Student evaluation of online learning during the COVID-19 pandemic

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ABSTRACT

The aim of the paper is to provide knowledge with regard to what extent a student's engagement, travel time to the business school, and nationality determine their perception of the value of business school education. We have analyzed what determines the evaluation of online studies, the frequency of participation in online courses, and the preferences regarding the mode of study in the future (offline vs. online). For this purpose, we conducted research in late March and early April 2020 among management students attending one business school in Warsaw. The respondents included native residents of Poland, as well as migrants from countries of the former Soviet Union. We analyze survey responses provided by 317 respondents. We used the chi-squared test, the Kruskal-Wallis test, and the Mann-Whitney test to verify relationships between variables. According to the analysis, the student engagement variable determines the current evaluation of online studying, the change in frequency of participation since the introduction of online classes, and the preferred mode of study (online or offline). The time required to commute to the business school determines only the preferred mode of study in the future, while students' nationality determines their assessment of online studying and the frequency of participation in online courses.

1. Introduction

Modern technologies encroach on all spheres of human life including both learning and teaching (Lepičnik-Vodopivec et al., 2020). These technologies are accessed and used vastly in the private domain, and the latest pandemic has shown how invaluable they are to continuing business operations and fulfilling employment responsibilities. For organizations to withstand the changes brought by the COVID-19 pandemic in 2020, they had to break with standard procedures and adopt new ones. Allowing employees to work remotely from home became the new normal on an unprecedented scale. The same necessity to embrace these new pandemic-imposed conditions, such as social distancing and a frozen economy, needed to be addressed by the higher education sector as well. Both professors and students were forced to re-think the use of available tech resources to both deliver higher education services and to benefit from those services. As question remains, however, as to whether this new setup can be effective.

The COVID-19 pandemic and the consequent lockdowns introduced major changes in behavior regarding work, cooperation, learning, and the purchasing of goods and services (Elyassi, 2021; Ruiz Estrada et al., 2021). These sudden changes have put unprecedented pressure on the

Internet's infrastructure (Favale et al., 2020). We can observe rapid use of e-learning platforms such as MS Teams or Zoom. Students have an increased awareness regarding the usefulness and advantages of e-learning (Al-Fraihat et al., 2020). However, e-learning can cause tremendous difficulties for both students and teachers alike. Students often become isolated and alienated due to their hesitation to participate in online communities. This may stem from any number of factors, such as personality, sense of transactional distance in the online environment, lack of confidence and trust in the participants in an online community, lack of nonverbal communication (facial expression, voice tone, etc.), connection difficulties (e.g., low internet speed), poor writing skills or language barriers (Rasheed et al., 2019). For teachers, preparing for online courses is much more time-consuming than preparing for face-to-face learning in a classroom (Guri-Rosenblit, 2018). A further challenge for the academic community in preparing online courses is the issue of intellectual property rights (Guri-Rosenblit, 2018).

The COVID-19 pandemic took conversations about online teaching to a new level: instead of offering a few select, often extra-curricular, online courses, universities and business schools had to turn full undergraduate and postgraduate programs virtual. New skill sets, capabilities, and venues had to be mastered and created, both by students

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and professors. After several months (totaling to nearly two years now) of operating in this new highly virtual mode, the time has come to evaluate the efficiency and effectiveness of these efforts. Asking questions around the quality of online teaching and student satisfaction is crucial as any unresolved issues may have long term consequences for the structure of the higher education sector and the future format of the programs designed and offered.

It is important to measure student satisfaction in education, where student satisfaction and student motivation are the results of student interactions with the educational environment in the form of students' perceptions of the educational services (Stukalina, 2012). This paper addresses this topic, restricting its scope to the business school environment, and undergraduate and master's programs in a business school environment. We explore how students evaluate being taught online, how often they participate in online courses compared to face-to-face courses, and ultimately which mode of learning (offline or online) they would prefer post-pandemic. We analyze how these factors are determined by the student engagement and attitudes towards learning, by the distance students had to travel from home to business school before the pandemic, and by student nationality. Therefore, the aim of the paper is to provide an insight into to what extent student engagement, travel time to the school, and nationality determine their judgement of the perceived value of online education in a business school. Our study was conducted among management students attending one business school in Warsaw, Poland. The respondents included native residents of Poland, as well as migrants from countries of the former Soviet Union.

The remainder of this paper is structured as follows: The second section presents the theoretical background. The third section identifies the research hypotheses and describes the methods. The fourth section analyzes the research results. The final section presents the conclusions as well as a discussion of the work's implications, limitations, and scope for future research.

2. Theoretical background

2.1. COVID-19 pandemic, digital technologies and higher education

The COVID-19 pandemic is not the first time that higher education institutions have introduced programs making use of digital technologies; however, the resulting lockdowns have sped up the process of university digitalization and have forced universities to provide online programs on a much larger scale. The current form of online education started in the 1990s with the advent of the Internet and World Wide Web and continued to develop as information and communication technologies advanced and became more sophisticated. According to Kumar et al. (2019), online learning is not merely a passing trend that impacts universities but a burgeoning standard in education. Hsu et al. (2012) second this claim, stating that learning is no longer restricted to the traditional in class and on campus environment. Online business education in particular is becoming increasingly common in response to the growing needs of a changing student population and increased competition on the education market. E-learning and teaching business online have unique challenges when compared to their more traditional classroom counterparts. Effective online teaching promotes the concepts of a nimble organization from the managers' perspective. It requires preparation and training for both teachers and students as well as consistent planning (Cong, 2020). However, the COVID-19 pandemic exposed the shortcomings of the existing systems and forced their revision. The pandemic has sparked discussion regarding online curricula and whether it should become an element of the competitive advantage of universities and business schools and a permanent feature of their development strategy.

We recognize the role of digital technologies in the rise of online education. Digital technologies have given rise to the fourth industrial revolution (World Economic Forum, 2016) and digital transformation (European Commission, 2017); in the context of higher education, they change the way we approach teaching and learning. The infusion of new digital technologies, such as mobile computing, cloud computing, social media, 3D printing, and data analytics, into various aspects of innovation and entrepreneurship has also transformed the nature of the uncertainty inherent in entrepreneurial processes and outcomes as well as the ways of managing such uncertainty (Rippa and Secundo, 2019). The diffusion of digital technologies has created new avenues for the development of entrepreneurial projects by leveraging collaboration and collective intelligence (Elia et al., 2020). While the business applications of these movements are unquestionable, Whitaker, New and Duane (2016) still argue that it is not entirely clear whether IT has truly "transformed" management education. Academic and educational settings require further research in this respect.

We define distance education in line with Bourdeau and Bates (1997) and assume that this type of education is computer-based, remote, or asynchronous and supported by some instructional system. Online education is driven by the emergence of new technologies, the widespread adoption of the Internet, and the intensifying demand for a skilled workforce for a digital economy. The advances of digital technologies facilitate the move from traditional learning to learning embedded into our everyday environment. What used to be limited by time and physical place, e-learning guarantees anyone who can use a mobile device can access knowledge (Vidal García, Blasco López and Sastre Castillo, 2019). The advancement and use of mobile technologies to support learning (such as smartphones, tablets, and microcomputers) is progressing rapidly as their accessibility increases in both developed and developing countries. Therefore, distance education is becoming popular among new and diverse groups of potential students. Students are beginning to discover that online courses can offer a more convenient and flexible way to take courses that will lead to a business degree. For some students, it may be the only practical method to access their desired degree programs and courses.

2.2. Type of students and online education

Changes in education delivery models have been profound and have generated both opportunities and threats as recognized as such by various groups of stakeholders. A prominent threat addresses the quality and effectiveness of online education. The need to ascertain accountability for online learning seems understandable if we assume an exponential demand for online education and increasing competition in the field. The learning outcomes of online students have been shown to be similar to those in face-to-face settings (Palloff and Pratt, 2001; Redpath, 2012). Spooner et al. (1999) perceive no differences in cognitive factors (such as the amount of learning, academic performance, achievement, and examination and assignment grades) between online classes and traditional campus-based classes. Krishnamurthy (2020) argues that while online learners perform marginally better than students in traditional classroom environments, and blended learning approaches might be fruitful, faculty members remain skeptical about the efficacy of online learning.

Different studies have designed various frameworks to test or evaluate the effectiveness of online teaching versus face-to-face learning in achieving learning outcomes. Robinson and Hullinger (2008) argue that studies on the effectiveness of online learning fall into three broad categories: (1) student outcomes, focused on test scores and grades; (2) student attitudes about learning; and (3) overall student satisfaction with online learning. Whitaker et al. (2016) also identify three broad categories to analyze research on student learning in online education, though using slightly different terminology. They identify: (1) ways in which technology tools can address student learning, (2) similarities and differences in learning outcomes between in-class, online, and blended course formats, and (3) the appropriateness of online education for various student types.

This paper deals with the third category in both frameworks; it

focuses on the various types of students enrolled in business courses and the ways these students use technology in online education. If we agree that online education requires students to take more responsibility for their learning, then a student's choice of course format may signal their motivation level (Klein et al., 2006). Knowing that online courses allow for less active participation (lurking behavior) (Küçük, 2010; Ruthotto et al., 2020), the question then emerges: who is more likely to positively assess online classes? Students who are engaged or disengaged? Additionally, universities and business schools in Poland were obliged to record and archive courses conducted online, which may further contribute to reducing student participation in the course in real time (Dommett et al., 2020; Drouin, 2013). Therefore, students who are disengaged or who do not actively participate should be more likely to prefer online courses. Similar conclusion was drawn from Al-Azzam et al. (2020) study, who uncovered that the engagement of medicine and dentistry students was one of the factors influencing their preferences regarding the study mode. In effect, we believe that students' motivation and engagement constitute the key factor to predicting and/or evaluating their attitude towards online learning and willingness to join classes both in the present and in the future. The evaluation of online learning relates to the perceived quality, appropriateness, suitability of the methods, as well as suitability for a particular student. Student engagement is measured here as the time and effort that students devote to study and the undertaking of various activities in their academic journey (Kuh, 2003; Robinson and Hullinger, 2008).

We focused not only on the conditions the online courses are conducted in and how programs are tailored exclusively to the online space, but also student characteristics. It is suggested that student profiles are equally important, with specific traits and attributes determining preferences for the mode of study. To create a profile of the typical online business education student, various factors, demographic and psychographic, need to be considered.

The intensity of participation in online courses varies depending on demographic characteristics such as age, race, and ethnicity. (Ruthotto et al., 2020). Smith and Rupp (2004) considered whether students were intermediate or advanced computer users, whether they work full or part-time, their age, and whether they were participating in their first online business education class. Evans and Haase (2001) tested the background of distance education through demographics, courses versus programs, reasons for enrolling or not enrolling, desired features, customer service expectations, tuition, prestige and value, and institutional attributes. The results of another research confirm the link between students' age, occupation, and overall use of technology, as well as between the use of technology and increased confidence regarding digital competences, especially in learning languages online (Arrosa-garay et al., 2019). Students' performance in online learning is strongly linked to their demographic characteristics, such as regional affiliation, socioeconomic status, educational level, age, gender, and disability (Rizvi et al., 2019).

We decided to focus on two more factors/descriptors that are meaningful in the Polish context: travel time to the business school and nationality. The first one relates to the accessibility and convenience of the educational programs offered. With the increased interest in achieving a higher education degree, students of various backgrounds look for different options to develop skills and increase their chances on the job market. The desire to save time is one of the factors that influences the change in preference towards distance learning (Al-Azzam et al., 2020). According to Secundo et al. (2021), distance learning allows some students to overcome the difficulty of moving away from home. The proximity of their location to university correlates with the commute time.

The existing literature indicates the globalization of higher education (Zheng, 2014) and underlines the key role of national culture in terms of consumer behavior (De Mooij, 2013; Hofstede et al., 2010), which translates into attitudes and preferences also in relation to education and a professional career. With regards to international students, it also

entails the choice of which country they wish to study in. While the country of origin of a student must be noted as an influencing factor, the location of a chosen university and its broader economic, political, and social factors is of critical importance. When researching the antecedents of the international students' reasons to study in the UK, Zheng (2014) noticed that the home country's economic wealth and demographics, relative exchange rate, historic/linguistic link, and government preferential policies matter. In the case of international students originally from developing economies, a wide range of economic, social, and political factors dominate decisions to study in the UK, whereas for students from developed countries, it is their home country's economic wealth, population, and bilateral trade that determines their choice of the UK. For our own research context, international students choosing Poland come from neighboring countries from the East, and their motivation to study abroad has similar economic grounds.

In Poland, the influx of large numbers of students from the countries of the former Soviet Union is a particularly interesting phenomenon (Hut and Jaroszewska, 2011). Poland is a popular educational destination among Ukrainians. It is rated highly among this group, and the cost of living and studying is lower than in countries of Western Europe. Young Ukrainians choose Poland in order to obtain a European diploma. They are the poorest group of all the international students in Poland with their stay funded mostly by family. Online studies might be perceived in terms of money savings as it does not require relocation to a foreign country. This raises the following questions: Will students from the countries of the former USSR be interested in studying online, without having to leave their home country? Are there differences in the perception of online learning between Polish and Ukrainian students? And is it possible to observe similar student behaviors in other regions too?

Young Ukrainians do not want to return to their home country after graduation. More than half of them are planning to stay in Poland and one third are planning to go further west (Długosz, 2018). The most common motivation for Ukrainians to study in Poland is to improve their chances on the labor market. In their opinion, foreign universities offer higher education standards. At the same time, they consider completing studies abroad a "good mark" on their CV (Rębisz, and Sikora, 2015).

The considerable number of Ukrainian migrants is the result of Poland and Ukraine being neighbors and the attractiveness of large cities, but also the effect of administrative solutions encouraging long-term stay, for instance, by facilitating access to the labor market for specific categories of migrants (e.g., students, graduates of Polish universities and business schools, holders of the Pole's Card [Karta Polaka]). (Brunarska et al., 2016). Those students are most often employed in trade and catering (Skoczyńska-Prokopowicz, 2018). That said, these students often encounter language difficulties. Language barriers are encountered in many countries, not only Poland, as identified by Rasheed et al. (2019).

3. Study design & methods

After analyzing key themes uncovered in the literature review, and after considering the current student situation in Poland, we decided to focus on three main variables: student engagement, travel time to the business school and student nationality. These aspects all reflect and influence a student's evaluation of online courses and the overall learning experience. As a result, the following hypotheses are proposed:

H_1: Student engagement determines the evaluation of online studies.

H_2: Student engagement determines the frequency of participation in online courses.

H_3: Student engagement determines the preferred form of studying in the future.

H_4: Student travel time to the business school determines the evaluation of online studies.

H_5: Student travel time to the business school determines the

frequency of participation in online courses.

H_6: Student travel time to the business school determines the preferred form of studying in the future.

H_7: Student nationality determines the evaluation of online studies.

H_8: Student nationality determines the frequency of participation in online courses.

H_9: Student nationality determines the preferred form of studying in the future.

The study was conducted by means of an online questionnaire distributed in late March and early April of 2020. The final version of the questionnaire was based upon the pilot study and was also formed in a process of substantive discussions among experts in the domain. The snowball method was used to collect data. The group included 317 respondents studying management at one business school in Warsaw, Poland. The respondents included native residents of Poland, as well as migrants from countries of the former Soviet Union.

To explore student engagement, we analyzed several variables such as: student assessment of online learning (related to perceived quality, appropriateness, suitability of the methods, as well suitability for a particular student), student participation in online courses, and preferences regarding online and offline learning. Students evaluated online learning on a scale of 1–10. The respondents were asked whether they have participated more often, less often or with the same frequency since the courses switched to the online form. They were also asked about the form in which they would like the courses to be conducted in the future: online or offline.

Factors that may influence student attitudes towards online learning, such as students' country of origin, travel time to the business school and students' subjective assessment of their commitment to learning, were also analyzed. A Likert scale was used to measure the responses. The respondents were asked to rate to the following sentence: "I am committed to studying by not skipping classes and through systematic learning". The following responses were available: *Completely agree, somewhat agree, neither agree nor disagree, somewhat disagree, completely disagree*. The analyses excluded the answers of respondents who neither agreed nor disagreed. All remaining responses were divided into two groups: engaged students (those who chose "completely agree" or "somewhat agree") and those who were disengaged (those who chose "completely disagree" or "somewhat disagree"). A chi-squared test and the Mann-Whitney test were used to verify the relationship.

4. Research results

The respondents included native residents of Poland as well as migrants from the former countries of the Soviet Union. 53.7% of respondents were Poles while 46.3% were foreigners from the former USRR. 26.9% of respondents were male and 70.4 female. 52% of respondents studied full time while 48% studied part time. 24.8% of respondents reported that the commute time to business school took up to 20 min. For 35.7% of respondents, it took from 21 to 40 min. For 39.5% of respondents, the commute took longer than 40 min.

When asked about their subjective assessment of their own engagement, 81.1% of respondents stated they were engaged, 11.6% stated that they were disengaged, and 7.3% could not answer this question. The mean score for online classes was 6.17, the median was 7.0 and the dominant was 8.0. 33.1% of respondents stated that since the classes were held online, their attendance improved when compared to the period when the classes were held offline. 20.2% stated that they attended the classes less often, while 46.7% declared they attended the classes with the same frequency. 43.4% of the respondents would prefer an online learning mode in the future, while 56.6% would prefer the offline mode.

Our first hypothesis concerned the relationship between student engagement and the assessment of studies conducted online. The Mann-Whitney test was used to verify the relationship. The results confirmed a statistically significant correlation between students' declarations

regarding their engagement in studying and the assessment of online learning. The assessment of online learning was higher with engaged students (Mdn = 8.0) than with disengaged students (Mdn = 3.0). A Mann-Whitney test indicated that the difference was statistically significant, $U(N_{eng} = 257, N_{no\text{-}eng} = 37)$, $z = -5014$, $p < 0.001$, $U = 2356.50$. H_1 was supported.

The second hypothesis concerned the relationship between student engagement and the frequency of participation in online courses. A chi-squared test was used to verify the relationship. The results confirmed the statistical relationship between the analyzed variables ($\chi^2 = 38.849$; df = 2; $p < 0.001$). Then, using the Z-test, we compared the proportions of the columns.

Table 1 shows the distribution of the responses concerning the frequency of participation in the courses after the lockdown, divided into self-declared engaged and disengaged groups. The analysis of data contained in Table 1 shows that a higher percentage of respondents in the disengaged group (versus the engaged group) reduced their class activity after switching to online learning. This finding indicates that the introduction of online learning does not engage disengaged students – it worsens their performance. H_2 was supported.

The third hypothesis concerned the relationship between student engagement and the preferred form of studying. The chi-squared test was used to verify the relationship. The results confirmed the statistical relationship between the analyzed variables ($\chi^2 = 11.772$; df = 1; $p < 0.001$). Then, using the Z-test, we compared the proportions of the columns. Table 2 shows the distribution of the respondents' answers concerning the preferred form of studying (online or offline) divided into engaged and disengaged groups. It is evident that respondents who reported being engaged were more likely to choose online studying than the disengaged group. H_3 was supported.

The fourth hypothesis supposed that there is a relationship between travel time to business school before the lockdown and assessment of online studying.

Initially, we examined the answers in four groups of travel time: - up to 20 min; between 21and 40 min; between 40 min and an hour; and over an hour. The Kruskal-Wallis test showed that the time needed to get to a business school does not impact student evaluations of online studying, $H(3) = 3.80$, $p = 0.284$. Because of the small number of people whose commute was over an hour long, that group was combined with the group whose commute was between 40 min to an hour long. In this situation, the Kruskal-Wallis test also showed that the time needed to get to business school does not affect student evaluations of online studying, $H(2) = 3.336$, $p = 0.189$. H_4 was not supported.

The fifth hypothesis concerned the relationship between the required travel time before the lockdown and the change in the frequency of attendance since the studies switched to the online mode. As in the case of the previous analysis, initially, we examined the assessments in four groups of travel time. In this case, the chi-squared test did not confirm a statistically significant relationship between the variables ($\chi^2 = 7.714$; df = 6; $p = 0.260$). As previously, the group whose commute was over an hour long was merged with the group with 40 min to an hour travel time, and the chi-squared test was performed again. There was no correlation between the time travel and the change in the frequency of participation in the courses since they switched to the online mode ($\chi^2 = 7.248$; df = 4; $p = 0.123$). H_5 was not supported.

The sixth hypothesis concerned the relationship between time travel and the preferred course mode (online or offline). The chi-squared test showed a statistically significant correlation between the time needed to get to business school and the preferred course mode (online or offline) ($\chi^2 = 8.255$; df = 2; $p < 0.05$). H_6 was supported. Table 3 shows that the differences in the preferred form of studying were statistically significant in the group of people whose travel time was up to 20 min and in the group whose travel time required more than 40 min.

Our final group of hypotheses concerned the relationship between the nationality of students and the assessment of online studies. The Mann-Whitney test was used to verify the relationship between the

Table 1

Distribution of responses concerning the frequency of participation in online courses in self-declared engaged and self-declared disengaged groups.

		frequency of participation in online classes			Total
		I'm more likely to participate online than before	I'm less likely to participate online than before	My participation frequency has not changed	
Self-declared engaged students	In figures	93_a	36_b	128_a	257
	In%	95.9	63.2	91.4	87.4
Self-declared disengaged students	In figures	4_a	21_b	12_a	37
	In%	4.1	36.8	8.6	12.6

Each letter in the subscript denotes a subgroup of the "frequency of participation in online classes" group whose column proportions are not statistically significantly different at a significance level of 0.05.

Table 2

Distribution of responses concerning the preferred study mode in self-declared engaged and self-declared disengaged groups.

		Preferred mode of study		Total
		Online only	Offline only	
Self-declared engaged students	In figures	52_a	51_b	103
	In%	98.1	76.1	85.8
Self-declared disengaged students	In figures	1_a	16_b	17
	In%	1.9	23.9	14.2

Each letter in the subscript denotes a subgroup of the "frequency of participation in online classes" group whose column proportions are not statistically significantly different at a significance level of 0.05.

Table 3

Distribution of responses concerning the preferred study mode among groups of students differing in terms of travel time to a business school.

		Preferred mode of study		Total
		Online only	Offline only	
up to 20 min	Size	8_a	24_b	32
	In%	14.3	32.9	24.8
21–40 min	Size	19_a	27_a	46
	In%	33.9	37.0	35.7
over 40 min	Size	29_a	22_b	51
	In%	51.8	30.1	39.5

Each letter in the subscript denotes a subgroup of the "frequency of participation in online classes" group whose column proportions are not statistically significantly different at a significance level of 0.05.

Table 4

Distribution of responses concerning the frequency of participation in online courses among Poles and foreigners.

		Frequency of participation in online classes			Total
		I'm more likely to participate online than before	I'm less likely to participate online than before	My participation frequency has not changed	
Poles	Size	61_a	19_b	92_a	172
	In%	58.1	29.7	62.2	54.3
Foreigners	Size	44_a	45_b	56_a	145
	In%	41.9	70.3	37.8	45.7

Each letter in the subscript denotes a subgroup of the "frequency of participation in online classes" group whose column proportions are not statistically significantly different at a significance level of 0.05.

5. Conclusions and discussion

5.1. Value of research

This paper focuses on the impact of digital technologies on the higher education sector and the need to create new conditions for providing online teaching services. Digital transformation is now widespread and pervasive in most industries and companies. The economy is increasingly knowledge-based, people have become increasingly connected, and the use of digital technologies creates opportunities for more dynamic, flexible, collaborative, and innovative business models and operational methods. Various researchers underline how this leads to more opportunities for innovation but also more uncertainty (Lee et al., 2011; Leyden et al., 2016; Yami et al., 2020).

Similar patterns are to be observed in the higher education sector. The COVID-19 pandemic sped up and intensified efforts to provide high-quality education services in an online format. Face-to-face teaching and learning are traditional functions of universities; however, with globalization and rapid technological changes, this format is undergoing transformation. The unification of knowledge and technology permits higher education institutions to provide learning anytime, anyplace, and to anyone (Robinson and Hullinger, 2008). It seems that a new paradigm of academic discovery and disruption has emerged, driven by the necessity to hold classes remotely online.

It is reasonable to assume that the scale and scope of online business education will expand globally in the coming years. Even prior to COVID-19, Evans and Haase (2001) reported that three-fifths of the 1700 US institutions of higher learning that are engaged in distance education – 55 percent of which offer credit-bearing business courses – already use some form of Internet-based technology. Another study involving schools representing 36 countries provides evidence that there has been an increase in the number of schools offering fully online degree programs at all levels (Kumar et al., 2019). Survey data shows that business administration remains the most popular discipline for online graduate programs (Friedman, 2016). Polish universities and business

responses of Polish and international students. The results confirmed a statistically significant relationship between the students' country of origin and the assessment of online learning. The assessment of online teaching was higher among Poles (Mdn = 8.0) than among international students (Mdn = 7.0). The Mann-Whitney test indicated that the difference was statistically significant, $U(N_{Poles} = 172, N_{other} = 145)$, $z = -2004$, $p < 0.05$, $U = 10,858.50$. H_7 was supported. The eighth hypothesis concerned the relationship between the nationality of the students and the frequency of participation in online courses. The chi-squared test showed a statistically significant correlation between the nationality of the respondents and the frequency of participation in online courses ($\chi^2 = 19.916$; df = 2; $p < 0.001$). H_8 was supported. Table 4 shows that the frequency of participation in online courses is lower in the international students' group, compared to the Polish group.

The last hypothesis concerned the relationship between the nationality of the students and their preferred mode of study. There was no significant statistical relationship between nationality and preferred mode of study ($\chi^2 = 0.868$; df = 1; $p = 0.377$). H_9 was not supported.

schools will follow in offering online learning.

This paper provides insight into how students evaluate online teaching and suggests how business schools can take advantage of the new norm of holding classes online. Since this is now a necessity, ensuring efficiency and effectiveness is more relevant than ever.

There is little research on preferences related to the choice of the mode of study during the pandemic. Interesting insights come from the study of Al-Azzam et al. (2020), conducted among medicine and dentistry students in Jordan, the study of Chen et al. (2020), conducted among dentistry students in the United States as well as the study of Joshi et al. (2020) with students of life sciences. However, all of them were held in a different cultural context and focused on a different type of student. Our study was conducted in Poland among management students, which does not require as much commitment as medical studies. In-person training is also not a requirement to become fully educated and graduate from business school. Because of this, we believe that business schools are in a particularly good position to adapt to the online environment and expand on the number of programs offered. This may also include the hybrid teaching-learning approach, where students can either join the professor in a classroom or via Zoom, and jointly experience and co-create the session. In effect, it is crucial for business schools to get a better understanding of the "new" customer base – students interested in online learning in order to prepare, launch, and execute programs that will meet their expectations and needs. The decision to put online programs parallel to traditional ones may influence the position of a business school in the market and, in the longer term, its development. This paper expands the literature by adding the business school students' perspective to the conversation around online learning.

Additionally, many people studying management combine studies with work. This is particularly true in the case of foreigners from countries of the former USSR who pick Poland as a place of study. Taking up studies in Poland gives them the opportunity to work in the country legally. Poland is perceived by them as the gateway to the markets of the European Union. For them, online learning may not be attractive because studying online, from home country, is not enough to get work permit.

Our research and the observations made in the course of online learning in Poland and in the United States, suggest that online studying increases passivity in people who are not engaged in learning. This is borne out by our results which show that a smaller percentage of students reduced their attendance (after online classes were introduced) in the engaged group than in the disengaged group. Disengaged students often treat online classes as an addition to other activities performed at the time – by logging into a virtual classroom and then focusing on something else. This situation is described best by one of the respondents: "thanks to online studies, I can simultaneously be at work and attend classes via MS Teams." Students also look for ways to explain their absences or inactivity, stating technical difficulties (power and Internet outages, equipment problems) as excuses. Engaged students are more likely to prefer online studying in the future than disengaged students. They can also re-watch the recorded classes. It is easier for them to get in touch with the lecturer, and they have more opportunities to consult them. This is best described by another respondent:

"Online studies make it easier for me to learn statistics. I re-watch the classes (recordings) any time I want to. Before the pandemic, I had to attend personally, and the classroom was loud and uncomfortable after a day filled with other classes. I can schedule meetings with the lecturer regularly, ask for clarifications regarding certain exercises."

In general, we can say that online studies exacerbate the lack of engagement among unengaged students, but they create new opportunities for those who are motivated to learn.

5.2. Verification of hypotheses

The approach to engaged learning was the differentiating factor when studying in the face of the pandemic. Those who were engaged rated online learning higher than those who were disengaged. The results show that students who self-report as engaged did not reduce the frequency of participation in the courses after the transition from traditional to remote learning, as opposed to those who declared poor commitment to courses before the transition from traditional to remote learning. Respondents from the former group, when faced with the choice of attending online or offline courses in the future, chose online learning more often. This may be explained by the fact that the value of a lecture stays the same for those who want to learn, regardless of the mode of delivery. In a situation where a person treats studies as an opportunity to socialize or to legalize their stay in Poland, online learning is not as attractive and does not offer such opportunities as studying on a campus.

We assumed that students who need to travel a greater distance to get to the classroom would rate online classes higher than those whose travel time was short. However, there was no confirmation that those who spend more time commuting are more likely to participate in online classes instead of coming to the business school. However, the travel time to a business school did determine the preferred form of studying in the future. The students who reported that they would prefer online delivery were predominately those from the group that needed more than 40 min to commute. In the group of people who spent up to 20 min and more than 20 min to commute, face-to-face classes were preferred. Travel time did not affect the students' evaluation of online classes during the pandemic.

Nationality has proven to be a determining factor in students' evaluations of online studies, as well as the frequency of participation in online classes. International students rated online studying lower than Polish students. They also reported a reduction in the frequency of participation in courses since switching to the online mode of study. There may be several reasons for this. Poor knowledge of the Polish language might make it difficult to participate in online courses. In addition, some people returned to their home countries during the pandemic, where poor internet connectivity may have made it difficult for them to participate in online courses. It was noted that some students from the East encountered difficulties using some functions of the MS Teams software. This may have been caused by unauthorised operating software. Finally, it is worth noting that many international students come to Poland to study to enable them to take up legal employment alongside their studies. Additional analyses of the collected data show that if studies in Poland were conducted online without the need to come to Poland, only 31.8% of the surveyed international students would undertake such studies. 15.6% of the international students surveyed stated that the main reason for coming to Poland to study was the possibility of taking up legal employment. Therefore, if these students had to return to their home countries during the pandemic, some may have lost their motivation to continue their studies without the incentive of employment and income.

5.3. Perspective of universities and faculty members

The student perspective is paramount to the future design and delivery of online education, as is the perspective of universities and faculty members. There is a financial argument for online education, with online education providing an opportunity to reach more fee-paying students who desire education. Although there are additional demands placed on the technological systems of the organization (e.g., computing networks, new hardware and software), there is no corresponding demand for increased physical space associated with on-site students (Gibson et al., 2008). With the increase of interest in online education, business schools and universities may want to focus on developing their online brand presence. The connection between social media interactions and the consumer-brand relationship could be strengthened so as to provide greater brand recognition, translating into higher intakes of new students, and ultimately more income.

Alongside the opportunities, institutions need to be careful about the potential dangers involved in expanding the development of their online courses. The first major challenge rests with the need to introduce digital platforms that are able to process and support all online teaching and learning programs, as well as enable knowledge sharing. This requires institutional changes and resources, which may not be easy if a university lacks facilitators and managerial support, or if a process of coordinating training (for employees) does not exist (Stoffregen & Pawłowski, 2018). The second challenge involves faculty members, primarily their attitude towards distance education and their IT competency necessary to lead and facilitate online learning. Higher education institutions implementing distance learning need to ensure that this system of learning provides the same levels of knowledge and competences as conventional learning (Milićević et al., 2021). With the increasing demand for online education and the need for faculties to embrace this as a viable teaching tool, user acceptance of technologically based teaching is an important issue. In other words, universities need faculty acceptance of online education to make it work. Studies regarding faculty attitudes toward online education show that the perceived usefulness is a strong indicator of faculty acceptance; however, perceived ease of use offers little additional predictive power beyond that contributed by the perceived usefulness of online education technology (Gibson et al., 2008). Further research post 2020 pandemic, when faculties all had to up-skill without choice, is required to understand faculty attitudes today.

As lecturers, we can see that students often explain their absence from classes or the lack of sending the work or tasks assigned to them on time due to technical difficulties (e.g. interruptions in Internet supply, hardware problems). Our research shows that students who were less involved before the pandemic when remote learning started reduced their activity. Lecturers are faced with the challenge of verifying to what extent the absences of students or the delay in sending the tasks and exams ordered during the tutorials are due to reasons beyond the students' control, or whether technical difficulties are just an excuse. A group of foreign students (i.e., the one who limited their activity after switching to distance learning) also cite this type of difficulty. In part, this may be for reasons beyond their control. For example, as reported by the Belarusian students, technical difficulties have been exacerbated by restrictions and the cut-off of the Internet in Belarus in 2020, both of which were aimed at hindering communication and limiting protests against the government. Universities must develop a policy on dealing with students who do not engage in online classes, in order to identify those who are not making excuses and students who are trying to fulfill their obligations but cannot for technical reasons beyond their control. Facial recognition systems and in-class quizzes, which would require attendance and carefully follow the content provided by lecturers, could help. As the online learning experience develops, universities should develop algorithms to assess student involvement. This will allow the universities to reduce operating costs. Universities and business schools are facing the dilemma of whether to continue online studying in the post-pandemic period – and if so – to what extent? Will online studying bring in more students or will it discourage them? The problem of ensuring adequate quality control of activity, attendance, and knowledge arises. This, in turn, may cause doubts amongst supervisory bodies concerning the quality of education in higher education institutions (in Poland – the Polish Accreditation Committee).

6. Limitations and future research

We realize that the findings of our research are preliminary restricted by a relatively limited scope. The study was conducted among respondents studying in Warsaw, the capital of Poland – considered to be one of the most attractive cities in terms of earning possibilities. It is unclear how this phenomenon manifests itself in other neighboring cities which do not offer such earning opportunities as Warsaw. Additionally, the study was conducted in the first stage of the pandemic; a

review at a later date may have shown a shift in attitude and evaluation as students and faculty settled into the reality of long-term virtual learning and working. Further, this study was carried out in Poland where a significant portion of students are from the East. Therefore, further study is suggested to balance the regional disadvantage of this study and collect data that will serve a much greater audience. We would also like to balance the student-focused survey design with a university-centered input realizing that both opportunities and challenges experienced at an organizational level will greatly influence the quality of online education provided and, in the end, the levels of students' satisfaction.

Swartz and Cole (2013) point the researchers' attention towards the ethics and integrity necessary to create a true learning environment and grant appropriate online course delivery. Although the movement towards distance education gains acceptance among multiple stakeholders, the interest in making online instruction both valid and valuable will continue to demand more consideration.

7. Funding

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