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HIGHER EDUCATION AND MOBILITY: THE IMPACT OF TECHNOLOGY AND INNOVATION ON INTERNATIONAL LEARNING AND COOPERATION OPPORTUNITIES

EDUCAÇÃO SUPERIOR E MOBILIDADE: O IMPACTO DA TECNOLOGIA E DA INOVAÇÃO NAS OPORTUNIDADES DE APRENDIZADO E COOPERAÇÃO INTERNACIONAIS

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ABSTRACT

This article aims to investigate the profound effects of technology and innovation on opportunities for international learning and cooperation in higher education and mobility. Employing a survey and questionnaire, the study focuses on 120 students across various specialities and education levels (bachelor, master, postgraduate). The research distinguishes itself through a novel, comprehensive analysis, utilizing a combined approach that amalgamates diverse methods of data collection and analysis. In the methodology, the experiment is outlined, specifying the types of data analytics employed (statistical analysis and thematical analysis). The significance of this work lies in its holistic examination of the impact of technology and innovation on international learning and cooperation, encompassing various mobility programs and their popularity among students. The results highlight the integral role of digital technologies in academic mobility, showcasing their ability to enhance student experiences by optimizing time management and fostering convenient interactions with international partners. Noteworthy differences in the popularity of mobility programs are identified, accompanied by an exploration of factors influencing their attractiveness to students. This studyunveils a range of digital tools such as virtual classes, distance learning, and virtual exchanges, illustrating their pivotal role in empowering students to discover, select, and engage with international study opportunities. The findings underscore the transformative impact of technology, offering a roadmap for educational environments beyond coursework. In conclusion, the article not only enriches the discourse on the integration of technology in academic mobility but also provides recommendations for educators and policymakers to enhance the effectiveness of international learning and cooperation in higher education.

Keywords: digitalisation, improved accessibility, mobility, implementation of international training, education, and Science.

RESUMO

O objetivo do artigo é determinar o impacto da tecnologia e inovação nas oportunidades de aprendizado e cooperação internacional no ensino superior e mobilidade, com base em uma pesquisa e questionário. Métodos: o experimento foi realizado em etapas, utilizando uma abordagem combinada com o uso de vários métodos de coleta e análise de dados. Os participantes do estudo são 120 estudantes de instituições de ensino superior representados por diferentes especialidades e níveis de educação (bacharelado, mestrado, pós-graduação). A novidade científica do trabalho é determinada por uma análise abrangente do impacto da tecnologia e inovação nas oportunidades de aprendizado e cooperação internacional no ensino superior e na mobilidade dos estudantes modernos. O estudo utiliza, pela primeira vez, uma abordagem combinada, reunindo diferentes métodos de coleta e análise de dados, e abrange uma variedade de programas de mobilidade e sua popularidade entre os estudantes. Os resultados indicam que as tecnologias digitais se tornaram parte integrante da mobilidade acadêmica, e seu uso ajuda os estudantes a maximizar seu tempo e interagir convenientemente com parceiros internacionais. O estudo também revelou diferenças na popularidade de diferentes programas de mobilidade e apontou fatores que podem influenciar sua atratividade para os estudantes. Os resultados do estudo indicam que a tecnologia facilita grandemente o processo de mobilidade acadêmica dos estudantes, incluindo aulas virtuais, aprendizado a distância, intercâmbios virtuais e outras abordagens inovadoras. Essas tecnologias ajudam os estudantes a encontrar e escolher efetivamente oportunidades de estudo internacionais, interagir com parceiros e obter informações sobre oportunidades de estudo.

Palavras-chave: digitalização, acessibilidade aprimorada, mobilidade, implementação de treinamento internacional, educação e ciência.

Introduction

In an era marked by the globalization of society, state interdependence, and the complex interplay of crises, including the coronavirus pandemic, military conflicts, and economic challenges, the imperative to modernize the education system has become more pressing than ever. The evolving needs of our society necessitate the exploration of educational models capable of addressing the intricacies of the contemporary landscape. Notably, the educational trajectory in Ukraine is undergoing a transformative shift, progressively moving away from authoritarian paradigms towards a democratic model. This transition is underscored by the adoption of a humanitarian paradigm, epitomized by the establishment of the New Ukrainian School – a paradigm shift that transcends the boundaries of general secondary education and extends its influence to the realm of higher education.

In the contemporary global context, higher education and mobility have emerged as integral facets driving individual and societal development. Over recent decades, the confluence of globalization and information technology has elevated higher education to a pivotal role within competitive societies. Simultaneously, student mobility and international educational cooperation have assumed new dimensions and heightened significance.

However, amidst these transformative shifts, it is crucial to acknowledge and anticipate emerging trends that will shape the future of higher education. Technological progress stands out as a transformative force reshaping the higher education landscape. The infusion of digital technologies and innovations into the educational milieu has transcended geographical constraints, offering unprecedented access to knowledge. Virtual classrooms, online resources, and multimedia platforms have revolutionized the delivery of education, rendering it more flexible and attuned to the contemporary needs of students. This technological wave has also reverberated through academic exchange programs, leaving an indelible mark on their nature and scope.

Furthermore, the aftermath of the COVID-19 pandemic has accelerated the integration of digital technologies in education, leading to a surge in remote learning and virtual collaborations. As we navigate these transformative times, understanding and adapting to these emerging trends is critical for shaping the future of higher education. This research aims not only to comprehend the current impact of technology and innovation on international learning and cooperation but also to identify and analyze these emerging trends that will undoubtedly define the future landscape of higher education in the global context. In this regard, it is also important to note the current opportunities for international learning and international cooperation in the context of the total digitalisation of social and scientific life.

Main focus

This research article focuses on the interaction between higher education and student mobility in the context of rapid technological development. In particular, the impact of modern technologies and innovations on the development of international learning and cooperation will be considered. Through the analysis of current trends and best practices, it is proposed to highlight key aspects, including the use of remote technologies, digital pedagogical methods, and the role of virtual exchanges in shaping the new face of global education.

Aim and tasks

Therefore, the purpose of the article is to analyse the impact of technology and innovation on the opportunities for international learning and cooperation in higher education and mobility. To achieve this goal, several additional issues will be considered:

1. Defining theoretical aspects of academic mobility
2. Study of the main technologies used in international projects
3. Analysing the impact of technology and innovation on the development of academic mobility of students

Theoretical basis

Academic mobility is a process that allows students or researchers to receive education or gain research experience in other educational or research institutions, usually outside their home country (FOMENKO, 2019). This may include student exchanges, internships, participation in international projects or programmes, and collaboration with other universities or research organisations (TSEKHMISTER; CHALYI; CHALYY, 2009; HAN, 2014).

The main goal of academic mobility is to enrich the educational or scientific experience of participants, broaden their cultural understanding and increase their competitiveness in the international labour market (IVANOVA; HORYTSKA; SHAPOVALOVA, 2022). Students or researchers participating in academic mobility programmes have the opportunity to study new subjects, work with renowned experts in their field, and gain valuable experience and knowledge (JACKSON, 2020). This contributes to the development of professionalism among students, enriches their knowledge and practical experience. As a rule, special agreements and cooperation programmes are concluded between universities or research institutions of different countries to implement academic mobility (KHOMYNETS, 2018; QUINTANA, 2019).

Acoording to KALOGIANNAKIS et al. (2023) modern scholars have underscored the benefits of international travel in enhancing one's skills. However, the ongoing pandemic has underscored the critical importance of digital skills in our current information-based society. In their study evalueted the digital competence levels of international students and teachers within the context of an International Week event. This research sheds light on the transformative impact that international experiences, coupled with innovative technological tools, can have on the digital competencies of both students and teachers (KALOGIANNAKIS et al., 2023). In the study by TÜLÜBAŞ et al. (2023), various educational benefits associated with digital technologies have been highlighted. Notably, the internet has been identified as a powerful tool supporting education by enabling enhanced information access. Additionally, social media platforms have been recognized for their role in enhancing learning processes. While digital technologies offer

convenience and diverse functionalities, research underscores the potential drawbacks associated with their overuse, which could lead to serious problems in personal, family, and social well-being (TÜLÜBAŞ et al., 2023). LAVIDAS et al. (2023) explored the determinants affecting the inclination of faculty members to utilize Moodle. They delve into different facets, including the user interface, available functionalities, support, and other variables that might impact the acceptance of this technology within the higher education setting in Greece (LAVIDAS et al., 2023). Moreover, PAPADAKIS et al. (2023) explored the synergistic potential of combining cloud technologies and augmented reality in the field of education. The authors investigated how the integration of these technologies can enhance the educational experience, providing insights into the applications, benefits, and challenges of this joint approach. In addition, the work by PAPADAKIS et al. (2023) delved into the advancements in lifelong learning and professional development facilitated by ICT. The authors share insights gleaned from the 3L-Person 2023 workshop, shedding light on innovative approaches, tools, or strategies that leverage ICT to support ongoing learning and career growth.

When considering the concept of academic mobility, it becomes obvious that it can be compared to similar, but not absolutely identical concepts, such as transnational education, as well as internationalisation and Europeanisation of the educational space (MONTEIRO; LOPES; CARBONE, 2021). An analysis of the research of many scholars has confirmed that the concept of academic mobility is often viewed through the prism of several approaches. They are presented in Table 1.

Table 1 – Academic mobility perceptions of researchers

Approach	Meaning
Functional	It provides for the free movement of students to build the academic and general cultural potential of national higher education systems.
Personal	He considers academic mobility as a tool for the development of personal qualities of higher education students.
Cultural approach	Creates conditions for cultural and intellectual exchange.
A virtual approach	It provides an opportunity to combine formal, non-formal, and informal education, share experiences, receive expert advice, participate in professional communication without leaving family or work, and receive educational services using modern information and communication technologies.

Source: compiled by the authors based on the study: MONTEIRO; LOPES; CARBONE (2021); IVANOVA; HORYTSKA; SHAPOVALOVA (2022).

The forms of mobility for modern students who receive bachelor's or master's degrees in national higher education institutions are: obtaining education through participation in academic mobility programmes; participation in scientific or language internships (SPIVAKOVSKA & KOTKOVA, 2017). The forms of this mobility for individuals obtaining a degree, research or teaching staff, and other employees of the education sector are

1. participation in joint international research projects;
2. teaching;
3. conducting scientific research;
4. participation in research internships;
5. general professional development (NETZ, 2014; PETZOLD & BUCHER, 2018).

However, the active digitalisation of the educational process has also affected student mobility.

It is proved that modern technologies have significantly changed and improved the academic mobility of students, providing them with more

opportunities and conveniences. Table 2 shows the main ways in which technology has influenced academic mobility.

Table 2 – Ways in which technology has influenced academic mobility

Aspects	Description
Virtual classes and online courses	Thanks to the power of the Internet and remote technologies, students can participate in virtual classrooms and study online without leaving their home country. This allows them to gain academic expertise from recognised universities and experts anywhere in the world.
Virtual laboratories	Some fields require work in laboratories. Virtual laboratories allow students to conduct experiments and perform practical tasks online, which facilitates their participation in academic mobility programmes (SALNYK et al., 2023).
Virtual communication	Virtual communication tools, such as video conferencing, facilitate communication between students and teachers at a distance. This makes it easier to discuss academic issues, interact, and conduct joint research.
Joint online projects Joint international conferences	Students can collaborate on projects over the Internet, joining forces even over long distances (BROADEN, 2012). This facilitates international cooperation and exchange of ideas. For this reason, it is important to organise international conferences and scientific tables involving students from different countries

Source: based on SALNYK et al. (2023); BROADEN (2012).

In general, modern technologies have greatly expanded the opportunities for participation in academic mobility, making it more accessible and convenient for students and scholars from all over the world.

Methodology

Research Design

The study is designed to explore the impact of technology and innovation on international learning and cooperation opportunities in higher education. Using a mixed-methods approach, the study will take into account several methods of data collection and analysis.

Participants

The participants of the study will be 120 students of higher education institutions selected from different specialities and levels of education (see Table 3).

Table 3 – Information about the participants

Degree of study	
Bachelor's degree	68 people
Master	51 people
Postgraduate student	9 people
Speciality	
International relations	32 people
Economics, international economic relations	21 people
Philosophy	4 persons
Political Science	12 people
International law	18 people
Computer science	18 persons
Management	5 people
History and archeology	4 persons
Culturology	2 persons
Secondary education	4 persons

Source: respondents' data.

The specific criteria used for selecting participants in this study were carefully chosen to ensure a diverse and representative sample. First and foremost, we considered the participants' student status, encompassing those pursuing education at various levels, including Bachelor's, Master's, and Ph.D. degrees. This ensures a broad spectrum of educational backgrounds and experiences.

International experience was another crucial criterion, focusing on students who have engaged in international exchange programs, internships, or have studied abroad. This inclusion adds a valuable layer to our research, as it brings in perspectives shaped by exposure to different cultural and educational settings.

Recognizing the significance of technology in contemporary education, we also looked at students who actively incorporate technology into their learning processes, such as through online courses and virtual platforms. This criterion acknowledges the evolving landscape of education and its intersection with technology. Readiness to cooperate emerged as a pivotal factor, targeting students expressing a willingness to participate in international projects or joint programs. This criterion aims to ensure that our participants are not only academically inclined but also possess a collaborative mindset, crucial for the success of international academic endeavors. Language competence, with a focus on a high proficiency level enabling effective communication in an international academic environment, was another key criterion. This ensures that participants can engage meaningfully in the research process and contribute to discussions in a diverse linguistic setting.

In essence, these inclusion criteria collectively contribute to the robustness of our research results. By accounting for factors like socio-economic diversity, geographic representation, and gender balance, we strive to create a well-rounded and comprehensive understanding of the student population under investigation. This approach enhances the validity and applicability of our findings, reflecting the dynamic and varied nature of today's educational landscape.

Sample Procedure

Participants were selected randomly from different higher education institutions. Students were divided by faculty and course to ensure diversity.

Data Collection

The results were obtained through questionnaires and interviews. During the survey, higher education students received standardised questionnaires containing questions about their experience of international learning, the use of technology, and innovation in this process (see Table 4).

Table 4 – Questionnaire with research questions

Section of the questionnaire	Key questions
1. Personal data	1.1. Name: 1.2. Degree of study (bachelor's, master's, postgraduate): Bachelor's degree Master Postgraduate student 1.3. Faculty or speciality
2. International experience	2.1. Specify the programme and duration of your international experience
Use of technology	3.1. Have you used technology (online courses, virtual platforms) in your studies? Not used at all Little used Usually used Partially used by I have always used 3.2. Do you use online resources for study or research at foreign universities? 3.2. What technologies did you use?
4. The impact of technology on international mobility:	4.1 What technologies or innovations do you consider most important for improving the opportunities for international cooperation in higher education? 4.2 How do you assess the impact of technology and innovation on international learning and cooperation opportunities? No effect at all Has little effect It has a slight effect It has enough impact Strongly influences
5. Comments and suggestions:	5.1. Do you have anything specific you would like to add or suggest about the research topic?

Source: compiled by the authors.

The interviews were conducted in focus groups of 10 people with prepared questions to explore in depth some aspects that could not be exhaustively covered in the survey.

Data Analysis

The utilization of quantitative analysis in this study played a pivotal role in distilling and summarizing the survey results. By employing statistical software, we were able to delve into the data, revealing intricate patterns and establishing correlations between various factors. This methodological approach provides a comprehensive numerical overview, offering quantitative insights into the multifaceted aspects of our research.

Simultaneously, the qualitative analysis of interviews adds a nuanced layer to our investigation. Through the meticulous process of transcribing responses, we aim to capture the richness of participants' perspectives. Subsequently, the qualitative content will undergo a thorough analysis to identify key themes and discern prevailing trends. This qualitative aspect enables us to gain a deeper understanding of the intricate dynamics surrounding the impact of technology and innovation on international mobility within higher education institutions.

Furthermore, a strategic comparative analysis will be applied to harmonize the quantitative and qualitative facets of our research. By juxtaposing the outcomes of surveys with the insights garnered from interviews, we aspire to create a comprehensive synthesis. This comparative approach not only validates our findings but also provides a nuanced and holistic portrayal of how technology and innovation intersect with the landscape of international mobility in higher education institutions. Through this multifaceted analytical framework, our study aims to contribute substantively to the discourse on the evolving nature of global higher education.

Ethical criteria

Before the study began, all participants received information about the purpose, course, and expected results of the study. Their consent was obtained

before taking part in the survey or interview. The data collected is anonymous and confidential - participants were assured that their answers would not be linked to their personal identification data. Participation in the study was based on the principle of voluntariness. Participants had the opportunity to refuse to participate or terminate their participation at any time without negative consequences.

Results

Students take part in various mobility programmes that provide them with the opportunity to study or undertake internships in other countries. These are mostly students who have a good level of English and have scientific results. Table 5 summarises the data of respondents who participated in international mobility programmes.

Table 5 – Participation in international programmes by respondents

Programme	Number of students	%
Erasmus+.	51	42.5%
Fulbright Programme	4	3.33%
Chevening Scholarships	5	4.17%
DAAD Scholarships	34	28.33%
Australia Awards	16	13.33%
Swiss Government Excellence Scholarships	10	8.33%

Source: created by the authors.

The Table 5 outlines the distribution of students across various international scholarship programs. Each program represents a unique opportunity for students to pursue academic endeavors abroad. In particular, Erasmus+ emerges as the most utilized program, with 51 students (42.5%). The program's popularity may be attributed to its comprehensive offerings, fostering cross-cultural academic experiences. Fulbright, with 4 students (3.33%), occupies a smaller share. Despite its lower representation, Fulbright signifies a prestigious and competitive avenue

for select individuals pursuing international education. Chevening accommodates 5 students (4.17%). While not the most dominant, Chevening remains an influential program, potentially appealing to specific academic and professional aspirations. DAAD stands out with 34 students (28.33%). The substantial representation indicates the allure of German academia and the diverse opportunities afforded by the DAAD program.

Thus, the Erasmus+ programme has the largest number of participants, which may indicate its great popularity among students or teachers. The DAAD Scholarships and Australia Awards also have a significant number of participants, which indicates their attractiveness. However, the Fulbright Programme, Chevening Scholarships, and Swiss Government Excellence Scholarships have fewer participants, possibly due to specific requirements or limited availability.

Based on the responses received, it can be unequivocally established that digital technologies have become an integral part of modern student mobility. As can be seen from the answers, the largest percentage of respondents often used digital educational technologies during their academic mobility (50 people or 41.6% of respondents) (See Table 6).

Table 6 – Have you used technology (online courses, virtual platforms) in your studies?

Answer	Number of defendants	Percentage
Not used at all	6	5 %
Little used	18	15 %
Usually used	25	20,8 %
Often used by	50	41,6 %
I have always used	21	17,5 %

Source: compiled by the authors.

It is also worth noting that many respondents (in approximately equal proportions) have either always used digital educational technologies or usually use them. Such high activity of Internet users creates additional opportunities for further development of international learning and cooperation. Therefore, these

data indicate that the majority of respondents use technology in their learning: the level of "often used" was more than 40%.

The data from the survey and interviews show that students participating in academic mobility programmes often use various technologies and online resources for learning and research. In particular, 28.3% of respondents said that they used digital libraries and scientific databases. 41.6% of students said that they used video lectures and open online courses, which provided an opportunity to learn new topics and expand their knowledge through. Some scientific fields use virtual laboratories or simulations for experiments and research (9% of respondents). At the same time, students use electronic platforms such as Google Docs, Microsoft Teams, or Slack, Zoom to collaborate and exchange information with classmates or staff (54.5%). It is also worth noting that many modern universities provide students with access to electronic portals where they can find timetables, lecture materials, assignments, and other useful information (60%).

It is worth noting that respondents also noted that technology has influenced their mobility organisation. Virtual exchanges and online communication have become important aspect, allowing students to communicate with colleagues and teachers from other countries, exchange ideas and research.

At the same time, collaboration tools such as Google Docs and virtual conferencing platforms make it easier for international groups of students to work together on projects and research. International online conferences also play an important role, allowing students to expand their knowledge and skills.

Furthermore, in the survey, participants were queried about the extent to which technology has eased the process of academic mobility. Impressively, a majority of 91 respondents unequivocally affirmed that technology has played a definitive role in facilitating academic mobility. This resounding affirmation suggests a widespread acknowledgment among respondents regarding the positive impact of technology on the overall experience of academic mobility. Conversely, 19 individuals expressed a more nuanced perspective, indicating that technology's contribution to academic mobility was not quite apparent or did not have a substantial impact. This subgroup of participants introduces a layer of complexity

to the discourse, suggesting that while technology is widely recognized as beneficial, there may be variations in the degree of its perceived impact among respondents. Interestingly, a minority of 10 respondents conveyed a lack of noticeable impact by technology on the process of academic mobility. This finding provides a counterpoint to the predominant sentiment, emphasizing that, for a small portion of participants, technology may not have played a discernible role in shaping their experiences of academic mobility.

Table 7 – Have modern technologies facilitated the process of academic mobility?

Answer	Number of defendants	Percentage
Definitely Yes	93	77.5 %
Not quite	22	18.33 %
No.	5	4.17 %

Source: compiled by the authors.

The divergent responses within the participant pool underscore the need for a nuanced understanding of the role technology plays in academic mobility. While a significant majority applauds its positive influence, a minority suggests a more tempered view or even a lack of perceived impact. This variability in responses opens avenues for further exploration into the specific aspects of technology use and its effectiveness in different contexts within the realm of academic mobility. At the same time, the interviews revealed that online platforms for finding reference points or international study opportunities are valuable resources for modern students that facilitate the organisation of academic mobility. This helps them to effectively find information and make informed decisions about their future studies. This aspect was emphasised by 75% of respondents. Table 8 presents the individual aspects of this point.

Table 8 – Opportunities for online platforms to find points of international cooperation

Aspect	Description
Collecting and Searching for Information	Students can use these platforms to gather detailed information about various study programmes, scholarships, exchange opportunities, and other academic initiatives in different countries.
Filtering by Criteria	The platforms allow students to set their own search criteria, such as country, university, level of study, speciality, which makes it easier to choose the best study programmes.
Ratings and Reviews	Students can view ratings and reviews from other students about specific programmes or universities to get an objective assessment.
Keeping track of deadlines and deadlines	The platforms can provide information about application deadlines, scholarship deadlines, which are important for students to apply on time.
Tips and Resources	The platforms can also provide advice on how to prepare documents, pass exams, learn the language, and other useful resources for successful applications.
Interaction with University Representatives	Students can use the platforms to interact with university representatives or programme organisers through online consultations or webinars.

Source: compiled by the authors.

Therefore, we believe that these technologies help students to make the most of their time during academic mobility and provide convenient access to resources for learning and research. This is confirmed by the survey data, as a large number of respondents believe that technology and innovation have a significant impact on

international learning and cooperation opportunities (49 people or 40.8% of respondents) (See Table 9)

Table 9 – How do you assess the impact of technology and innovation on international learning and cooperation opportunities?

Answer	Number of defendants	Percentage
No effect at all	8	6,6 %
Has little effect	15	12,5 %
It has enough impact	27	22,5%
Tangible impact	49	40,8 %
Strongly influences	21	17,5 %

Source: compiled by the authors.

This trend underscores a notable shift in perspective, aligning with the broader digitalization of education. It signals a collective recognition among the majority of students regarding the relevance and significance of employing digital models of development in the context of academic mobility. The acknowledgment by 21 additional respondents (17.5%) who emphasized the substantial impact of online learning opportunities further corroborates the prevailing sentiment that technology, particularly in the form of digital education, significantly influences the landscape of academic mobility. It's essential to acknowledge, however, that a relatively modest number of 23 individuals (19.1% in total) expressed reservations, perceiving a minimal or negligible impact of digital technologies. It's worth noting that this percentage may be influenced, at least in part, by potential methodological limitations inherent in the survey. The nuances captured within these responses hint at the complexity of evaluating the impact of digital technologies on academic mobility and call for a nuanced examination of the factors contributing to varying perceptions among students.

Discussion

The fundamental documents that regulate key aspects of academic mobility are the statutes of the Bologna Declaration, which state that modern European students have the right to obtain knowledge and degrees that are recognised in Europe as a whole, not just in the country where they are obtained. For this reason, we believe that the adaptation process of the national education and science system to the European standards and criteria will affect the state's ability to ensure the innovative development of academic mobility in higher education (BAKHMAT et al., 2022). At the same time, the main tools and methods for ensuring the compatibility of individual national elements within the European higher education area are formed in the main documents of the Bologna Process (TRAN, 2016).

According to OLEKSIIENKO et al. (2022), the profound impact of digitalisation on the operational aspects of universities is a transformational phenomenon marked by complexity and nuance. These processes are dynamic, turning into multifaceted, ambiguous, and sometimes contradictory activities. In the educational environment, universities that use digital technologies play a key role in responding to the confluence of factors such as bureaucratisation, increased workload, and cost-effectiveness. At the same time, as RAJAB (2018) has shown, these technologies are particularly effective in delivering education in extreme conditions. According to BADER et al. (2022), by overcoming these challenges, digital universities have skilfully established their presence in the education system. In response to the demands of the modern academic environment, these institutions have demonstrated active adaptability (MELNYK, 2022). They have used a variety of channels and employed different codes and formats, taking many different actions. KULICHENKO et al. (2022) proved that the integration of digital technologies is not just a response to external pressures, but rather a strategic and comprehensive approach to solving the complex problems of modern higher education. This is also evident in the work of SHAVEL et al. (2021), which identifies how modern technologies help to develop inclusive education.

Modern research has shown that technology and innovation affect international learning and collaboration opportunities for students, especially in the context of mobility. According to the study by SALNYK et al. (2023), VR and AR serve as innovative tools that facilitate dynamic learning in a virtual environment, thereby simplifying the management of its various components. The use of these technologies brings a transformative dimension to the learning process. By immersing students in the virtual sphere during the process of information acquisition, these technologies enable students to explore complex environments and navigate difficult situations by manipulating the elements that make up the virtual environment (VOROPAYEVA et al., 2022; KOLBINA & OLEKSENKO, 2020; KRYMETS, 2022; (TSEKHMISTER et al., 2021).

Researchers HUMENIUK & ROMANIUK (2023) described the effectiveness of information and communication technologies based on the analysis of cloud technologies. In their opinion, these technologies have dramatically changed the learning process and are important in the study of any discipline. KYRPA et al. (2022) proved the effectiveness of using electronic resources, in particular memes, in learning foreign languages. At the same time, the use of technology is an important challenge for modern teachers. SEIS (2023) found that the active use of technology can lead to emotional burnout among educators. Therefore, it is important to develop special courses to improve information communication and digital competence. This idea is expressed in many works (KONIARI & RAFTOULIS, 2023).

Thus, modern studies have shown that information and communication technologies open up opportunities for virtual exchanges, where students can take part in online courses or projects with other participants from around the world (BAKHMAT et al., 2020). At the same time, the use of technology allows students to register for courses in different countries and universities without even leaving home. Virtual collaboration tools are also important: the use of shared platforms, chats, and video conferencing allows students from different countries to collaborate on projects and exchange views in real-time (ABA, 2019; BILECEN & VAN MOL, 2017). It is also worth noting the opportunities for remote work and internships. Modern students can use technology to obtain internship or work

opportunities in other countries without the need for physical presence. At the same time, the use of digital signatures and electronic documents makes the process of international mobility more efficient and convenient.

All these aspects allow students to more easily access global education, promote international cooperation, and expand opportunities for educational mobility without significant financial and geographical restrictions.

While the chosen methodology offers valuable insights, it is important to acknowledge certain research limitations that may impact the generalizability and scope of our findings. First and foremost, the reliance on quantitative analysis may inherently oversimplify the nuanced nature of certain phenomena. The reduction of responses to numerical data may not capture the richness of individual experiences and perspectives, potentially overlooking essential qualitative nuances.

Additionally, the qualitative analysis, despite its depth, is constrained by the interpretive nature of content analysis. The identification of key themes and trends relies heavily on researchers' subjectivity, introducing a potential source of bias. Moreover, the transcription process itself may omit non-verbal cues and contextual nuances present during interviews, limiting the comprehensive understanding of participants' viewpoints.

Another inherent limitation lies in the cross-sectional nature of the study. The data collected represents a specific snapshot in time, and as such, it may not account for temporal changes or fluctuations in the variables under investigation. Longitudinal studies would provide a more dynamic perspective on how technology and innovation continue to shape international mobility within higher education institutions over time.

Furthermore, the research is confined to the perspectives of participants who met the inclusion criteria, potentially excluding valuable insights from those who do not fit the defined categories. This may limit the external validity of our findings to a specific subset of the student population, thereby reducing the applicability of the study's outcomes to a broader context.

In summary, while the chosen methodology offers a robust approach to understanding the impact of technology and innovation on international mobility,

researchers must remain cognizant of these limitations. Recognizing these constraints will contribute to a more nuanced interpretation of the results and encourage further exploration to address these gaps in future research endeavors.

Conclusions

The overall result indicates that digital technologies have become an integral part of the academic mobility of modern students. The survey results show that most students often use digital educational technologies during their academic mobility, which includes the use of virtual classrooms, electronic resources, and collaboration through online platforms.

It is determined that technology greatly facilitates the process of academic mobility of students. This includes virtual classes, distance learning, virtual exchanges, and other innovative approaches. Students can use online resources to access up-to-date educational materials, as well as to interact with international partners and receive information about educational opportunities. Special online platforms allow students to effectively find and select international study opportunities, taking into account various criteria and accessing important information. In general, most respondents are convinced that technology has a positive impact on academic mobility by facilitating learning, communication, and finding study opportunities.

Thus, the integration of technology into higher education significantly increases the flexibility and accessibility of learning, making academic mobility more accessible and attractive to students.

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