DOI: 10.61905/wwr/203493

„Wychowanie w Rodzinie” t. XXXII (1/2025)
“Family Upbringing” vol. XXXII (1/2025)

Sławomir Sobczak and **Tamara Zacharuk***
Faculty of Social Sciences, University of Siedlce, Siedlce, Poland

Sławomir Sobczak https://orcid.org/0000-0001-5215-0607
Tamara Zacharuk https://orcid.org/0000-0001-7306-5436

Correlates of Students' Preferences for Instructional Delivery in the University Education System After Their Remote Learning Experiences

Korelaty preferencji trybu prowadzenia zajęć w systemie kształcenia uniwersyteckiego po doświadczeniu zdalnego nauczania studentów

Submitted: January 22, 2025 – Accepted: March 28, 2025

Abstract

Aim. The purpose of this paper is to determine the correlates of student preferences for the mode of instruction in the university education system.

Methods and materials. In order to achieve the goal, a pilot study was conducted on a group of 124 students selected randomly.

Results and conclusion. Based on the statistical analyses, it can be concluded that the students' preferences in the aspect of choosing the mode of education are not divided; the majority of them are in favour of the mixed education system 85.5%. In addition, the study presents a generalised model of the correlates of preferences of educational mode choices. The analyses show that students in favour of full-time education will simultaneously claim

* **Corresponding author:** Sławomir Sobczak, e-mail: slawomir.sobczak@uws.edu.pl, Instytut Pedagogiki, Wydział Nauk Społecznych, Uniwersytet w Siedlcach, Konarskiego 2, 08-110 Siedlce, Polska

that high quality education is provided only by full-time education (r=0.631) and they will reject online education (r=-0.561), and mixed type (r=-0.216). Three correlates of students' thinking on the choice of university education mode were identified. The first referred to the preference for the full-time system considering the quality of education resulting from the full-time mode. The second mode of preference concerned the choice of online and blended education, and was related to the claim that the quality of education does not depend on the mode of stationary education. The third was a preference for a blended system while claiming that only the full-time mode of study would provide a high quality of education.

Keywords: student, e-learning, blended learning, university education, post-pandemic experience

Abstrakt

Cel. Doświadczenia zdalnego nauczania przyspieszą czas wprowadzenia do edukacji na poziomie wyższym kształcenia w systemie *blended learning*, który jest testowany na świecie już od kilkunastu lat. Celem artykułu jest ustalenie korelatów preferencji studentów dotyczących trybu prowadzenia zajęć w systemie kształcenia uniwersyteckiego. Przedmiotem badań jest preferowany przez studentów tryb kształcenia na poziomie wyższym.

Metody i materiały. Aby zrealizować cel przeprowadzono badania w formie pilotażowej na grupie 124 studentów. W badaniach wykorzystano metodę sondażową.

Wyniki i wnioski. Na podstawie przeprowadzonych analiz statystycznych można stwierdzić, że preferencje studentów w aspekcie wyboru trybu kształcenia nie są podzielone, większość z nich opowiada się za systemem kształcenia e-learning 85.5%. Ponadto w badaniach zaprezentowano uogólniony model korelatów preferencji wyborów trybu kształcenia. Z analiz wynika, że studenci opowiadający się za kształceniem stacjonarnym jednocześnie będą twierdzić, że jakość kształcenia może zapewnić wyłącznie nauczanie stacjonarne (r=0.631) oraz będą odrzucać edukację online (r=-0.561) i typu mieszanego (r=-0.216). Wyodrębniono trzy korelaty myślenia wśród studentów w kwestii wyboru trybu kształcenia uniwersyteckiego. Pierwszy odnosił się do preferowania systemu stacjonarnego z uwzględnieniem jakości kształcenia wynikającej z trybu stacjonarnego. Drugi sposób preferencji dotyczył wyboru kształcenia online i mieszanego. Był on związany z twierdzeniem, że jakość kształcenia nie zależy od trybu kształcenia stacjonarnego. Trzeci stanowił wybór systemu mieszanego przy jednoczesnym twierdzeniu, że tylko nauka w trybie stacjonarnym zapewni wysoką jakość kształcenia.

Słowa kluczowe: student, zdalne nauczanie, kształcenie uniwersyteckie, doświadczenia po pandemii, mieszane nauczanie

Introduction

The COVID-19 pandemic triggered a radical and sudden transformation in the education sector, forcing a shift from traditional teaching to digital environments. While some university lecturers embraced this change by implementing modern digital tools and interactive strategies (Müller & Goldenberg, 2021), others limited themselves to passive, one-way verbal instruction through telecommunication media. In the post-pandemic period, the global higher education landscape experienced a perceptual shift concerning distance learning, the use of ICT, and the very nature of what constitutes "effective education" (Agrawal & Krishna, 2021).

This transformation has raised critical questions for academic institutions. Given the widespread digital adaptation during lockdowns, will students now prefer remote learning, a complete return to traditional education, or a hybrid, blended model? The answer holds practical significance: Polish universities are already planning to scale back in-person instruction due to financial constraints. Since both universities and students possess the necessary technological capacity, the key variable to investigate becomes students' own preferences and mental readiness for blended learning. Additionally, a deeper issue looms beneath: how will universities balance technological advancement, economic sustainability, and pedagogical effectiveness?

The aim of this paper is to examine students' attitudes toward hybrid learning, with particular attention to their sense of readiness for this new educational model. This study contributes to ongoing academic debates on the future of higher education, offering insight into a transition that is not merely technological, but psychological and institutional.

Online education at the university level is no longer a novelty. Even before the pandemic, in 2019, 82% of European universities had already implemented some form of e-learning, and 39% conducted courses exclusively online (European Commission, 2019). Historically, this development is not new: Jagiellonian University introduced correspondence education as early as 1776 (Heuristic, 2012; Woźnicka, 2023). The evolution of digital education has been ongoing for decades; the pandemic merely accelerated its widespread acceptance (Szostek, 2020).

However, research highlights both the advantages and limitations of remote education. One major concern is the inability to replicate practical, hands-on experiences in virtual environments. Fields such as medicine, pedagogy, or chemistry require direct engagement with patients, children, or laboratory equipment (Chiu *et al.*, 2021). Despite these limitations, some practical disciplines have successfully adapted ICT tools for training purposes, as shown in recent studies (Nijakowski *et al.*, 2021).

Furthermore, the university experience extends beyond curriculum delivery. It includes personal development, independence, and the cultivation of social skills through

peer and instructor interactions (Dodd *et al.*, 2021). Yet, financial factors are equally influential, albeit often understated. Distance learning reduces student expenses — especially those related to commuting and housing — even if tuition fees remain constant.

Young people frequently report benefits such as self-paced learning, reduced pressure, increased accessibility to materials, multitasking capabilities, and overall flexibility (Romaniuk & Łukasiewicz-Wieleba, 2021). These advantages contribute to the increasing appeal of blended learning models, which combine the strengths of online and in-person formats.

Given these developments, it seems inevitable that blended learning will become the new standard in higher education (European Commission, 2021). This article addresses one essential aspect of this transition: students' psychological readiness and their perceptions of its advantages and limitations.

Research Procedure and Applied Methodology

The pilot study involved 124 students. The sample selection was non-probabilistic (random). The questionnaires were completed by respondents during the second half of the winter semester in 2023 using the Microsoft Office Forms tool. A link to the questionnaire was shared on several digital platforms accessible exclusively by students, who were the only designated respondents. Each student voluntarily filled out the questionnaire. Respondents were informed that their individual results were anonymous and would only be used for scientific research after collection.

The subject of the study is the preferred mode of education at the higher education level among students. The aim of the research is to determine the correlates of student preferences concerning the mode of conducting classes in the university education system.

Research problem:

What are the correlates of students' preferences regarding the mode of conducting classes in the university education system?

Specific questions:

- What is the average result of indications for the preferred teaching mode: in-person, online, or blended learning, as well as the belief that only in-person teaching ensures education quality?
- Is there a statistically significant correlation between the variables: preference for in-person, remote, and blended learning, as well as the statement that only in-person education ensures learning quality?
- Are the different choices of university teaching modes significantly differentiated depending on the generalized correlates of students' preferences?

The main research problem has a diagnostic character, and the first specific research problem is a description of the phenomenon; therefore, no hypotheses were formulated. To refine the analysis of the research results, two working hypotheses were adopted:

- There is a statistically significant correlation between the variables: preference for in-person, remote, and blended learning, as well as the belief that only in-person education ensures learning quality.
- The different choices of university teaching modes and the belief that only in-person education ensures quality are not significantly differentiated depending on the generalised correlates of students' preferences.

The analysis included four dependent variables: the choice of learning mode — in-person, remote, and blended. The fourth variable concerns the claim that only in-person education improves learning quality. Each variable was created by determining the degree of preference regarding the mode of education at the higher level. The studied variables were described using definitional indicators. The analysis also included an independent variable, which was the outcome variable, created based on the obtained correlates of the four dependent variables. This variable was named the generalised preference.

The research procedure verified the test power, which was 0.95. Based on this, the required sample size for a test power of 0.90 should be 71 people. This report meets these requirements. Based on Cronbach's alpha test, the reliability for the four analysed questions was α=0.92. The research employed the diagnostic survey method and questionnaire technique. The research tool was of proprietary design and consisted of four questions. A simple question, such as: *What do you prefer more?* or *which mode of learning do you choose?* was not asked, as the goal was to capture the correlates of different aspects of students' choices, allowing for a more detailed analysis of their preferences and grouping them into specific predictive clusters.

The responses required students to assess their preferences on a 10-point binary ordinal scale, ranging from 1 (*strongly disagree*) to 10 (*strongly agree*), regarding their opinion on whether university education should be conducted exclusively in in-person, online, or blended formats (partially remote and partially in-person), and whether only in-person education ensures university education quality. The conducted research is of a pilot nature and serves to provide an initial diagnosis. The analyses presented will be used for further statistical description and explanation of the phenomenon.

The creation of the outcome variable was carried out in two ways. The first involved checking correlations between variables using Pearson's test, followed by conducting a principal component analysis (PCA) using the Statistica statistical package. The second approach involved conducting cluster analysis using

the *k*-means method for each of the four scales and, in the final step, aggregating the results through qualitative analyses. The principal component analysis indicated the direction of aggregation, while the final merging of results was determined by PCA.

The ultimate confirmation of the validity of the conclusions will be the identification of significant differences in learning mode preferences and the perceived quality of in-person education using the ANOVA test. If statistically significant differences are observed between the means of students' generalized preference profiles concerning the dependent variables, conclusions can be drawn regarding the way students think when choosing their mode of study at the higher education level.

Analysis of Research Results

The results for the variable *preference for in-person learning* are as follows: mode *Mo*=5, median *Me*=5, mean *M*=4.58 (*SEM*=0.243), standard deviation *SD*=2.71, variance SD^2=7.33. The skewness measure *A*=0.412 (*SEA*=0.217) indicates a right-skewed distribution, while the kurtosis measure *K*=-0.491 (*SEK*=0.431) is platykurtic, meaning that the results are slightly dispersed from the mean, with no outliers present.

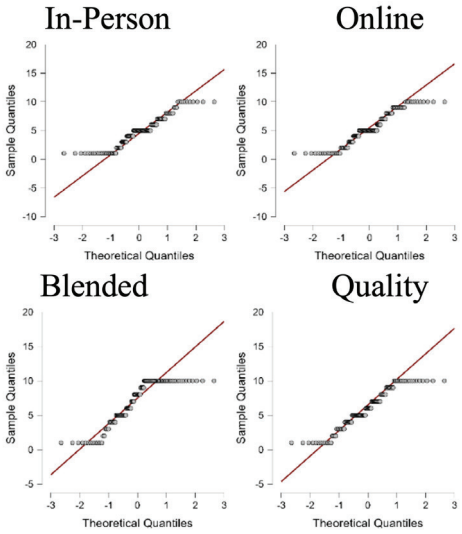
The distribution shape is approximately normal. Based on the exploratory analysis of the variable *preference for online learning*, the following results were observed: mode *Mo*=5, median *Me*=5, mean *M*=5.32 (*SEM*=0.264), standard deviation *SD*=2.93, variance SD^2=8.62. The skewness measure *A*=0.070 (*SEA*=0.217) suggests that the distribution is very slightly right-skewed. The kurtosis measure *K*=-1.114 (*SEK*=0.431) is platykurtic, meaning that the results are dispersed from the mean, with no outliers present. The distribution is approximately normal.

Regarding students' selection of the blended learning mode, the descriptive statistics are as follows: mode *Mo*=10, median *Me*=8, mean *M*=7.04 (*SEM*=0.286), standard deviation *SD*=3.18, variance SD^2=10.15. The skewness measure *A*=-0.660 (*SEA*=0.217) indicates a left-skewed distribution, while the kurtosis measure *K*=-0.926 (*SEK*=0.431) is platykurtic, meaning that the results are dispersed from the mean, with no significant outliers. It was assumed that the distribution is approximately normal.

The results for the variable representing the belief that only in-person learning enhances education quality are as follows: mode *Mo*=5, median *Me*=5.5, mean *M*=5.92 (*SEM*=0.257), standard deviation *SD*=2.85, variance SD^2=8.16. The skewness measure *A*=-0.111 (*SEA*=0.217) indicates a slightly left-skewed distribution, while the kurtosis measure *K*=-0.993 (*SEK*=0.431) is platykurtic, meaning that the results are dispersed from the mean, with no outliers present. The distribution shape is approximately normal.

Figure 1

Distribution of teaching mode preferences: in-person, online, blended, and the statement that only in-person learning ensures education quality

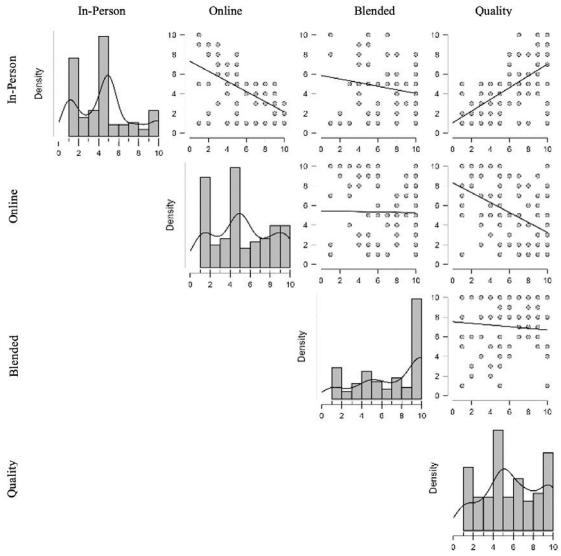


Pearson's correlation showed a negative linear relationship between the results for preferences of in-person teaching and online teaching, $r=-0.561$, $p<0.001$, with a moderate strength of the relationship. The more a student prefers in-person classes, the less likely they are to prefer online teaching. Between the preference for in-person teaching and blended learning, $r=-0.216$, $p=0.016$, the correlation is negative, statistically significant (two-tailed), with a weak strength of the relationship. The correlation between the preference for in-person teaching and the statement that *in-person teaching improves the quality of education* is positive, $r=0.631$, $p< 0.001$, and its strength is large. The more a student believes that universities should only offer in-person teaching, the more they will also believe that only in-person teaching will lead to a higher quality of education compared to any other modes, such as blended learning. The correlation between the preference for online learning and blended learning is nearly zero, $r=-0.020$, $p=0.829$, and the relationship is non-linear. Students who prefer online learning consistently state that it is not accurate to claim that the quality of education is guaranteed only by in-person studies. The correlation between these variables is negative, statistically significant, $r=-0.492$, $p<0.001$, with a moderate strength of the relationship. Those in favour of blended learning maintain some independence regarding the choice of in-person studies, as the correlation between the variables is statistically significant and negative, and there is also ambivalence about the choice of classes offered remotely, as evidenced by the lack of a linear relationship between

the variables. The results concerning the statement that only in-person teaching will improve the quality of classes, and the choice of blended mode are as follows. The correlation between the variables is negative, r=-0.075, but not statistically significant, $p=0.410$. There is no linear relationship between the variables.

Figure 2

Linear relationship between the variables: preference for conducting classes in person, online, or in a blended manner, and the statement that only in-person teaching ensures the quality of education



Based on the Principal Component Analysis (PCA), two groups of factors (RC1, RC2) were identified, which are very weakly correlated with each other. The RC1 group, after varimax rotation, includes three variables: preference for in-person education (0.86), the quality of education, which students believe is achieved only through in-person teaching (0.84), and preference for online university teaching (-0.83). The choice of online teaching correlates negatively with RC1, while the other two variables (preference for in-person teaching and the resulting quality of education) correlate positively with RC1. The proportion of the common variance not associated with the factor for the variable *preference for in-person education* is 0.205, for *online education* it is 0.293, and for *quality resulting exclusively from in-person education* it is 0.292. The eigenvalue for RC1 is 2.153, with a proportion of variance of 0.538 and a cumulative variance of 0.538.

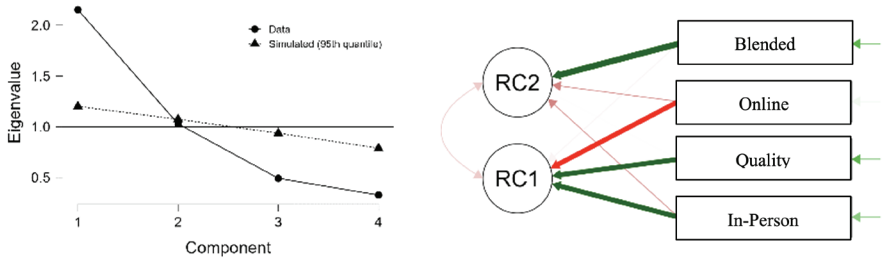
The components of the RC2 factor include the variable *preference for blended learning* (0.98), as well as the variables *preference for in-person education* (-0.25) and *online education* (-0.15). The latter two variables are very weakly associated with the factor. The variable *preference for blended learning* strongly correlates with the factor. The proportion of the common variance not associated with the factor for the variable *preference for blended learning* is 0.029, for *in-person education* it is 0.751, and for *online education* it is 0.849. The eigenvalue for RC2 is 1.028, with a proportion of variance of 0.257 and a cumulative variance of 0.795.

From the scree plot analysis, it can be concluded that the total variance explained by the component *blended learning* is 53.8% (with an extraction value of 0.97), summing to 2.15. Next, the variable *preference for in-person studies* contributes significantly to the variance with 25.7% (extraction value of 0.80), summing to 1.03. Both rotated factors explain 79.5% of the total variance and are sufficient for interpreting the phenomenon of students' preference for teaching modes. The next factor is the *preference for online study mode*, which explains 12.3% of the variance (with an extraction value of 0.72), summing to 0.49, and the *quality of education achieved exclusively through in-person teaching* accounts for 8.2% of the variance (with an extraction value of 0.70), summing to 0.33.

Based on the Principal Component Analysis, the results were grouped according to the identified relationships, resulting in three types that define a student's thinking regarding their preferred mode of study at the university: exclusively in-person, considering the statement that the quality of university education depends solely on traditional (in-person) teaching; online or blended, considering the statement that not only in-person studies can ensure high-quality education; and blended, with a high evaluation of the statement that only in-person studies can ensure good quality education at the university.

Figure 3

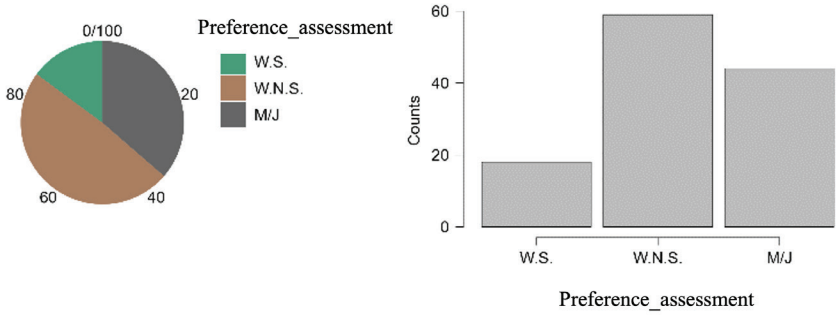
Principal Component Analysis



In the studied sample (N=124), the frequency distribution for the generalized category of student preference regarding the mode of study is as follows: the fraction of individuals stating that the only form of studying is in-person (W.S.) n=18, representing 14.516% of the group; students choosing the online mode of study (W.N.S.) n=61, representing 49.194% of the total sample; and students preferring the blended mode, with the consideration that the quality of education, according to them, results from in-person studies, n=45 (36.290%) of the sample

Figure 4

Frequency of student responses based on declared education categories: W.S.; W.N.S., or (M/J)



Note. W.S. (preference for studying exclusively in-person); W.N.S. (preference for studying in an online mode exclusively or blended, considering the statement that not only in-person studies can ensure high-quality education); M/J (preference for studying in a blended mode, considering the high evaluation of the statement that only in-person studies ensure high-quality education).

The ANOVA test analysis indicated statistically significant differences in the preference for in-person education based on student preference categories regarding the study mode selection procedure, $F(2, 118)=80.39$, $p<0.001$, $\eta^2=0.577$. The post-hoc Tukey test showed a statistically significant difference between exclusive in-person study preference (W.S.) and online study preference (W.N.S.), $t=12.626$, $p< 0.001$, with a mean difference of RIJ=6.026 and a standard error of SE=0.477. A statistically significant difference was also found between the exclusive in-person study preference (W.S.) and the blended mode with consideration of educational quality (M/J), $t=8.518$, $p<0.001$, with a mean difference of RIJ=4.225 and a standard error of SE=0.496. Additionally, a statistically significant difference was observed between the online study preference

(W.N.S.) and the blended mode (M/J), t=-5.102, p< 0.001, with a mean difference of *RIJ*=-1.802 and a standard error of *SE*=0.353.

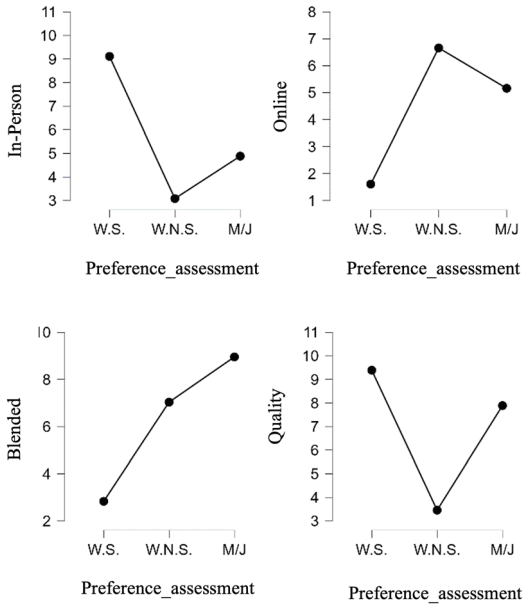
Based on the ANOVA test, statistically significant differences were found in the variable of online education preference concerning student preference categories regarding the study mode selection procedure, $F(2, 118)=30.174$, $p<0.001$, $\eta^2=0.338$. The post-hoc Tukey test revealed a statistically significant difference between exclusive in-person study preference (W.S.) and online study preference (W.N.S.), t=-7.737, $p<0.001$, with a mean difference of *RIJ*=-5.050 and a standard error of *SE*=0.653. A statistically significant difference was also observed between exclusive in-person study preference (W.S.) and the blended mode with consideration of educational quality (M/J), t=-3.548, $p<0.001$, with a mean difference of *RIJ*=-3.548 and a standard error of *SE*=0.678. Furthermore, a statistically significant difference was found between online study preference (W.N.S.) and the blended mode (M/J), t=3.111, p=0.007, with a mean difference of *RIJ*=-1.502 and a standard error of *SE*=0.483

After conducting the ANOVA test, statistically significant differences were found in the preference for blended learning concerning student preference categories regarding the study mode selection procedure, $F(2, 118)=37.989$, $p<0.001$, $\eta^2=0.392$. Based on the post-hoc Tukey test, a statistically significant difference was observed between exclusive in-person study preference (W.S.) and online study preference (W.N.S.), t=-6.211, $p<0.001$, with a mean difference of *RIJ*=-4.201 and a standard error of *SE*=0.676. A statistically significant difference was also found between exclusive in-person study preference (W.S.) and the blended mode with consideration of educational quality (M/J), t=-8.711, $p<0.001$, with a mean difference of *RIJ*=-6.121 and a standard error of *SE*=0.703. Additionally, a statistically significant difference was noted between online study preference (W.N.S.) and the blended mode (M/J), t=-3.839, $p<0.001$, with a mean difference of *RIJ*=-1.921, and a standard error of *SE*=0.500.

The results of the ANOVA test indicated statistically significant differences between the statement that *only in-person learning ensures the quality of education* and the student's preferred study mode category, $F(2, 118)=170.647$, $p<0.001$, $\eta^2=0.743$. The post-hoc Tukey test revealed a statistically significant difference between exclusive in-person study preference (W.S.) and online study preference (W.N.S.), t=14.916, $p<0.001$, with a mean difference of *RIJ*=5.931, and a standard error of *SE*=0.398. A statistically significant difference was also observed between exclusive in-person study preference (W.S.) and the blended mode with consideration of educational quality (M/J), t=3.636, p=0.001, with a mean difference of *RIJ*=1.503, and a standard error of *SE*=0.413. Additionally, a statistically significant difference was found between online study preference (W.N.S.) and the blended mode (M/J), t=-15.055, $p<0.001$, with a mean difference of *RIJ*=-4.429, and a standard error of *SE*=0.294.

Figure 5

Differences between the variables: preference for in-person, online, or blended classes, and the statement that only in-person teaching ensures the quality of education, and the category of overall preference, W.S., W.N.S., and M/J.



Discussion

Based on the analysis of arithmetic means, the highest value was observed for the category of blended learning (M=7.04). The next highest mean corresponds to the statement that quality education can only be ensured through in-person studies (M=5.92). Following this, the preference for online learning recorded a mean of M=5.32. The lowest mean was observed for in-person learning (M=4.58). The distribution shape measure for all variables was platykurtic, indicating that most results were concentrated around the means.

The analysis of research results reveals a certain logical pattern in student thinking. The fraction of students who believe that studies should be conducted exclusively online tend to reject in-person learning and any arguments supporting traditional education. A similar situation occurs among students who strongly prefer in-person learning; they affirm the benefits of this mode while dismissing online alternatives. Blended

learning emerges as a middle ground, integrating both remote and in-person systems. The study shows that students who opt for blended learning do not strictly support either extreme. They do not correlate with the belief that only in-person education ensures high-quality learning, nor do they align with the notion that online learning is the sole effective approach. There is no observed linear relationship between choosing blended learning and favouring online education. Respondents preferring the mixed mode reject purely in-person learning, but do not fully endorse online education either. It can be inferred that those who see blended learning as a viable university education model may partially agree with arguments supporting both online and in-person education. To clarify this matter further, more in-depth analyses were conducted, though they were omitted from the report, with only the final results presented.

Attention was given to explaining the variance components. The highest percentage of total variance was explained by the variable *hybrid learning* (2.15). Next came the variable *preference for in-person learning* (1.03), followed by the component *preference for online learning* (0.49), and finally, the variable indicating that high-quality education is achieved only through in-person learning (0.33). The first two rotated factors accounted for nearly 80% of the total variance, suggesting they are sufficient for interpreting the phenomenon. However, rejecting solely in-person learning did not guarantee which alternative mode of education (online or hybrid) the respondent preferred. Likewise, rejecting hybrid learning did not necessarily indicate whether the respondent chose in-person or online learning. Further PCA analyses revealed details of the connections between factors. Two groups of principal components were identified. The first group included three variables: preference for in-person learning and the belief that education quality depends exclusively on in-person instruction, both of which showed positive correlations with the identified group. Meanwhile, the third variable, preference for online learning, correlated negatively with the factor. This clear linear relationship between variables was confirmed by Pearson's pairwise test. Only the analysis of the second identified group through PCA and principal component analysis (PCA) clarified the significance of the variable *preference for hybrid learning*, which strongly and positively correlated with the extracted group of factors. This group also included the variables *preference for in-person learning* and *preference for online learning*, which correlated negatively, but very weakly, with the group component. This analysis demonstrated that the variable *preference for hybrid learning* should be considered a separate category for interpretation. On one hand, it connected to in-person education through the evaluation of education quality; on the other, it related to online learning when the claim that in-person education ensures quality was rejected. Both connections within the hybrid learning group were very weak, suggesting the presence of an intermediary factor. This intermediary factor turned out to be the claim that education quality can only be guaranteed through in-person study. After account-

ing for this factor, three general student preference categories were identified. Since the results obtained for the variables *preference for online learning* and *preference for hybrid learning*, when considering the belief that only in-person learning guarantees quality in higher education, did not differ significantly in a statistical sense, they were treated as closely related.

The following three correlates were identified: The first group included respondents who preferred in-person learning and simultaneously affirmed their choice by indicating the perceived connection between this type of education and the quality of teaching. Both variables were positively correlated. Therefore, asking about one of them would also imply the choice of the other. The second category of student thinking is associated with the exclusive choice of online learning and the hybrid mode, which is simultaneously linked to the statement that in-person education is not the only way to achieve high-quality teaching. The third way of thinking is related to the choice of hybrid learning, accompanied by the belief that in university education, in-person classes are essential, as only this form of teaching can ensure higher educational quality.

Ultimately, the ANOVA test confirmed that all identified groups are distinct categories, as in each of the conducted analyses, all three types of overall preferences significantly differed from each other in the choice of learning mode (in-person, online, and hybrid) as well as in the statement that the quality of higher education can only be ensured through in-person studies.

Summary

It was decided to summarise the results, as it would be difficult to conduct a discussion on this matter due to the lack of other analyses directly defining the presented research framework. Predictions for the future of university education, particularly in the blended learning mode, based on these studies, are highly probable. The majority of students prefer remote or blended learning modes, accounting for 85.5% of the surveyed sample, while only 14.5% of respondents favoured exclusively in-person education. The introduction of blended learning at the university would likely meet with approval from students rather than resistance to this type of education.

It should be noted that the remote learning faction includes individuals who indicated online education as well as students who prefer blended learning. The preference for blended learning, regardless of the categorisation of the phenomenon of educational quality, still represents the same choice, pointing to the mode of university teaching. Therefore, it seemed appropriate to combine the number of indications from both generalised preference groups regarding the method of conducting university classes in order to refine the conclusions.

The three identified correlates of student thinking are independent ways of preferring the mode of education at the higher education level. The binary division of preferences for the mode of education into supporters of traditional and remote learning polarises respondents' statements. The negation of traditional education simultaneously signifies the choice of online education and *vice versa*; acceptance of remote learning indicates the rejection of traditional education. When it comes to choosing blended learning, the situation is no longer so straightforward. The opinion on this matter depends on factors other than just the simple question of which mode of education is preferred. Introducing the variable of educational quality proved to be correct, although it divided the preferences of students opting for blended learning into two types of indications, which had to be separated. This step allowed for more precise analyses, as without it, it would have been impossible to establish a generalized perspective of student preferences regarding the choice of university education mode. However, it did not divide the opinions of those inclined toward online and traditional forms of education.

The experience of students with remote learning has allowed them to recognize the benefits of this form of education. Since, as is assumed, the perspective of blended learning is inevitable, it would be advisable to prepare for it both methodologically, in terms of integrating ICT technologies that facilitate knowledge transfer in the remote system, and by changing the foundation of knowledge transmission during on-site meetings.

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