the concept of quality of education itself (as already mentioned), which can be related to meeting the expectations and needs of customers.[5] Harvard's activities fit perfectly into this approach to the quality of education. This university gained prestige and reputation "not because the state gave it a lot of money or someone wrote a wise law to promote the best US universities. Harvard has become a synonym of quality in higher education, as after the Civil War it was the first university to adapt to the needs of a dynamically developing society. [...] Students were allowed to choose a significant part of subjects, new, practical directions were introduced, the program of scientific research was developed".[6]

Universities focused on the quality of education are called learning schools. The concept of a learning organisation formulated in the 1980s can be cited here. In this approach, a university is treated as an organisation focused on permanent development in order to properly adapt to the conditions of the changing reality. It is possible when organisation is open to new ideas, puts emphasis on employee improvement and the processes of creating or acquiring knowledge.[7] And so, the answer to technological progress and the possibilities offered by modern technology will be the option of distance learning (e-learning). It is also important that "the process of education in a learning higher education institution takes into

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3 D. Kukla, *Marketisation of higher education in the face of changeability of the labour market*, „Szkoła-Zawód-Praca" 2017, no 17, p. 55.

4 A. Rosół, *Jak badać i kształtować jakość kształcenia w szkole wyższej?* „Pedagogika" 2016, t. XXV, p. 21–22.

5 M. Jelonek, J. Skrzyńska, *Jakość kształcenia w szkolnictwie wyższym – uwagi wstępne,* [in:] W. Przybylski, S. Rudnicki, A. Szwed (red.), *Ewolucja jakości dydaktyki w szkolnictwie wyższym. Metody, narzędzia, dobre praktyki*, Krakow 2010, p. 19.

6 P. Dobrowolski, *Ile są warte studia w Polsce*, „Wprost" 2009, no 40, p. 32.

7 B. Mikuła, A. Pietruszka-Ortyl, A. Potocki, *Zarządzanie przedsiębiorstwem XXI wieku. Wybrane koncepcje i metody*, Difin Publishing, Warsaw 2002, p.

account the factors enabling the implementation of the assumptions contained in the NQ".[8]

Methodology of research

The research used the method of a diagnostic survey carried out with the use of the online survey system Survio.pl used for the preparation of questionnaires and data collection. The authors of the publication conducted research on the needs, expectations and assessment of participation in courses on the Moodle platform carried out at one of the public universities of the Silesian Voivodeship. The survey included both single-choice and multiple-choice questions. In addition, a telephone interview was conducted with a group of university teachers.

The aim of this study is to outline the challenges, problems and needs in terms of the quality of distance learning. The main research problem was to recognise the quality of distance education guaranteeing. Students and teaching staff participated in the research. The research used questionnaires prepared for their needs – a version for students and lecturers. 130 students and 27 teaching staff participated in the research conducted in spring 2020.

Distance teaching and the quality of academic education – analysis of own research

The quality of the education process is determined by, among others, a proper choice of methods and forms. The pandemic time caused by COVID-19 forced higher education to implement the education process using modern technologies. This caused a stir in the academic community. Although e-learning has so far been implemented at many universities, the scale of its application has not been that large. Never in the history of Polish education has remote teaching replaced *face to face* education. The difficult situation was aggravated by the ubiquitous uncertainty about returning to the university premises, accompanying both employees and students.

It is interesting that three trends have emerged among academics that define the attitude to e-science. And so, based on the conducted interviews, a short description of was made. This prompted its division into three groups: opponents, supporters and the undecided.

In the surveyed group of academic lecturers, 27% of the respondents are lecturers with a positive attitude towards the implementation of classes in the form of e-learning courses. This group of respondents included people under 45. Supporters are usually young people, familiar with the operation of distance learning platform and with better knowledge of the world of technological innovations. This group also included people who have used e-learning in previous years. On the other hand, the group of undecided lecturers (44.4% of the respondents) were mostly

[8] J. Bakonyi, *Doskonalenie jakości kształcenia szkoły wyższej jako organizacji uczącej się w świetle wymogów Krajowych Ram Kwalifikacji*, „Zeszyty Naukowe Wyższej Szkoły Humanitas. Zarządzanie" 2012, no 2, p. 202.

teachers who knew about the platform and had contact with it. However, they did not conduct classes with its use. This group of respondents included people aged 46–57. However, the opponents are the so-called old guard (academic lecturers over 57 years of age). Units that are reluctant to use technological opportunities. They have a skeptical attitude towards them, they lack knowledge in this regard, etc. The respondents from this group constituted 18.5% of all surveyed respondents.

Lecturers participating in the study were also asked about the sources of their reluctance to use new technologies in education. However, one should take into account the situational context of the conducted research, which is related to the specificity of the situation caused by COVID-19. The authors have in mind, inter alia, the suddenness of introducing e-courses, the general chaos caused by the initial lack of specific guidelines for the classes or the return to traditional forms of teaching, and social isolation.

The overwhelming majority of lecturers participating in the survey (85.1%) indicated the need for a rational division between classes conducted in the traditional form and those conducted in the form of e-courses. It is an important indicator suggesting that the so-called *blended learning* can be an optimal solution between tradition and modernity. Moreover, the respondents considered the necessity to suddenly transfer the education process to the virtual world overnight. The suddenness of such a change was indicated by 70.3% of the interview participants as a source of reluctance. 62.9% of the surveyed lecturers indicated the lack of training / preparation in the use of the e-learning platform. The further responses covered: limited possibilities to prepare materials for students (44.4%), aversion to something new / unknown (29.6%), lack of good equipment or the Internet (25.9%), negative perception of e-learning (18.5%), reluctance to change in relation to something they are used to / liked (14.8%), laziness (11.1%). In addition, 7.4% of the surveyed lecturers indicated the unpleasant obligation to conduct classes on the platform on behalf of senior employees.

It is worth to emphasise the specific nature of functioning of the studied group, which could have influenced the nature of the answers provided. It is difficult for academics to admit their reluctance to learn, fear of the unknown or reluctance to experiment, which often results from the schematic thinking. Only 3 respondents indicated the aspect of laziness. Only two lecturers admitted that they conduct classes on the e-learning platform not only for themselves, but also for their supervisor. While the authors of this text suppose that the scale of this phenomenon is larger. At the same time, it is worth emphasising that the negative perception of this form of learning may still be a barrier to the development of e-learning, as indicated by 5 respondents. In this context, it should be noted that these factors will constitute elements, at least partially, determining the quality of remote classes.

Academic lecturers were also asked about the ways of online classes they used. The most frequently chosen answer (74%) was sharing materials in the form of a course

on the Moodle e-learning platform and sending materials via e-mail (59.2%). 11.1% of the respondents indicated that the lecture was delivered 'live", for example via Skype, MS Teams or Zoom. None of the research participants indicated posting their e-lectures on YT (YouTube) etc., which would make it possible to play them multiple times at any time. Freedom, multiplicity and, in this case, attractiveness (these are audio-visual materials) may suggest that this method of delivering lectures is the most desirable. Unfortunately, as shown by the above data, the potential of YT was not used. By continuing with further research, it would be worth to check the reasons.

It is worth emphasising that the lecturers participating in the study most often provided students with materials in the form of links to websites (81.4%), PDF files (74%), scans of articles / books (55.5%), and prepared PowerPoint presentations (44.4%), a Word document with the prepared material (40.7%). These data suggest that the less frequently chosen forms of sent materials are those that required more work in their preparation.

Creating electronic educational materials presents lecturers with new challenges. It should be emphasised that "the quality of presented content translates into the "quality of the student's knowledge" and is largely responsible for the success of the entire project – teaching via the Internet". [9] It is important to transfer "some components of the didactic process from verbal communication to the presented content. Such ingredients are, for example, techniques of focusing attention and maintaining motivation to learn. Educational materials fulfilling these roles should be much more attractive and varied compared to the materials used in traditional education (...)".[10] While links to websites can refer participants to various content, e.g. films, animations, PDF files, scans of books or texts in a Word file are not very attractive. The factors determining the attractiveness of e-learning indicated by the surveyed students will also be discussed in the further part of this study. It should be remembered that attractiveness usually "goes hand in hand" with quality. And the very quality of education should be assessed in terms of its effectiveness.

It is interesting that when asked about which form of activity, they most willingly used on the e-learning platform, students most often (53.8%) indicated files prepared by lecturers, i.e. less varied and attractive content. Perhaps this is due to the situation where, due to isolation, the use of ready-made content causes the least problems. It does not require leaving home. It limits the student's activity to a minimum. These were followed by: tests / quizzes (49.2%), tasks to be performed (36.9%), participation in discussion forums (35.4%), files sent for elaboration (29.2%), links to pages (13.8%). The last place was taken by the "websites" category (6.2%). Another

[9] Z. Drążek, T. Komorowski, *Problemy tworzenia materiałów dydaktycznych w technologii e-learningu*, [in:] Dąbrowski M., Zając M., (red.), *E-learning w kształceniu akademickim*, Foundation for the Promotion and Accreditation of Economic Studies Publishing, Warsaw 2006, p. 64.

[10] Ibid., p. 65.

aspect worth extending knowledge in further research will be the determination of the level of adjustment of remote work forms to the content provided.

At the same time, 58.5% of the surveyed students assessed the use of the content provided via the platform as comfortable. For 7.7% of respondents, such access to materials is very comfortable. 24.6% of respondents considered the use of online content to be uncomfortable. None of the students indicated the answer "very uncomfortable". On the other hand, the answer "hard to say" was given by 9.2% of the surveyed students. Another issue is to verify whether the materials provided by teachers were really helpful in preparing for classes.

Teaching staff were also asked about the methods of communication with students. It turned out that the answers provided referred to only two forms: phone calls (85.1%) and chat communication (37%). Meanwhile, 33.8% of students asked about the need for contact indicated that they largely lack direct relations with lecturers. Even larger group (46.1%) constituted students who experienced the lack of direct contact, especially when performing certain tasks or studying specific content. 16.9% of the surveyed students did not indicate the need to contact the teacher regardless of the circumstances, and 3.1% of the respondents chose the answer "I don't know".

The surveyed group of students was also asked to indicate the degree of satisfaction with their current academic achievements obtained both during traditional classes and in distance learning.

And so, 66.2% of the surveyed students indicated their satisfaction with academic achievements in traditional teaching. 27.7% are very satisfied with their achievements. 3.1% of students are dissatisfied. The same group of respondents had a problem with determining their level of satisfaction. However, in the group of very dissatisfied people, no student was found.

Using the same scale to assess the level of satisfaction with academic achievements during distance learning, 55.4% of respondents indicated their satisfaction. Very satisfied students were significantly less than in the case of traditional education (6.2%). At the same time, there was an increase in the number of students dissatisfied (15.4%) and very dissatisfied (9.7%) with their academic achievements. The answer "don't know" was given by 15.4% of the respondents. It is worth adding that the level of academic achievement is influenced by the appropriate selection of teaching methods, which should be adapted to the needs, capabilities and preferences of the audience. On-line teaching makes it difficult to diagnose them, and then to choose the optimal method of delivering subject content. As Paweł Zeller points out, noticing the individual needs of a student should be one of the elements proving the quality of education.[11] Another factor will be the involvement of the students themselves in the distance learning process.

[11] P. Zeller, *Marketingowe zarządzanie uczelnią wyższą*, [in:] K. Rogoziński (red.), *Marketing usług profesjonalnych*, Poznań 2002, p. 172.

At the same time, it is worth noting that 44.6% of the surveyed students positively evaluate their experiences related to online learning. In turn, 30.8% of students gave a negative assessment in the indicated aspect. 24.6% of the respondents indicated the answer "I have no opinion". Therefore, three tendencies have emerged that allow students to be assigned to one of the three groups: positive, negative and undecided.

One of the questions addressed to students related to the willingness to participate in remote classes in the next academic semester. 35.4% of the studied group of students showed such willingness, however, this applies only to some courses. An affirmative answer was also given by 26.2% of the respondents, noting that lecturers should commission fewer tasks to be performed. This may suggest that the remote workload is inappropriate in relation to the number of hours and ECTS credits allocated to a given course (subject). Reluctance to this form of study was shown by 20% of the surveyed students. An affirmative answer was given by 12.3% of the surveyed population without any objections. The answer "yes" indicating the need to diversify the content was given by only 1.5% of the respondents. However, 4.6% of the respondents did not have any opinion on this subject.

Students were also asked about the factors that were the source of reluctance to learn online. In this case, almost half of the respondents (49.2%) indicated difficulties in organising time to study. Subsequently, the respondents pointed to the lack of direct contact with the teacher (44.6%) and the fact that studying alone takes much more time (44.6%). It is worth adding that contact with the teacher is an important element of the education process. Another group of research participants (20%) see the sources of reluctance to distance learning in the limited possibilities of contact with lecturers, which are reduced only to the exchange of e-mails or information exchange via the platform. The strong will to learn systematically was indicated by 41.5% of the surveyed students. Technical difficulties, such as lack of Internet access or problems with the Internet (poor connection), discourage 26.2% of respondents from distance learning. 16.9% of the respondents indicated limited contact with other participants of the classes.

Referring to the above answer relating to the need to spend more time on-line learning, it should be added that 43.1% of students spend 2–3 hours a day on independent e-learning. 36.9% spend less than two hours a day studying, and 12.3% of the surveyed students spend 3–4 hours. Only 7.7% of students spend more than 4 hours studying.

Students participating in the study were also asked to assess the preparation of lecturers to conduct remote classes. 41.5% of the respondents indicated that they were well prepared, 1.5% assessed the preparation of lecturers as bad. According to 4.6% of students, lecturers are very well prepared. Subsequently, 20% of the respondents indicated that only some lecturers are well-prepared or prepared in a satisfactory manner. 9.2% of the respondents selected the answer indicating

that only some lecturers were very well prepared for the classes. 3.1% of research participants had problems with making such an assessment.

Returning to the issue of increasing the level of attractiveness of e-science (which has already been mentioned in the context of the development of teaching materials), its attractiveness is influenced by the number of works/tasks to be performed. For 55.4% of the surveyed students, reducing the number of tasks will make distance learning attractive. Significant for 41.5% of the respondents was the extension of time allocated for submitting individual works/tasks. 33.8% indicated that the forms in which the content is sent should be diversified, and 26.2% of the respondents indicated the need to diversify the tasks. Then, they were: the possibility to improve work/tasks (23.1%), extending the time to access the course (18.5%), posting feedback, comments on the tasks performed (18.5%), improving the qualifications of lecturers conducting distance learning activities (16.9%), encouraging the teachers to contact the students more often (13.8%) and carrying out summary classes (6.2%).

The surveyed students were also asked to indicate the advantages of e-learning. More than half of the respondents (58.5%) see the advantages of saving time spent on commuting. The second most frequently chosen category (55.4%) of answers relates to the possibility of adjusting studying to lifestyle and other duties. 55.3% of respondents indicated savings in money spent on travel/accommodation. For 36.9% of respondents, the advantage is the possibility of returning to specific content any number of times. Easy access to learning materials provided by lecturers is an advantage indicated by 32.2% of students. In turn, the possibility of learning at home was indicated by 26.2% of respondents, and the ease of use of the e-learning platform was indicated by 9.2%. Only 6.2% of students chose the answer regarding easy contact with lecturers.

Similarly to the question about the advantages of e-learning, the surveyed students were also asked about the disadvantages of this form of teaching. The time-consuming process of distance learning is one of the most frequently mentioned. This answer was given by 58.5% of the surveyed students. Subsequently, the surveyed students chose: limited contact with the lecturer (48.5%), no study atmosphere (40.8%), the need to have appropriate predispositions to self-study, i.e. regularity, patience (33.1%), the need to have an appropriate hardware and the Internet (24.6%).

Elimination of the above-mentioned disadvantages (and not only them) and developing the potential of e-learning included in, inter alia, the abovementioned advantages will contribute to the improvement of the quality of e-learning. At the same time, it should be remembered that this text is not exhaustive, but only introduces the issues discussed. It is worth mentioning the problem with the implementation of student internships. Their implementation online does not fulfil their idea. The challenge here is to organise the student's work in such

a way that he or she can achieve the learning outcomes set out within them. And while equipping students with knowledge or skills requires effort and creativity, developing competences without actually participating in internships is very difficult. An additional challenge is to mobilise participants and train them in such a way that they can cooperate remotely, taking care of the quality of on-line internships. In this aspect, the virtual implementation of designated internships, where there are no developed procedures, may have a negative impact on the quality of the education process.

Conclusions

In the light of the collected data, it can be tempted to draw a picture indicating the deficiencies determining the development of e-science. We still lack staff efficiently moving around in the world of virtual education and appropriate technological facilities (although this problem is gradually being eliminated). The authors of this study, based on their own experience, can point to problems with university e-mail servers and network overload that make participation in the courses difficult. We also forget that the methodology of distance learning is slightly different than in classical teaching, and the development of materials and tasks for students requires an increased amount of work. At the same time, the fact that the use of new technologies by the modern generation of students is already embedded in their environment may indicate that difficulties in adapting to distance learning should not be seen in their mental barriers.

The effectiveness of online learning increases in conjunction with activities carried out in a traditional way. Their complementarity will translate into the quality of education. Unfortunately, the social isolation resulting from the current pandemic has transferred the learning process completely into the world of distance learning.

However, it should be emphasised that remote learning gives us a chance to improve the education process. The experience gained in this field is conducive to planning valuable tasks, a selective approach to the selection of content, so that they allow for the efficient adaptation of students to the needs and expectations of the modern world, stimulate their activity and develop a sense of responsibility for their own academic achievements.

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