

An Examination of Opportunities and Obstacles in Online Learning: A Student Perspective

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Abstract:

This study reveals the dimensions of satisfaction within online and traditional education, illuminating the distinct opportunities and challenges. The purpose is to offer insights into the landscape of university education, exploring how students navigate these varied environments and the resulting implications for the learning experience, educational institutions, and beyond. However, we will show the challenges faced by traditional approaches, such as limited availability, inflexibility, and potential difficulties in promptly adapting to the constantly evolving requirements of today's students. This try to assess the satisfaction of online learning throughout the university studies, offering valuable insights for educators, policymakers, and learners. A survey is conducted to estimate the satisfaction of online learning for 622 students in the private universities in Albania during 2022-2023 academic year. Proceeding data with econometric model of multiple factors with index variables. Dependent variable is the satisfaction of online learning, and independent variable are many dimensions which effect the online learning such as: challenges, disadvantages and advantages of digitalization and learning platforms, new online teaching methods and relevance, etc. Among many positive aspects and opportunities of online learning (material access at any time, using contemporary study methods, video-recorded lectures, guest lecturers, etc.), there are some problems (technological problems, interactive communication, social isolation, etc.).

Keywords: Online learning, digitization of auditoriums, prospect learners, learning satisfaction.

INTRODUCTION

In the rapidly evolving education landscape, the dichotomy between online learning and traditional education has emerged as a pivotal discussion point, steering the course of contemporary pedagogy. As the digital era continues to unfold, exploring the prospects and challenges inherent in the satisfaction derived from these two educational paradigms becomes relevant and imperative. Online learning has revolutionized the

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traditional model, introducing various possibilities and reshaping knowledge acquisition. The flexibility, accessibility, and ability of online learning experiences to meet individual needs have positioned online education as a formidable contender in the educational arena. However, this digital transformation is not without its intricacies, as the virtual realm presents challenges that differ markedly from the conventional classroom setting. This exploration delves into the nuanced dimensions of satisfaction in online and traditional education, unpacking the unique prospects and challenges each model brings to the forefront. It seeks to illuminate the evolving landscape of education, offering insights into how learners navigate these diverse environments and the implications for educators, institutions, and the broader educational ecosystem.

Regarding this study, we will scrutinize the prospects that online learning presents, including the potential for global accessibility, personalized learning experiences, and the integration of cutting-edge technologies. Simultaneously, we will address the challenges accompanying this shift, such as concerns about the quality of online education, the digital divide, and the impact on social and interpersonal skills traditionally fostered in classrooms. We will examine the enduring strengths of traditional education, grounded in face-to-face interactions, established pedagogical methodologies, and cultural and social. Yet, we will also confront the challenges traditional models face, such as limited accessibility, inflexibility, and a potential struggle to adapt swiftly to the dynamic demands of the modern learner. Through this study, we aim to provide a comprehensive understanding of satisfaction in learning, offering valuable insights for educators, policymakers, and learners. As we navigate the intricate between online learning and traditional education, we embark on a quest to uncover the challenges for a new era in learning.

Many advantages motivate online learning for students:

- *Flexibility and Convenience:* Students can access course materials and lectures anytime, accommodating diverse schedules and allowing for self-paced learning. The flexibility of online learning is particularly beneficial for those with work or family commitments, enabling them to balance education with other responsibilities.
- *Accessibility:* Online learning breaks down geographical barriers, allowing students to access courses from anywhere in the world. This is especially advantageous for individuals who may not have access to quality education locally.
- *Diverse Learning Resources:* Online courses often incorporate multimedia elements, interactive quizzes, and various digital resources catering to different learning styles. Access to online materials enhances the learning experience and provides students with a broader range of information.
- *Cost Savings:* Online learning can be more cost-effective as it eliminates expenses associated with commuting, housing, and physical course materials. Many online courses and programs are more affordable than their traditional counterparts, making education more accessible.
- *Customized Learning Experience:* Online platforms often allow for personalized learning paths, enabling students to focus on areas of interest, revisit challenging concepts, and progress at their own pace. Adaptive learning technologies can tailor content to individual learning styles and provide targeted feedback.

- *Enhanced Communication:* Online learning platforms facilitate diverse communication channels, including discussion forums, video conferences, and email, fostering interaction among students and instructors. Collaboration tools promote virtual teamwork, allowing students to engage with peers from different backgrounds and cultures.
- *Skill Development:* Online learning hones digital literacy skills as students navigate various online tools and technologies. Virtual collaboration and communication skills gained through online discussions and group projects are increasingly relevant in today's interconnected world.
- *Self-Directed Learning:* Online courses empower students to take greater control of their learning journey, encouraging self-discipline and time management. Managing assignments, deadlines, and study schedules fosters independence and self-motivation.
- *Career Advancement Opportunities:* Online learning provides a flexible avenue for individuals to acquire new skills or pursue advanced degrees while working. Employers often value the adaptability and commitment demonstrated by individuals who engage in online learning to enhance their professional qualifications.

There are some main disadvantages of online learning for students:

- *Limited Social Interaction:* Online learning can lack the face-to-face interaction in traditional classrooms, potentially leading to feelings of isolation and a diminished sense of community.
- *Dependence on Technology and Technical Issues:* Students may encounter technical difficulties such as internet connectivity issues, software glitches, or hardware malfunctions, disrupting the learning experience.
- *Self-Motivation Challenges:* Some students may struggle with self-discipline and motivation, as online learning requires a high level of personal responsibility to manage time effectively and stay engaged.
- *Communication Challenges:* Effective communication can be more challenging in online settings, as students may feel hesitant to ask questions or seek clarification compared to face-to-face interactions.
- *Lack of Immediate Feedback:* Students may experience delays in receiving feedback on assignments or assessments, potentially slowing the learning process and hindering timely improvement.
- *Teacher-Student Relationship:* Developing a personal connection between students and instructors can be more challenging in online courses, potentially impacting the quality of mentorship and support.
- *Cheating Concerns:* The remote nature of online exams and assessments may raise concerns about academic integrity, with some students resorting to dishonest practices.
- *Limited Networking Opportunities:* Building professional networks and relationships with peers can be more challenging in online learning environments compared to traditional classrooms.

The questionnaires are intended to analyze the students' satisfaction level based on online learning and the comparison with the traditional one in the classroom. The study is motivated to analyze the perspective and challenges of online learning as a current new and novel way of learning through universities and professional qualifications.

LITERATURE REVIEW

The sudden emergence of COVID-19, beginning in 2019, has significantly impacted global communities (Ayithey et al., 2020; Villela et al., 2021). Due to health and safety concerns, numerous schools worldwide closed temporarily. There was a rapid surge in demand for online learning, prompting a shift from the traditional face-to-face learning approach to an online format as educators endeavored to ensure the continuation of formal education programs for students (Lei and Medwell, 2021). This pandemic has presented unprecedented challenges to the education system, necessitating heightened emergency preparedness as schools grapple with adapting to the evolving environment and recurrent outbreaks a situation commonly referred to as the "new normal" (Wang, 2020). Educational institutions face the daunting task of finding alternative solutions to traditional face-to-face education to navigate this complex situation. This results in the closure of campuses to facilitate social distancing among students (Toquero, 2020). However, transitioning from a conventional educational setup to online learning in a brief period is inherently challenging, giving rise to numerous obstacles and difficulties (Crawford et al., 2020). Students, in particular, seem to struggle with grasping the educational role of online technologies, often viewing them as irrelevant or hindrances to learning (Ellis and Bliuc, 2019). Research by Cui et al. (2020) indicated a decline in the proportion of students who completed their courses and assignments on schedule. While the full extent of the impact of the covid-19 outbreak on education may take time to materialize, educational institutions worldwide are currently exerting maximum effort to enhance online learning environments and resources across various academic disciplines, utilizing their limited resources to the fullest (Kaur, 2020).

Several research studies have emerged on online education amid the covid-19 pandemic. However, studies examining college students' technological proficiency, interpersonal relationships with peers and instructors, and collaborative learning experiences during this period are scarce (Yuefan Xia, Yawen Hu, Chenyi Wu, Ling Yang, and Man Lei, 2022). The study's findings unveil that online learning provides novel avenues for college students to learn independently, collaborate, and establish connections with peers. It prompts them to reassess methods to enhance their technological skills, learning approaches, and communication abilities and rethink their roles as team members. The results indicate that online learning provides college students with a fresh approach to independent learning, collaboration, and fostering relationships with peers. In turn, it prompts students to reevaluate methods for enhancing technical skills, refining learning approaches, and improving communication skills. Furthermore, there is a suggestion that future technical skills training should be extended to both faculty and students to enhance students' proficiency in practical skills and address communication barriers stemming from inadequate skills.

Previous studies have indicated that features such as file sharing, whiteboards, and annotation pose usability challenges, leading to the underutilization of conferencing functions (Ming et al., 2021). In asynchronous learning settings, learning content delivery differs from offline classes, making it impractical to provide real-time feedback and responses. Simultaneously, students lack a learning community, encounter technical issues, and struggle to comprehend instructional objectives-critical impediments to effective online learning. Significantly, challenges experienced in online courses can be attributed to educators' insufficient online teaching skills or preparation, including the absence of detailed teaching plans, inadequate support from technical teams, and congestion on online education platforms.

The present circumstances differ significantly from traditional online learning, resembling a crisis-driven learning approach that presents substantial student challenges. Issues such as unreliable internet connections create a barrier to ensuring equitable access to online learning among students (la Velle et al., 2020). This leads to complications with attendance and engagement in online sessions, rendering online education less adaptable than initially assumed. Additionally, students are compelled to swiftly adapt to unfamiliar learning methods while grappling with the individual and societal impacts of the epidemic on their daily lives and physical and mental well-being (Macintyre et al., 2020). Unsurprisingly, teachers' techno-pedagogical skills are a critical factor influencing student engagement during this period. Research indicates a positive correlation between students' grades and their technological proficiency, highlighting that the inadequacy of teachers in utilizing network equipment functions negatively impacts student learning outcomes (Masry-Herzallh and Stavissky, 2021). Therefore, in the future, educators must enhance their teaching skills to facilitate effective knowledge transfer and communication with students. Additionally, exploring online teaching strategies that prioritize students' interests becomes imperative to ensure heightened levels of student engagement.

While online learning has proven beneficial in protecting students and faculty from the covid-19 pandemic during that period, its effectiveness falls short of traditional learning methods. Evaluating the success of digital transformation in higher education institutions involves considering five critical criteria: the nature of the changes, the speed of implementation, the technology employed, the capacities of both users and systems and the economic implications (Kopp et al., 2019). Online learning is characterized by using technological devices and the Internet as educational tools. Adedoyin and Soykan's research (Adedoyin and Soykan, 2020) highlights various factors such as technical issues, socio-economic conditions, human and pet interference, digital competence, assessment and supervision challenges, and heavy workloads that can impact the effectiveness of online learning. The involvement of teachers can enhance students' learning efficiency to a certain extent. The most students encountered difficulties with online learning, particularly in underdeveloped areas with poor connectivity (Ming et al., 2021).

Online learning lacks the physical presence that fosters face-to-face interactive relationships among students and between students and educators (Alawamleh et al., 2020). Consequently, there is a need for a shift in how students and instructors interact and how students engage in collaborative efforts. Despite the availability of various online applications, many instructors face challenges in offering remote support and timely feedback on academic performance (Collazos et al., 2021), leading to student dissatisfaction. Essentially, students are identified as "social learners" who crave interaction with their peers and instructors. They can quickly become distracted, paying less attention to the content of online courses (Bozkurt and Sharma, 2020), and often struggle to maintain self-discipline (Nishimwe et al., 2022). Generally, students tend to exhibit a preference for face-to-face teaching and learning.

RESEARCH METHODOLOGY AND MODELS

Sample and Data: The study's database used in this paper is related to primary data regarding a survey. This survey involves students at bachelor level and Master level in private universities, in Albania, in 2023-2024 academic year. The total number of students who completed the questionnaire is 622. Therefore, based on the statistical sampling size for a infinite population, we have the following: The first step consists of calculating the infinite sample size depending on the population proportion, confidence level, and normal distribution Z-score value. The second step consists of calculating the finite sample size as our data. Based on the data collected by the questionnaire and using the confidence interval of 5%, the optimal sample size is more than 385. The meaning of the variables in the model and their description is shown in Table 1:

Table 1. Meaning of variables and descriptive statistics.

Abbreviation	Description of the variable
<i>Dependent variable:</i>	
SOL	<i>Satisfaction of online learning:</i> {Evaluate the overall satisfaction perceived during the development of online learning in relation to the traditional teaching developed in the faculty (from very low = 1 to completely satisfied = 5)}
<i>Independent variable:</i>	
I _{COL}	<i>Index of challenges of online learning</i> {is an average of the [Technology (computers, platforms, internet, etc.)] + [Interactive communication with the lecturer] + [Lack of digitized teaching materials] + [Low level of digital knowledge by the student] + [Low level of digital knowledge of lecturers] + [Time management and organization] + [Orientation/ support from the university]}
I _{MOL}	<i>Index of method-developing of online learning</i> {is an average of the [video conference] + [independent reading of recommended literature] + [read power point presentation independently] + [power point with audio of the lecturer that is followed in video form] + [power point with audio and video of the lecturer that is followed in video form] + [tracking of proposed video (additional) materials] + [reading proposed additional written materials] + [guest lecturers] + [case studies]}
I _{ROL}	<i>Index of relevance of online learning</i> {is an average of the [encourages me to reflect on the aspects I am learning] + [encourages critical thinking and creativity] + [encourages team work] + [online learning platforms help organize materials, assignments and schedules] + [I find it difficult to self-organize to learn] + [some of these practices I would like to continue when we return to university]}
I _{AOL}	<i>Index of advantages of online learning</i> {is an average of the [Ability to access materials at any time] + [Possibility of staying at home] + [Classroom interactivity] + [Possibility to record a lesson]}
I _{DOL}	<i>Index of disadvantages of online learning</i> {is an average of the [Reduces communication with the lecturer] + [Technical problems] + [Poor study conditions at home] + [Social isolation] + [Lack of self-discipline]}

Source: Author's summary.

Econometric model: In this study, we have used the multiple linear regression model. This model attempts to establish and estimate the relationship between the dependent and many independent variables. It is one of the most fundamental, usable, and powerful models for many statistical approaches. The questions used in the questionnaire are on a Likert scale (from 1 to 5), and the classification is from the lowest to the highest level. This type of measure creates a valid variation necessary for applying linear regression. The generalized form of the multiple linear regression is:

$$SOL = \beta_0 + \beta_1 I_{COL} + \beta_2 I_{MOL} + \beta_3 I_{ROL} + \beta_4 I_{AOL} + \beta_4 I_{DOL} + \varepsilon$$

Where,

- Dependent variable (the main purpose of this study);
- Independent variables (other questions that cause variation in the dependent variable or are the factors that affect it);

- β_i = regression parameters which estimate the impact scale of each independent index-variable in the dependent variable (with constrain “ceteris paribus”);
- ε = error term (all other variables that are not involved in the model).

Estimating parameters β_i it will be used the ordinary least squares method, this means that we need to minimize the square of errors. To make the parameter evaluation, it will be used the ordinary least square method (Verbeek, 2017). This evaluation set up conclusions with high statistical reliability, we will rely on all the basic assumptions of the Gauss-Markov theorem (Wooldridge, 2016). According to this theorem, as a regression model should be statistically the best and useful for economic analysis it must meet certain assumption:

- Assumption 1 (linear in parameters): the model should be linear this mean that it can be applied the smallest squares method. Linearity should be according to parameters.
- Assumption 2 (random sampling): This random sampling assumption means that we have data that can be used to estimate the parameters, and that the data have been chosen to be representative of the population.
- Assumption 3 (no perfect collinearity): In the sample (and therefore in the population), none of the independent variables is constant, and there are no exact linear relationships among the independent variables.
- Assumption 4 (zero conditional mean): The error term has an expected value of zero given any values of the explanatory variables.
- Assumption 5 (homoskedasticity): The error term has the same variance given any values of the explanatory variables.
- Assumption 6 (normality): The population error term is independent of the explanatory variables and is normally distributed with zero mean and constant variance.

EMPIRICAL ANALYSIS AND FINDINGS

Table 2 below shows the summary of descriptive statistics for all the variables included in the analysis. According to these statistics, the variables have an average index value from 2 to 3, having evaluation positions "satisfied" in positions of "average" challenges and difficulties. What we distinguish from the measurements is that none of the variables has a normal distribution. Hence, the heterogeneity of the values of the variables indicates the need for re-measurements in the future to have as much reliability as possible in the quantified assessments.

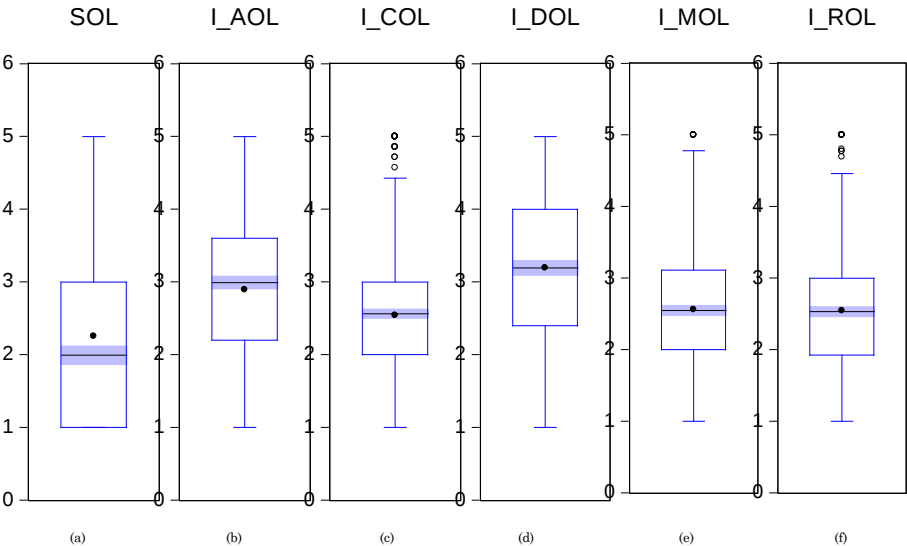
Table 2. Descriptive statistics

	I_AOL	I_COL	I_DOL	I_MOL	I_ROL	SOL
Mean	2.892512	2.541653	3.195169	2.557287	2.542392	2.254428
Median	3.000000	2.571429	3.200000	2.555556	2.538462	2.000000
Maximum	5.000000	5.000000	5.000000	5.000000	5.000000	5.000000
Minimum	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Std. Dev.	1.054260	0.884557	1.105179	0.947693	0.880409	1.147086
Skewness	-0.061982	0.459828	-0.155066	0.179057	0.291123	0.525201
Kurtosis	2.441483	3.346737	2.274560	2.642249	2.918655	2.464065
Jarque-Bera	8.469108	24.99513	16.10574	6.629983	8.943110	35.98104

Probability	0.014486	0.000004	0.000318	0.036334	0.011430	0.000000
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Source: Authors' calculations in EViews 12.

Another representation of the expansion of the index-variable values obtained in this study is given in Figure 1 (a - f). Each boxplot illustration also shows the quartile range of the values. According to these graphs, we see that although the variables in their average are comparable, in some of them, they are different from their variance, where we can mention the level of satisfaction with online learning and the advantages and disadvantages of online learning.



Source: Authors' calculations in EViews 12.

Figure 1. Boxplot illustrations.

Table 3 shows the association and strength of the associations between the variables. The positive fact is that none of the variables has a strong negative or positive relationship between them (ie, smaller than -0.7 and larger than +0.7). This fact shows that the linear estimation model is unaffected by the independent variables' multicollinearity. On the other hand, the connections, although not strong, are stable (all are significant in the pairwise connections with statistical significance level $p < 0.05$). The following are positively related to the level of satisfaction with online learning: (1) index of advantages of online learning, (2) index of method-developing of online learning, and (3) index of the relevance of online learning. The level of satisfaction with online learning has a negative relationship: (1) index of challenges of online learning and (2) index of disadvantages of online learning. Although these positive and negative relationships were logically expected to be so, the good thing is that the relationships with a positive impact also have the highest absolute correlation coefficient value.

Table 3. Matrix of correlations.

Correlation	I_AOL	I_COL	I_DOL	I_MOL	I_ROL	SOL
I_AOL	1.0000					
I_COL	-0.2898*	1.0000				
I_DOL	-0.1574*	0.2307*	1.0000			
I_MOL	0.5835*	-0.1722*	-0.0798**	1.0000		
I_ROL	0.5930*	-0.1514*	-0.1081*	0.6864*	1.0000	
SOL	0.5760*	-0.2609*	-0.1949*	0.6053*	0.6196*	1.0000

Source: Authors' calculations in EViews 12. Note: “*” for statistical significance level of $p < 1\%$, “**” for statistical significance level of $p < 5\%$.

Table 4 below shows the parametric statistical estimations of the linear model of variables influencing the level of satisfaction of students in online learning.

Table 4. Parametric estimations of “the satisfaction of online learning model.”

Dependent Variable: SOL				
Method: Least Squares				
White heteroskedasticity-consistent standard errors & covariance				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.363219	0.161932	2.243032	0.0253**
I_AOL	0.232525	0.046409	5.010333	0.0000*
I_COL	-0.122433	0.038317	-3.195250	0.0015*
I_DOL	-0.080642	0.030339	-2.658025	0.0081*
I_MOL	0.312709	0.057812	5.409100	0.0000*
I_ROL	0.388154	0.062260	6.234393	0.0000*
AR(1)	0.118017	0.041756	2.826371	0.0049**
R-squared	0.507341	Mean dependent var		2.253635
Adjusted R-squared	0.502511	S.D. dependent var		1.148504
S.E. of regression	0.810073	Akaike info criterion		2.427858
Sum squared resid	401.6051	Schwarz criterion		2.477934
Log likelihood	-744.4221	Hannan-Quinn criter.		2.447324
F-statistic	105.0399	Durbin-Watson stat		1.997062
Prob(F-statistic)	0.000000*	Wald F-statistic		164.9042
Prob(Wald F-statistic)	0.000000*			
Inverted AR Roots	.12			

Note: “*” for statistical significance level of $p < 1\%$, “**” for statistical significance level of $p < 5\%$ and AR(1) is autocorrelation adjustment.

Source: Authors' calculations in EViews 12.

Generalized form of the model is:

$$SOL_i = 0.36 + 0.23I_{AOL} - 0.12I_{COL} - 0.08I_{DOL} + 0.31I_{MOL} + 0.39I_{ROL} + 0.11\varepsilon_{i-1} + \varepsilon_i$$

The model is statistically significant based on the Fisher-test with significance $p < 0.01$. *SOL-Satisfaction of online learning* has a statistically significant positive relationship with the variables:

- *I_{AO}L* - *Index of advantages of online learning*, if this index increases the trend in enhancing by one Likert scale; in that case, this will increase the satisfaction of online learning with 0.23 Likert scale or 23%. The opportunities offered by online learning platforms create the opportunity for students to access materials at any time, to have recordings of class discussions at any time, the comfort of staying at home, etc.
- *I_{MO}L* - *index of method-developing of online learning*, if this index increases the trend in enhancing by one Likert scale; in that case, this will increase the satisfaction of online learning with 0.31 Likert scale or 31%. Online learning platforms at the students' discretion give the possibility of using contemporary study methods, increasing satisfaction and self-fulfillment in studies, where we can mention accessible online literature, video-recorded lectures, guest lecturers from different countries without having physical restriction of their movement, webinars and video conferences, etc.
- *I_{RO}L* - *index of relevance of online learning*, if this index increases the trend in enhancing by one Likert scale; in that case, this will increase the satisfaction of online learning with 0.39 Likert scale or 39%. According to the students, learning through the Internet is relevant in several aspects: it encourages them to reflect on the aspects of learning, encourages critical thinking and creativity, and online learning platforms help to organize materials, assignments, schedules, etc.

Meanwhile, *SOL-Satisfaction of online learning* has a statistically significant negative relationship with the variables:

- *I_{CO}L* - *index of challenges of online learning*, if this index increases the trend in enhancing by one Likert scale; in that case, this will decrease the satisfaction of online learning with 0.12 Likert scale or 12%. According to the students, online learning confronts them with several challenges: technological problems (computers, platforms, internet, etc.), interactive communication with the lecturer, time management and organization, etc.
- *I_{DO}L* - *index of disadvantages of online learning*, if this index increases the trend in enhancing by one Likert scale; in that case, this will decrease the satisfaction of online learning with 0.12 Likert scale or 12%. Issues such as reduced communication with the lecturer, technical problems, social isolation, lack of self-discipline, etc., are some limitations or disadvantages students express about online learning.

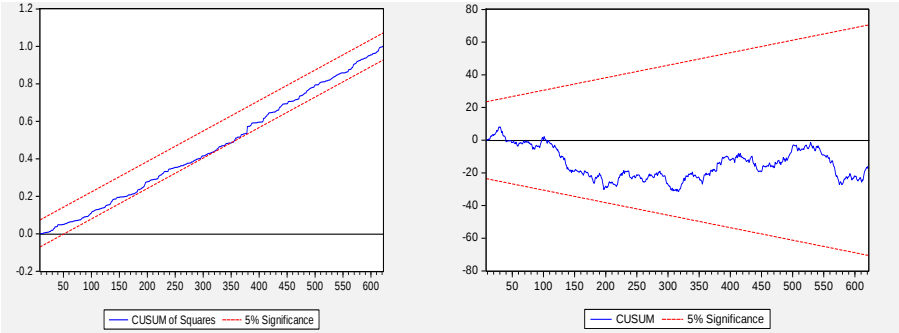
In order that the models to be accepted and valid for evaluations and predictions of similar phenomena in the future, it will be tested for the error term or residuals.

Table 5. Analysis of the Residuals.

The test	Description of hypothesis	Test result
Multicollinearity: VIF-test (Variance inflation factors)	This test estimates if the independent variables are correlated with residual or error of model. <i>Null hypothesis:</i> model does not have multicollinearity	According to the VIF test all independent variables are less than 10, means our models have not multicollinearity.
Autocorrelation: LM-test (Breusch- Godfrey)	This test estimates if the residual or error of model are correlated. <i>Null hypothesis:</i> model does not have autocorrelation	According to the test null hypothesis do not reject after AR(1) adjusted, and then the models have not autocorrelation.
Heteroskedasticity: Breusch-Pagan Godfrey-statistic	This test estimates if the residual of the model, has or not constant variance. <i>Null hypothesis:</i> model does not have heteroskedasticity	According to the test null hypothesis do not reject, so the models have not heteroskedasticity.
Normality of the residual distribution: Jarque-Bera-test	This test estimates if the residual of the model, has or not normality distribution. <i>Null hypothesis:</i> the residual of the model has normality distribution.	According to the test null hypothesis reject. So, the model has problem with normality distribution of residual, but cusum test confirm that model is stable regarding parameters.

Source: Authors' calculations in EVIEWS 12.

These models have successfully the main criteria of creating efficient models according to the main assumptions of the Gauss-Markov theorem (Table 5), hence the models are statistically useful to explain the direction and strength correlations of the variables. In addition, the coefficient stability for each model is tested by CUSUM of squares, that figured out a stability in long-term. This test is illustrated below:



Source: Authors' calculations in EVIEWS 12.

Figure 2. CUSUM test result of the parameters stability.

CONCLUSION AND DISCUSSION

Online learning offers several advantages for students, including flexibility, accessibility, diverse learning resources, cost savings, customized learning experiences, enhanced communication, skill development, self-directed learning, and career advancement opportunities. However, there are notable disadvantages, such as limited social interaction, dependence on technology with potential technical issues, self-motivation challenges, communication difficulties, lack of immediate feedback, challenges in developing teacher-student relationships, concerns about cheating, and limited networking opportunities. This paper relies on primary data from a survey conducted on students at bachelor and master levels in private universities in Albania during the 2023-2024 academic year.

In conclusion, the study reveals significant relationships between satisfaction in online learning and various factors. Positive associations are found with the Index of Advantages of Online Learning, Index of Method-Developing of Online Learning, and Index of Relevance of Online Learning. Precisely, an increase in these indices corresponds to higher satisfaction levels, emphasizing the benefits of online learning, such as flexible access to materials, contemporary study methods, and the perceived relevance of Internet-based education. On the contrary, satisfaction with online learning exhibits negative relationships with the Index of Challenges of Online Learning and Index of Disadvantages of Online Learning. An increase in these indices correlates with decreased satisfaction, indicating that challenges such as technological issues, interactive communication difficulties, and perceived disadvantages like reduced communication with instructors contribute to lower satisfaction levels among students engaged in online learning. These findings highlight the importance of addressing challenges and disadvantages to enhance students' overall satisfaction in online learning environments.

Based on the study's conclusion, the following recommendations for lecturers and university management can be made to improve the satisfaction of students in online learning environments:

Enhance Technological Infrastructure: Invest in robust technological infrastructure to address the challenges of computer, platform, and internet connectivity. Regular updates and maintenance can help mitigate technical issues and ensure a smooth online learning experience.

Improve Interactive Communication: Foster better online course communication channels between students and instructors. Implement regular virtual office hours, interactive discussions, and real-time feedback to enhance engagement and reduce perceived challenges in interactive communication.

Strengthen Instructor-Student Interaction: Encourage instructors to establish strong connections with students through various means, such as personalized feedback, virtual discussions, and collaborative projects.

Expand Access to Learning Resources: Continue to enhance and diversify online learning resources. Ensure that students can access various materials, including online literature, recorded lectures, and guest lectures from different countries, to support different learning styles and preferences.

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