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ORIGINAL RESEARCH PROJECTS
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The Importance of Building a Relationship Between Lecturers and Students for Student Satisfaction with Remote Learning

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Abstract
This article aimed to determine the significance of student-lecturer relationships in the context of remote learning to answer the following question: What is the relationship between student-lecturer relationships and student satisfaction with remote learning, feedback, the assessment process, lecturers' digital competencies and students' competencies related to remote learning? To achieve this aim, an online survey was conducted on a sample of 206 students from Milenium University in Gniezno, Poland (return rate approximately 42%) in the spring

of 2022. The data were analysed through the application of mediation analysis using IBM SPSS Statistics and the Jamovi software. The main finding of the study is that the student-lecturer relationship is crucial for ensuring students' satisfaction with remote learning. This paper contributes to the literature by explaining the potential impact of other factors on the student-lecturer relationship variable.

Keywords: distance learning, student-lecturer relationships, mediation analysis, feedback, digital competencies.

Introduction

In 2020, with the onset of the COVID-19 pandemic, universities in Poland, as well as all over the world, faced the challenge of implementing remote learning as the only possible teaching form. Since the academic year 2020/2021, online teaching has remained present in Polish universities but not as the exclusive teaching form (hybrid learning has been implemented). Therefore, assessing the level of student satisfaction with this form of learning is highly important. One of the key factors worth analysing in the context of student satisfaction with remote learning is the student-lecturer relationship. In this study, the mediating effects of this variable on the relationship between student satisfaction and other variables (feedback, the assessment process, the digital competencies of lecturers and students' competencies related to remote learning) were also verified.

The aim of this study is to analyse the importance of student-lecturer relationships during remote learning. An online survey was conducted with a group of over 200 students at Milenium University in Gniezno, Poland. The research was conducted in two phases: the first phase began in 2021 when classes were held only remotely, and the second phase extended into the following academic year of 2022, during which classes took on a hybrid form with a predominance of traditional classes. For brevity, the authors focused solely on the results of the second phase of the research, which was extended based on findings from the first phase.

For private higher education institutions competing for students, students' satisfaction with the education they receive is crucial in terms of the effectiveness of the teaching process and how these institutions are perceived by potential students.

Theoretical background

In the literature, the issue of remote learning, also known as distance learning, is most often described as a method that uses indirect contact instead of direct contact between the learner and the teacher (Juszczyk, 2002, p. 167). Remote learning is not a new phenomenon in the 21st century, but since the academic year 2020/2021, it has been implemented in a significantly different way. Due to the onset of the COVID-19 pandemic in 2020, most universities and other educational institutions switched to remote learning using online learning platforms. This brought forth the need to examine students' perspectives to assess their level of satisfaction with remote learning under the new circumstance of it being the primary form of teaching rather than a complementary form.

The building of student-lecturer relationships has been the subject of numerous studies from all over the world, both before and during the pandemic (Eom et al., 2006; So & Brush, 2008; Sun et al., 2008; Green et al., 2015; Romaniuk & Łukasiewicz-Wieleba, 2021; Skalski, 2021). Authors have pointed out the important role of emotional support and feedback provided by lecturers to students (Eom et al., 2006; So & Brush, 2008). In a Polish study (Romaniuk & Łukasiewicz-Wieleba, 2021), it was noted that students treated remote learning during the COVID-19 pandemic as a temporary situation. The respondents to the studies (Romaniuk & Łukasiewicz-Wieleba, 2021), felt socially distant, longing for people and face-to-face interactions. Students complained that they did not know their lecturers well and could not talk to them face-to-face. At the same time, however, students' communication with other students and lecturers via the Microsoft (MS) Teams platform compensated to some extent for the lack of in-person contact. Among other things, the possibility of talking to students from abroad was seen as an advantage of such communication. Also, the opportunity to invite lecturers or experts from various fields from other cities or even countries (distance does not play a role in online learning) to classes seemed to be a big advantage. Many lecturers (nearly 55%) saw the difficulty in the lack of direct interaction in remote learning. Furthermore, weaker contact during classes, looser relationships, more difficulty activating shy and reluctant students and more difficulty maintaining the attention of class participants were highlight-

ed (Romaniuk & Łukasiewicz-Wieleba, 2021). In another Polish study from the same year (Skalski, 2021), the surveyed students showed symptoms of remote learning burnout, mental fatigue and reduced performance. They also noticed a deterioration in their relationships with peers and lecturers. However, it must be remembered that the aforementioned studies concerned the beginning of the COVID-19 pandemic, and therefore, a significant reduction in interpersonal contact in the private and/or professional lives of the respondents also occurred. In another study conducted after the period of the greatest pandemic restrictions (Flicińska-Turkiewicz et al., 2022a), the student-lecturer relationship was found to be one of the key factors influencing students' satisfaction with remote learning.

The context of student-lecturer relationships in remote learning was investigated as early as the beginning of the 21st century. For example, American researchers (Shea et al., 2002) analysed students' interactions with lecturers during remote learning. The authors pointed out the provision of feedback to students after completing a specific task as the most basic form of these interactions. According to other researchers on the same topic, feedback should translate into grades and be characterised by regularity and given to students during online learning. It has been recognised as an integral part of the quality of the teaching service provided (Kuh, 2003; Holsapple & Lee-Post, 2006; Dykman & Davis, 2008). On the other hand, Australian researchers (Nandi et al., 2012) highlighted the active presence of lecturers in discussion forums, frequent questioning and asynchronous discussion as important types of interaction and ways of building relationships with students. The aforementioned studies emphasise the importance of feedback and the assessment process, understood in a broader context as elements of course organisation contributing to building better student-lecturer relationships and influencing greater student satisfaction with remote learning.

Student satisfaction with remote learning is an important topic of research that indicates the quality of remote learning. The importance of the student-lecturer relationship in the context of factors determining student satisfaction with remote learning has been analysed by many authors long before the COVID-19 pandemic began (Bray et al., 2008; Kuo et al., 2013; Sebastianelli et al., 2015; Parahoo et al., 2016), as well as during the pandemic (Bento et al., 2021; Ho et al., 2021; Reisinger-Walker et al., 2021). Bray et al. (2008) exam-

ined students enrolled in a Japanese remote learning university. The students' relationships with their lecturers and other students were among the five factors that had the greatest impact on student satisfaction with remote learning. The respondents who were most satisfied with their online classes were those who found it easy to interact with lecturers and who did not prefer face-to-face social interaction with other students during class (Bray et al., 2008). In an American study conducted during the COVID-19 pandemic, students' relationships with lecturers were also found to be highly important for student satisfaction with remote learning (Reisinger-Walker et al., 2021). In an earlier American study, the authors confirmed a statistically significant relationship between students' interactions with lecturers and their satisfaction with remote learning (Sebastianelli et al., 2015).

The authors of a Brazilian study (Bento et al., 2021) analysed the challenges of online learning and highlighted significant changes in student-lecturer interactions during the remote learning adopted throughout the COVID-19 pandemic. Bento et al. (2021) focused mainly on the adaptation processes that took place during the pandemic, such as the acquisition of new competencies, including digital competencies. The role of the lecturer is crucial in this case, as these competencies are also essential for students taking courses delivered remotely. Spanish authors Núñez-Canala et al. (2022) emphasised that education has been significantly affected by the digital revolution. With the advent of the COVID-19 pandemic, the importance of digital tools increased dramatically at all levels.

The importance of students' interpersonal relationships with lecturers can be highlighted when considering the problems students face related to a lack of social contact and isolation during remote learning (Iwańska, 2020). In a Polish study, Dziaczkowska (2014) asserted the special importance of the relationship between the academic teacher and the student (in the context of pedagogical studies). According to the researcher, pedagogical studies, by definition, are supposed to prepare future graduates to build constructive relationships with other people and help them grow (the situation is similar for management students). A contemporary, socio-cultural context influences the forms that these relationships can take. The master-student model is being abandoned, yet at the same time, it can be observed that there are many different configurations of the student-lecturer relationship pattern in the ac-

ademic sphere. Using the typology of students proposed by Ewa Kubiak-Szymborska (2007), Dziaczkowska (2014) defined types of students and also indicated various types of lecturers. According to the researcher, the multiplicity of these models determines the diversity of the relations between the participants in the academic sphere (Dziaczkowska, 2014). Moreover, the complexity of student-lecturer relationships shows the diversity of contemporary university life. All the abovementioned arguments clearly indicate that the topic of student-lecturer relationships is worthy of further analysis.

Research method

This article provides an in-depth analysis of the research conducted using a survey in the spring of 2022. An online questionnaire was used to collect data from students at Milenium University in Gniezno, Poland. The questionnaire was sent to the university's entire student population of 490. A total of 206 correctly completed questionnaires were obtained, which reflects a return rate of 42%. The questionnaire was completed by 120 Management students and 86 Pedagogy students. Among the respondents, 177 students were from the Faculty of Social Sciences in Gniezno and 29 were from the university's branch office in Wągrowiec. Regarding the degree program, 104 students were enrolled in their first degree, 71 in their second degree and 31 in a unified master's degree. The respondents consisted of 177 females and 29 males, ranging in age from 19 to 55 years. The analyses were conducted using IBM SPSS Statistics and Jamovi.

The main aim of this paper was to analyse the importance of student-lecturer relationships during remote learning. Building upon previous analyses of factors related to student satisfaction with remote learning (Flicińska-Turkiewicz et al., 2022a, 2022b), the authors of the current study concluded that the student-lecturer relationship was the factor worth analysing further. The factor's mediating effect on its relationship with other variables was also verified.

The analyses were conducted using factors (Wieczorkowska & Wierzbiński, 2007) constructed from the statements presented in the questionnaire. Respondents were required to rate the statements on a 5-point Likert scale,

where 1 = *I strongly disagree*, 2 = *I disagree*, 3 = *Difficult to say*, 4 = *Agree* and 5 = *Strongly agree*. The respondents' ratings of the student-lecturer relationship factor statements were summed, and a reliability analysis was conducted for these statements. The Cronbach Alpha index (α) was 0.934. As the α level exceeded 0.7, all originally proposed statements in the student-lecturer relationship factor were included.

The lecturer relationship index included the following variables:

1. My lecturers share their opinions about current events.
2. My lecturers share information about what they like or dislike.
3. My lecturers give examples from their own lives to better explain the issues discussed in class.
4. My lecturers keep themselves at a distance.
5. I like the majority of my lecturers.
6. I am happy to talk to my lecturers.
7. The suggestions of the students are taken into account by the lecturers.
8. The lecturers in my studies have tried to help me learn.
9. My lecturers are available outside of class during their office hours.

The other factors were also constructed based on the statements presented in the questionnaire:

1. Feedback,
2. Assessment process,
3. Lecturers' digital competencies,
4. Students' competencies related to remote learning.

The composition and results of the reliability analysis for these four factors are included in Appendix 1.

The existence of strong (mostly) or moderate (interpretation based on Bedyńska et al., 2012) correlations between this variable and the other analysed variables (Figure 1) provided the foundation for the following research questions.

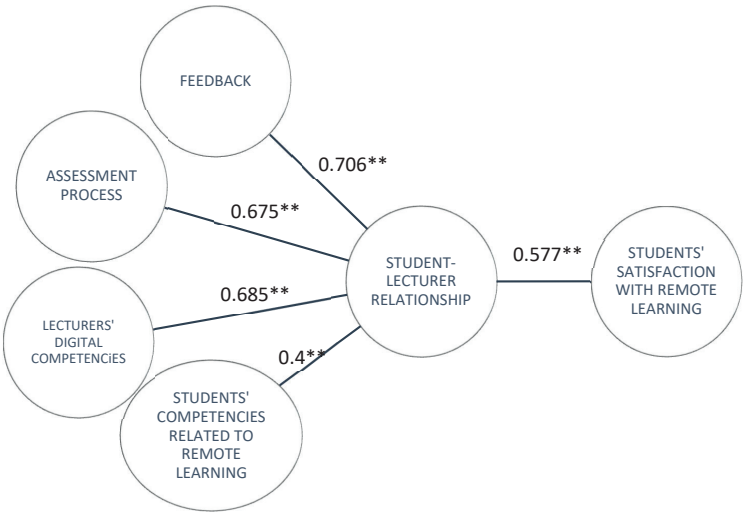

Figure 1. Spearman's rank correlations with the variable *Student-Lecturer Relationship*

** Correlation significant at the 0.01 level.
Source: Authors' research.

The main research question of this study is "What is the relationship between student-lecturer relationships and student satisfaction with remote learning, feedback, the assessment process, lecturers' digital competencies and students' competencies related to remote learning?"

The authors chose to analyse the mediating effect of the variable *Students' Relationship with Lecturers.*

A mediating effect was defined as one that helps explain the relationship between the independent variable and the dependent variable (Igartua & Hayes, 2021; Hayes, 2022).

Four specific research questions were posed:

1. Does *Students' Relationship with Lecturers* have a mediating effect on the relationship between *Feedback* and *Satisfaction with Remote Learning*?
2. Does *Students' Relationship with Lecturers* have a mediating effect on the relationship between the *Assessment Process* and *Students' Satisfaction with Remote Learning*?

3. Does *Students' Relationship with Lecturers* have a mediating effect on the relationship between *Lecturers' Digital Competencies* and *Students' Satisfaction with Remote Learning*?
4. Does *Students' Relationship with Lecturers* have a mediating effect on the relationship between *Students' Competencies Related to Remote Learning* and *Students' Satisfaction with Remote Learning*?

The authors also formulated four research hypotheses:

H1. *Students' Relationship with Lecturers* has a mediating effect on the relationship between *Feedback* and *Students' Satisfaction with Remote Learning*.

H2. *Students' Relationship with Lecturers* has a mediating effect on the relationship between the *Assessment Process* and *Satisfaction with Remote Learning*.

H3. *Students' Relationship with Lecturers* has a mediating effect on the relationship between *Lecturers' Digital Competencies* and *Students' Satisfaction with Remote Learning*.

H4. *Students' Relationship with Lecturers* has a mediating effect on the relationship between *Students' Competencies Related to Remote Learning* and *Students' Satisfaction with Remote Learning*.

Findings

In order to verify the hypotheses, a mediation analysis was performed using Jamovi. The satisfaction variable was treated as a quantitative variable.

The aim of the analysis was to test the hypotheses regarding the mediating effect of *Students' Relationship with Lecturers* on the relationship between:

H1. *Feedback* and *Students' Satisfaction with Remote Learning*,

H2. *Assessment Process* and *Students' Satisfaction with Remote Learning*,

H3. *Lecturers' Digital Competencies* and *Students' Satisfaction with Remote Learning*,

H4. *Students' Competencies Related to Remote Learning* and *Students' Satisfaction with Remote Learning*

An analysis was carried out using the jAMM module in the Jamovi programme. Following the classical approach of Baron and Kenny (1986) as presented in Zhao, Lynch and Chen (2010), the assumptions regarding the relationships between the variables in the model were met.

The independent variable's influence on the mediator was statistically significant in each case analysed (β1 = 0.801, $p < 0.001$; β2 = 0.775, $p < 0.001$; β3 = 0.807, $p < 0.001$; β4 = 0.5703, $p < 0.001$). In turn, the mediator's co-variation with the dependent variable was statistically significant (β1 = 0.343, $p < 0.001$; β2 = 0.423, $p < 0.001$; β3 = 0.420, $p < 0.001$; β4 = 0.6222, $p < 0.001$). In addition, the relationship between the independent and dependent variables was statistically significant without the presence of a mediator in the model (β1 = 0.572, $p < 0.001$; β2 = 0.532, $p < 0.001$; β3=0.605, $p < 0.001$; β4 = 0.3763, $p < 0.001$), even after the introduction of a mediating variable (β1 = 0.29, $p < 0.001$; β2 = 0.204, $p < 0.001$; β3 = 0.265, $p < 0.001$; β4 = 0.0214, $p < 0.001$).

Supplementing this approach with the Sobel test indicated a statistically significant mediating effect ($p < 0.001$). This was also confirmed by the bootstrap method with randomisation of n = 206 respondents. The 95% confidence interval constructed from it does not contain a value of 0 for any of the four analyses performed. Figures 2–5 and Tables 1–4 present the results obtained.

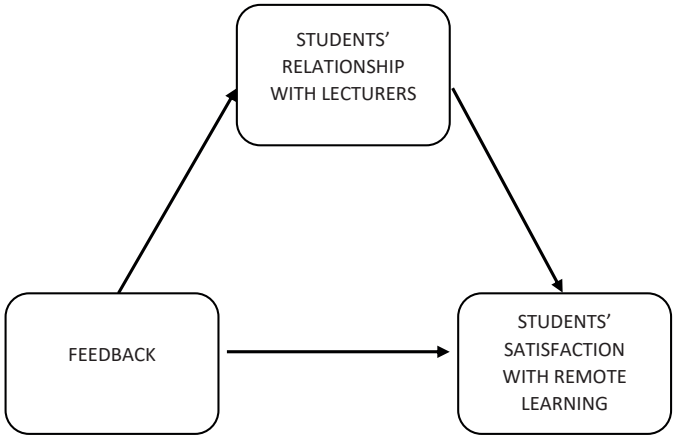

Figure 2. Illustration of the mediation model of *Students' Relationship with Lecturers* explaining the significant relationship between *Feedback* and *Students' Satisfaction with Remote Learning*

Source: Authors' research.

Table 1. Mediating effect of *Students' Relationship with Lecturers* explaining the significant relationship between *Feedback* and *Students' Satisfaction with Remote Learning*

	Effect	SE	Z	Bootstrap 95% CI (n = 206)	
				LL	UL
Mediating effect of *Students' Relationship with Lecturers*	0.1181	0.0341	3.47***	0.0556	0.1864

Z – Sobel test, ***$p < 0.001$

Source: Authors' research.

To confirm the mediating effect of the variable and exclude the possibility that the variable treated as the mediator is a confounding variable, further analyses were performed using the Jamovi programme. In three cases (H1, H2 and H4), the mediating variable was not found to have a statistically significant effect on the independent variable from the model. It was found to have a high level of statistical significance ($p < 0.001$). Therefore, for the relationships described in H1, H2 and H4, *Students' Relationship with Lecturers* being a confounding variable can be ruled out.

Based on the data presented above, it can be concluded that there is no basis for rejecting H1: *Students' Relationship with Lecturers* does have a mediating effect on the relationship between *Feedback* and *Students' Satisfaction with Remote Learning*.

It can be concluded that giving students more complete feedback in class leads to students having a better relationship with lecturers, which, in turn, is associated with an increase in satisfaction with remote learning.

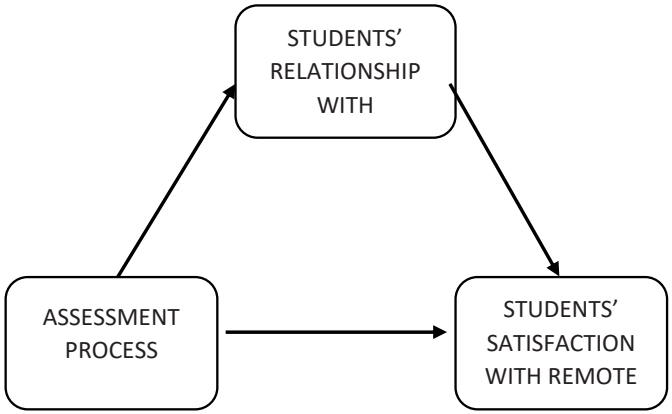

Figure 3. Illustration of the mediation model of *Students' Relationship with Lecturers* explaining the significant relationship between the *Assessment Process* and *Satisfaction with Remote Learning*

Source: Authors' research.

Table 2. Mediating effect of *Students' Relationship with Lecturers* explaining the significant relationship between the *Assessment Process* and *Students' Satisfaction with Remote Learning*

	Effect	SE	Z	Bootstrap 95% CI (n = 206)	
				LL	UL
Mediating effect of *Students' Relationship with Lecturers*	0.0864	0.0204	4.23***	0.04390	0.1247

Z – Sobel test, ***$p < 0.001$

Source: Authors' research.

Based on the data presented above, it can be concluded that there are no grounds for rejecting H2: *Students' Relationship with Lecturers* does have a mediating effect on the relationship between the *Assessment Process* and *Students' Satisfaction with Remote Learning*.

It can be concluded that when students receive higher indications of the assessment process, it leads to higher rated student-lecturer relationships, which in turn increases students' satisfaction with remote learning.

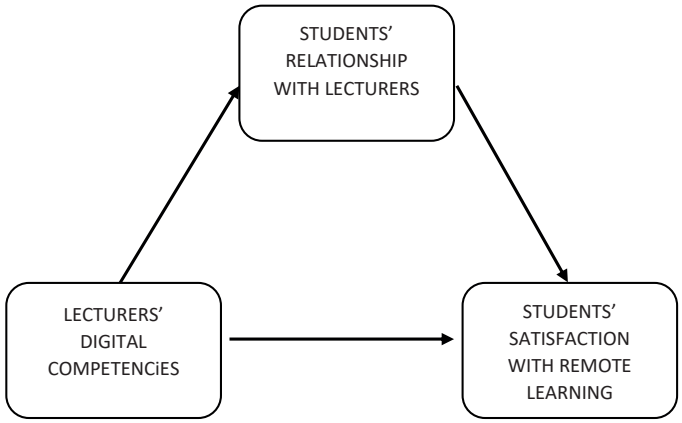

Figure 4. Illustration of the mediation model of *Students' Relationship with Lecturers* explaining the significant relation between *Lecturers' Digital Competencies* and *Students' Satisfaction with Remote Learning*

Source: Authors' research.

Table 3. Mediating effect of *Students' Relationship with Lecturers* explaining the significant relationship between *Lecturers' Digital Competencies and Students' Satisfaction with Remote Learning*

	Effect	SE	Z	Bootstrap 95% CI (n = 206)	
				LL	UL
Mediating effect of *Students' Relationship with Lecturers*	0.1422	0.0247	5.76***	0.0914	0.1906

Z – Sobel test, ***$p < 0.001$

Source: Authors' research.

After additional analyses in Jamovi, it was found that the variable assumed to be the mediating variable affected the independent variable. Therefore, in this case, the variable *Students' Relationship with Lecturers* is a disturbing variable.

Based on the data presented above, it can be concluded that H3 must be rejected: *Students' Relationship with Lecturers* does not have a mediating ef-

fect on the relationship between *Lecturers' Digital Competencies* and *Students' Satisfaction with Remote Learning*.

It can be concluded that both the students' and lecturers' higher rated digital competencies lead to higher rated student-lecturer relationships and that the students' higher rated relationships with lecturers influence the higher ratings of lecturers' digital competencies. Both of the indicated variables influence *Student's Satisfaction with Remote Learning*.

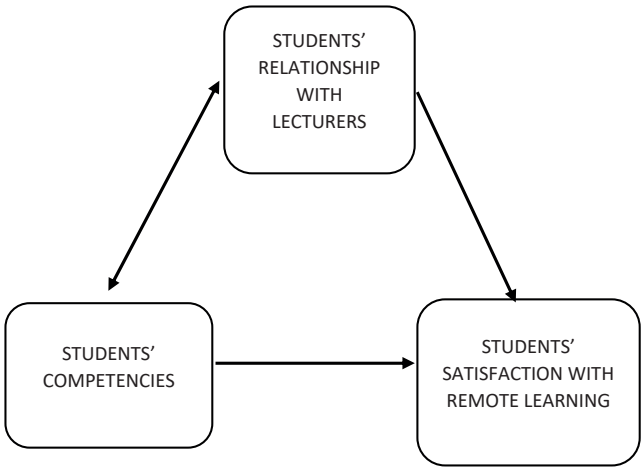

Figure 5. Illustration of the model of *Students' Relationship with Lecturers* as a variable disturbing the significant relation between *Students' Competencies Related to Remote Learning* and *Students' Satisfaction with Remote Learning*

Source: Authors' research.

Table 4. Mediating effect of *Students' Relationship with Lecturers* explaining the significant relationship between *Feedback* and *Students' Satisfaction with Remote Learning*

	Effect	SE	Z	Bootstrap 95% CI (n = 206)	
				LL	UL
Mediating effect of *Students' Relationship with Lecturers*	0.11954	0.01571	7.608***	0.0877	0.1500

Z – Sobel test, ***$p < 0.001$

Source: Authors' research.

Based on the data presented above, it can be concluded that there are no grounds for rejecting H4: *Students' Relationship with Lecturers* does have a mediating effect on the relationship between *Students' Competencies* and *Students' Satisfaction with Remote Learning*.

It can be concluded that higher student competencies lead to better student-lecturer relationships, which leads to students' increased satisfaction with remote learning.

Thus, three out of the four formulated hypotheses were positively verified.

Research conclusions and recommendations for educational practice

To understand the importance of student-lecturer relationships from the perspective of their impact on factors determining students' level of satisfaction with remote learning, it is worth considering the expectations of the surveyed students towards the university and its teaching staff. This study was conducted among part-time students (who only study on weekends), the majority of whom are also working professionals. Therefore, the students primarily perceived and evaluated the teaching process from the perspective of their position in the labour market. In response to these requirements, Milenium University has developed practical curricula profiles. It is important to assess students' satisfaction with their education should also be assessed in this context. Therefore, it is not only the student-lecturer relationship itself but also the practical approach related to education and professionalism that should determine students' satisfaction with remote learning. The results of the study demonstrate that the student-lecturer relationship is the mediating variable between variables such as *Feedback*, *Assessment Process* and *Students' Competencies Related to Remote Learning* and the *variable Students' Satisfaction with Remote Learning*.

The data presented in this paper were derived from the research that was conducted after almost three semesters of students and lecturers working with remote learning. In the context of student satisfaction, the university's organisation of the remote teaching process had been continuously improving, which resulted in an increased level of both the lecturers' and students' competencies to participate in the process. The conducted analysis concerns a situation in which this "new" form of learning is functioning smoothly, and

all parties can, as in the case of on-site learning before the COVID-19 pandemic, focus on aspects of the teaching process that are, from their perspective, important. This aspect is important as it allows for the assumption that the results presented in this study are free from the drawbacks of the implementation and adaptation period of remote learning. It provides an excellent foundation for considering how to combine classroom and distance learning activities in an optimal way that meets students' expectations and what to expect from such a combination.

In the results presented, the role of the student-lecturer relationship in determining students' satisfaction with remote learning was established. Remote learning seems to have diversified and broadened the perspectives of possible practices in the area of feedback, which may now be more complete than before the period of widespread remote learning during the COVID-19 pandemic as a result of the tools used for the implementation of said remote learning.

It is worth noting that most of these tools were also available before 2020, but the pandemic was the trigger point for spreading remote learning and testing new solutions applicable during the learning process. Feedback has certainly become more virtual and, thus, is more often asynchronous. Although the student feedback process has been transferred to the internet, such feedback has to be multifaceted and requires in-depth reflection. Therefore, it is definitely more time-consuming for lecturers to produce this new format of student feedback. This implies the need to set some boundaries, rules and habits in this respect to avoid overburdening lecturers. Producing separate information for each of the dozens or hundreds of students a lecturer has is a big challenge. It can be assumed, and this is confirmed by the present research results, that it is the quality of student-lecturer relationships that will accelerate the process of agreeing on effective and mutually acceptable forms of feedback.

The assessment process should be viewed differently. This process was put to a difficult test during the pandemic period of remote learning. The new conditions seemed to favour the use of tests. Other methods of assessing students' level of learning, skills and competencies created significant room for student malpractice. However, this experience resulted in lecturers making certain changes to the assessment process. Now, lecturers construct a final

grade for each student based on many variables, and the students are able to meet these new requirements and consciously monitor and improve their final grades. This can be considered an additional special value that, thanks to remote teaching, has influenced student-lecturer relationships.

The competencies required of students during remote learning were the last analysed factor. In the discussed context, the aspect of control plays an important role. Lecturers found it difficult to satisfactorily control their message (what students would see and hear from them) during the initial period of remote teaching. Students were more sensitive than usual to the quality of their relationships with lecturers and more (or at least, differently) dependent on them than before the COVID-19 pandemic. Moreover, this dependence was expressed not only in their reactions to unexpected content coming from their homes but also through their often needed support in the effective use of the capabilities of the programmes and equipment required for remote learning. The lecturers often taught the students not only the curriculum content but also how to effectively use the remote learning platforms. From this perspective, the student-lecturer relationship expanded into new areas during the pandemic period of remote learning. At the time of this research, however, the students had regained the control they had lost, made up for equipment shortages, secured the desired stability and speed of internet connections and, above all, adapted the space of their homes and the behaviour of their household members to the requirements of remote learning. Technical issues related to remote learning became much less of a disturbance than at the start of its implementation. Nonetheless, the previous period of increased dependence on lecturers gave rise to new experiences and made it clear to students that the student-lecturer relationship is crucial to the effectiveness of their learning process and the gaining of new competencies, including technical ones.

Bearing in mind the previously discussed nature of the surveyed students' expectations from the higher education institution, it is necessary to ask ourselves what the student-lecturer relationship should look like during remote learning. It seems that in the future, this issue will be more present in the teaching practices in higher education institutions than it was before the pandemic. This will result in the growth of a factor of student-lecturer relationships: digital competencies. However, these competencies seem to refer less

to the ability to use remote learning platforms, hardware resources and the internet, and more to the skills necessary to manage one's presence in the context of asynchronous communication. However, what will probably have the greatest impact on the level of student satisfaction with remote learning will be the ability to successfully transition between remote and on-site teaching, with the quality of the relationship in both contexts being maintained at a similar level. Regardless of the widely shared reservations about the effectiveness of the assessment process for verifying acquired skills, competencies and knowledge during remote examinations, it must be emphasised that student activity and engagement in these two spaces differ. Some students feel better and are more active in remote classes, while others are more comfortable in onsite classes. Sometimes, lecturers fail to activate students who are usually active only during onsite classes during remote classes, and vice versa. The quality of the student-lecturer relationship seems to be of great significance in overcoming these inequalities in engagement.

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Appendix 1. Factors

Factor	Statements included in the factors
Feedback (α = 0.924)	1. Feedback during project preparation was sufficiently detailed. 2. The feedback during the preparation of the projects was given within the agreed timeframe. 3. I am clear about the requirements of the assignments given in class.
Assessment Process (α = 0.915)	1. I am clear about the requirements for passing the course. 2. My grades reflect my work input. 3. Remote methods of knowledge testing adequately verify my level of preparation. 4. The feedback related to the assessment was sufficiently detailed. 5. Feedback related to the assessment was provided within the agreed timeframe.
Lecturers' Digital Competencies (α = 0.925)	1. In general, my lecturers are able to use the MS Teams platform. 2. I felt that my classes delivered using the MS Teams platform were well delivered. 3. I found the online learning materials useful.
Students' Competencies Related to Remote Learning (α = 0.785)	1. I know the MS Teams platform well. 2. I rate my ability to work in MS Word well. 3. I rate my ability to work in MS Excel well. 4. I know how to use the library's electronic resources.