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Impact of COVID-19 Emergency Transition to On-line learning on International Students' Perceptions of Educational Process at Russian University

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Abstract

The research aims to explore ways of improving adaptability of international first-year university students based on the experience of making the transition from face-to-face learning to various online platforms during the nationwide pandemic lockdown in Russia in spring 2020. The research purpose is to analyze various sociocultural, technical and other challenges faced by international students after the one-day seamless transition to remote learning and their impact on the attendance record, motivation, academic performance and other quantitative and qualitative data. The research topic relevance is determined by the substantial rise in popularity of online learning, which had been demonstrating exponential growth even prior to the events of 2020, which further accelerated its expansion. The research methods integrate theoretical analysis of the current trends in online learning and its evolution as well as the strengths, weaknesses, threats and opportunities analysis. Statistical data was collected and processed using the University's digital ecosystem. The research data includes the results of the survey consisting of multiple-choice, single-choice and open-end questions, interviews with the students as well as the faculty and the background material. The research sample includes international first-year students from 12 countries with CEFR levels of the Russian language proficiency ranging from A1 to B1. The research findings show that the speed of adaptation to online learning depends on various psychological and technological factors as well as the students' learning abilities. The findings lead to the conclusion that despite the efforts of the faculty to make this process a seamless one, some factors lie beyond its reach, which makes neutralizing the disadvantages of remote teaching time-consuming. The research results demonstrate the potential ways of improving online learning for all parties concerned by implementing such features as risk management plans, knowledge bases, focusing on making the content user-friendly and introducing other various quality-of-life improvements.

Key words: *Online learning, remote teaching, pandemic lockdown, learning management systems, adaptability, COVID-19, international students.*

Introduction

As evidenced by experts in education and by market research results, the popularity of online learning has been growing exponentially since the time of its origin in the last decade of the twentieth century (Abe, 2020; Kaufmann & Buckner, 2019). The compound annual growth rate of

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online learning market is estimated at 36.5%, while its size is expected to reach $230 billion by the end of 2020 (Guo & Xiao, 2016).

The aforementioned dynamics of online learning market natural growth largely correlate with the trend of the global Internet access spread. The statistics provided by Internet World Stats show that in the period of time from 1995 to 2020 the number of users having access to the Internet demonstrated growth from 16 million to 4.5 billion, which accounts for more than 80% of the global adult population. Various factors, such as emergence of the World-Wide Web as a user-friendly and publicly accessible way of organizing the information contributed to this growth. Furthermore, it is linked not only to the availability of the Internet connection, but also to its quality, improved by the worldwide spread of mobile devices capable of offering stable high-speed connections with the bandwidth sufficient for real-time video communication (Kim, 2019).

While some researchers insist on the disambiguation of the terms online learning, e-learning remote learning and distance learning (Moore et al., 2011; Ohlin, 2019; Tadeu et al., 2019), the consensus on their semantics has not been reached, the lack of consistency of their use is observed in the mass media and the general population. Encyclopedia Britannica suggests the equivalence of these terms that are frequently used synonymously by teachers and their students despite some semantic difference pointed out by the academics. Corpus of Contemporary American English provides the evidence of the term online learning being the most widely used one.

For the purpose of the uniformity, this research was focused on the umbrella term online learning which encompasses various learning and teaching practices. They were conducted through the Internet as opposed to the traditional in-person or face-to-face learning. It was done for the reasons mentioned in the previous paragraph as well as the following ones:

1) concept of distance or remote learning is not normally limited to the process involving the Internet; however, it remained the only available option of communication between the students and teachers in the situation described in this research;

2) the overwhelming majority of respondents taking part in the research did not speak either English or Russian as a native language, hence both questionnaires in these languages were adapted to be understood by the students without any ambiguity.

Moreover, the present study operates within the framework of emergency transition to on-line learning. It has acquired additional stance during the COVID-19 international lockdown (Archambault & Borup, 2020; Tarman, 2020). The current international settings of higher

education environment agree on the digital tools potential for the overall communication among university audiences, and their sustainable education (Atabekova, 2020; Budiharso & Tarman, 2020).

The present research analyzes the experience of a seamless transition to online learning and remote instruction performed by RUDN University, also known as Peoples' Friendship University of Russia. The University was established in 1961 with the focus on diversity and inclusiveness, offering various degrees for international students with courses available in Russian and English. One of its main goals is providing language and cultural training to the first-year international students, ensuring that they reach a high level of sociocultural adaptation. It should be mentioned that such a trend in general is found in major Russian universities that pay a consistent attention to the comprehensive language policy within higher education environment in general, and to the first-year students' perceptions, in particular (Atabekova et al., 2016).

RUDN University entered the state of lockdown due to the COVID-19 pandemic on 23 March while some faculty members switched to remote teaching as early as 17 March. The newly adopted learning process included various activities divided into three categories (Khan, 2001):

1) Full synchronous -implementing multiuser real-time video communication organized by the faculty and aimed at recreating the traditional classroom experience;

2) Limited synchronous – encouraging project-oriented groupwork and spontaneous individual student-teacher communication using the learning environment provided by the university as well as the messaging systems of the students' choice;

3) Asynchronous – using the centralized Learning Management System to introduce individual assignments as well as guiding the students to use the external resources, communicating via text messaging, voicemail and email.

The uniqueness of the situation under study is characterized by the emergency transition to online learning. It required a high speed of changes the educational process that moved online learning from optional to compulsory which may be seen as detrimental by some experts in education (Burke, 2005).

Scholars insist that more attention should be given to the understanding of the way in which culture impacts online learning (Kang & Chang, 2016). They argue for the need of research on effective implementation of measures targeted at providing education during such force majeure events as pandemics (Basilaia & Kvavadze, 2020) and increasing the readiness of students for remote

education, which has been found to positively predict their satisfaction with the process (Adnan, 2018). The current focus on online learning solutions and the experience acquired by the international healthcare community indicate the possibility of the lockdown measures being renewed (Nazareth et al., 2020). The above situation supports the relevance of the current research on ground of the relevant literature analysis.

Research Questions

The goal of the present research is to identify the impact of emergency transition to on-line learning on the international students' perceptions with regard to their learning process within the Russian higher education environment.

To reach the above goal, the following research questions have been addressed:

1. What is the immediate and mid-term impact of an emergency transition to online learning on the performance and adaptability of international students?
2. What types of issues do the international students encounter and perceive as disruptive during their transition to online learning?
3. What strengths, weaknesses, threats and opportunities can be identified within emergency transition of international students to online learning?

Literature Review

The analysis of the current trends in academic research on online learning and its history performed using Google Scholar and Elsevier digital databases reveals its current popularity while emphasizing the importance of conducting a study that takes into consideration the specifics of the current situation in the global online learning environment.

According to the text corpus analysis conducted using Google Books Ngram Viewer, the term "online learning" saw a slow rise in the number of mentions in the literature from 1991 to 1995. The term further demonstrated a subsequent significant increase in the number of mentions from 1999 to 2004, which marked its popularization and wide acceptance by academia, encouraged by the development of technology (see Figure 1). The graph below was built using Google Ngram Viewer with the following parameters:

Search term: "online learning"; corpus: English (2019); Case-Insensitive; Smoothing of 5.

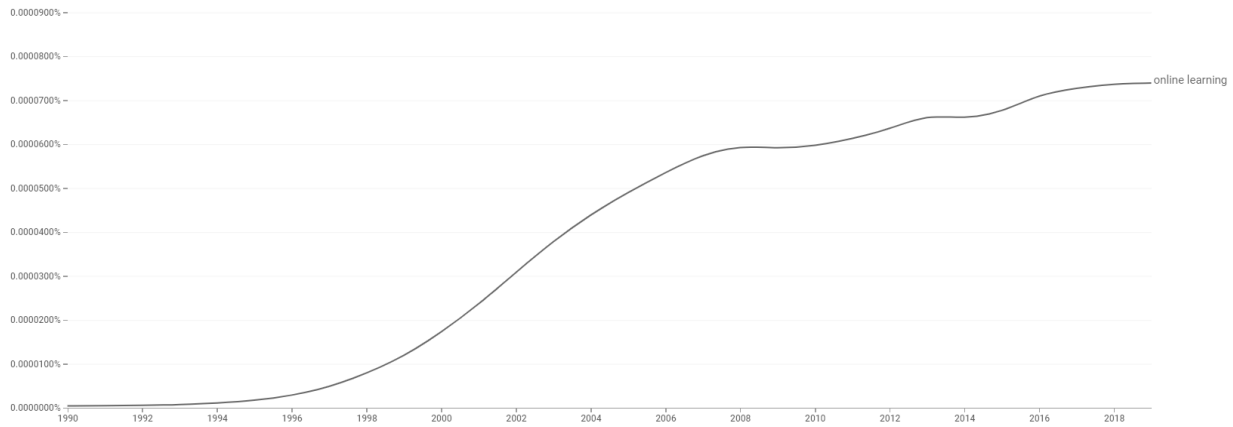

Figure 1. Ngram Analysis of the Term "Online Learning" (Author's Data)

While the abovementioned dynamics explain the relevance of online learning as a field of research in a typical non-emergency environment, taking into consideration the fast-growing trend of its natural increase of demand and availability did not suffice for the global readiness for the events of early 2020. That was the start of the period when the educational institutions all over the world were forced to suspend the face-to-face learning process during the pandemic lockdown.

The web document analysis performed using Google Trends shows the correlation between the start of the global lockdowns affecting educational institutions and the worldwide peak of interest in the search term online learning in late March 2020, showing an increase of more than 70% within three weeks, which is uncharacteristic of this period of time. The study of the previous years (from 2010 to 2019) conducted using the same method demonstrates the typical saw tooth pattern of interest which peaks at the beginning of the school year in September and falls gradually until the start of the next semester, reaching its bottom in August and December with monthly fluctuations not exceeding 20% (see Figure 2). The graph below was built using the following parameters:

Region: Worldwide; Time range: Jun 1, 2010 – Jun 1, 2020; Category: All categories; Search type: Web search

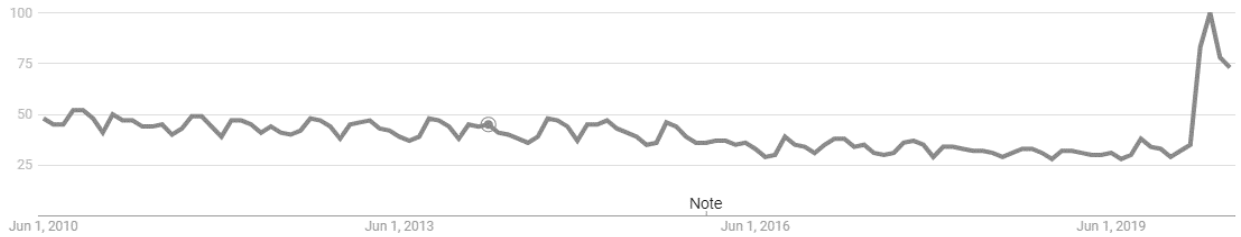

Figure 2. Online Learning - Patterns of Search Interest (Author's Data)

The abovementioned dynamics provide the evidence that the popularity of online learning requires specific urgent solutions in the current circumstances. Scholars underline the role of ICT in enhancing the sustainability of learning for citizens of all ages and providing new career opportunities for researchers (Anikeeva et al., 2019; Soltovets et al., 2020; Strielkowski & Chigisheva, 2018; Tarman & Dev, 2018). Coldwell et al. (2008) recommend that the faculty should make sure that the digital content they offer can be utilized by all students regardless of their cultural background. It has been established that some aspects of international students' adaptability largely depend on their individual adaptability (Hua, 2017) which is positively related to cross-cultural adjustment (Etherington, 2019; Liu, 2017). Therefore, the process of transition to online learning should be focused on mitigating the risks of maladaptation and avoiding the disruption of the learning process during such transition.

The most often-cited reasons for students preferring online learning courses to face-to-face courses include improved logistics and flexibility that allow students to avoid spending time on commuting and facilitate communication with their peers and teachers (Paechter & Maier, 2010). Additionally, educators list the following advantages: increased availability of information, improved speed of its transmission, and a higher degree of media interactivity (Jansen, 2011). However, some of these advantages may not be perceived as such by the students.

The perceived disadvantages of online learning include lower expected academic results, technical issues preventing students from achieving consistent results and more reliance upon self-control. They contribute to various informal theories explaining the unwillingness of some students to engage in online learning activities (O'Neill & Sai, 2014). Academia also emphasizes the importance of the competencies required for online learning environments (Baytak et al., 2010; Sinacori, 2020) as well as the need to focus on providing the learning content designed for mobile devices (Sevillano-García & Vázquez-Cano, 2015). Academia cites various technical and

methodological issues faced by students when learning online as well as the specifics of the international students' adaptability in the non-emergency learning environment.

The findings obtained as a result of reviewing the current trends in academic research on the emergency transition to online learning reveal that no research so far has focused on optimizing the experience of international students in the aforementioned situation. Scholars insist that more attention should be given to the understanding of the way in which culture impacts online learning (Baez Zarabanda, 2019; Kang & Chang, 2016). They argue for the need of research on effective implementation of measures targeted at providing education during such force majeure events as pandemics (Basilaia & Kvavadze, 2020) and increasing the readiness of students for remote education, which has been found to positively predict their satisfaction with the process (Adnan, 2018).

The latest developments in the filed explore the readiness of students to emergency transition to on-line learning within the COVID-19 pandemics. However, it refers to students of particular specialties or majors, for instance, engineering (Naji et al., 2020), geography (Schultz & DeMers, 2020), chemistry (Perets et al., 2020). Further, it refers either to education in general (Daniel, 2020), theory of pedagogy (Crawford et al., 2020), consequences of the securitization of higher education for post-pandemic pedagogy (Murphy, 2020), or to university management (Johnson et al., 2020) or students of a particular country (Rahiem, 2020). Initial studies are paving their way with respect to international students' perceptions of their learning during COVID-19 lockdown. Thus, the data can be found on the survey of Ghanaian international students in China (Demuyakor, 2020), Chinese international students in Australia (Ma et al. 2020).

The above results lead to the consideration of a number of points. First, the analysis of the current trends in academic research on online learning and its history reveals its current popularity. Second, the literature confirms that Academia has made immediate steps to consider the phenomenon of emergency transition to on-line learning within the current pandemic.

However, a number of topics still are to be analysed. Currently, no research has raised the question of immediate and mid-term impact of emergency transition to online learning on students' perceptions. However, researchers mention the need for such angle of analysis (Sahu, 2020).

Further, the issues of international students' perception are empirically considered with regard to a particular ethnic group of youth representatives who held the status of international students during COVID-19.

However, we consider it important to try to map the perceptions of representative of different countries as the RUDN university status allows for such an approach. Further, particular topics of international students' adaptability to an emergency transition to online learning have not become subject to academic research yet. Nonetheless, this aspect seems to deserve particular attention. Scholars underline that adaptability in general, and that of students, in particular, was one of the key issues during the recent lockdown (Pelly et al., 2020).

The review of literature confirms that scholars explore issues that students consider disruptive during their emergency transition to online learning. However, no particular emphasis has been laid on international students' community, or on their perceptions with regard to studies at Russian universities during the current pandemic.

Further, it should be mentioned that we have found no articles with an explicit focus on integrated approach in research that would cover e strengths, weaknesses, threats and opportunities (SWOT) within emergency transition of international students to online learning. Bearing in mind the above situation, we might conclude that the present research should concentrate on the listed themes as they bear importance in terms of raising societal awareness of the issue under study, and promoting academic studies, as well.

Methods

Design

This study used corpus based analysis design to which the contents of the corpus were thematised. The objective of this research is to identify the impact of emergency transition to on-line learning on the international students' perceptions with regard to their learning process within the Russian higher education environment. This research included theoretical and empirical studies, and involved a number of stages. The theoretical analysis of literature helped to map the academic rational of the study. The research core activities included empirical analysis of international students' academic performance during lockdown period and their perceptions of the learning process within the mentioned context. Data was analised using thematic analysis and descriptive statistics in the forms of rate percentage.

Research Sample

The sample for literature analysis covered over 578 papers which have been found on the Google Scholar and Elsevier digital databases for the period limits 1999-2020.

The sample for empirical investigation included a diverse pool of 46 international first-year students who had started their education face-to-face and were later transferred to online learning groups.

Most participants (80.44%) were enrolled in one of the programs offered by the Department of Philology, majoring in Linguistics, Philology or Journalism whereas a smaller percentage included those who were pursuing their degrees in Law (15.21%) and Economics (4.35%).

The sex ratio was representative of the typical first-year group composition (57.14% female to 42.86% male). While the age of the students ranged from 17 to 40 (mode = 20, median = 22), the majority of them were aged 18-24.

All of the students have completed their secondary education, graduating from an institution which corresponds to the equivalent of a high school, depending on their national system of education. Some (19.56%) students have previously received an equivalent of a Bachelor's degree outside of Russia. Furthermore, among these students those who majored in a field different from the one chosen at RUDN University (55%) were almost equally represented as those who chose to pursue a similar degree in a foreign language (45%).

As this research focuses on cross-cultural adaptation of international students, the nationalities of the participants are also of major importance. The majority of the participants were citizens of Peoples' Republic of China (65.21%), which is also representative of such groups pursuing the aforementioned degrees at RUDN University. Other nationalities included citizens of Vietnam (6.52%), Egypt (4.34%) and Madagascar (4.34%) whereas the following countries were represented by 2.17% of the sample size: Cuba, Spain, Syria, Iraq, Chad, Serbia, Afghanistan, Guinea and South Korea.

Native languages spoken by the students included Mandarin Chinese (65.21%), Arabic (10.87%), Vietnamese (6.52%), Malagasy (4.34%), Spanish (4.34%), Korean (2.17%), Serbian (2.17%), French (2.17%) and Farsi (2.17%). Despite the fact that the interface of the software provided by the university was not available in some of these languages, it is important to add that the majority of the students demonstrated the level of proficiency in English sufficient for understanding the instructions and using all the functionality of the software - 76.08% were able to read instructions in English. The students who were not able to read the instructions in either Russian or English received the necessary assistance from their peers, teachers and the students' committee.

The length of residence in Russia at the start of the research varied from 1 month to 7 months.

The CEFR level of proficiency in Russian varied from A1 to B1 due to the variance in the start of the first semester which ranged from September 2019 to February 2020. 41.30% have reached their B1 levels (First Certificate in Russian) by the start of the experiment, 30.43% have completed their A2 exams (Basic level in Russian) while the rest of the participants (28.26%) communicated at A1 level (Elementary level in Russian).

Table 1

Sample Key Data (Author's Data)

Major	Philology	Law	Economics	
	80.44%	15.21%	(4.35%)	
Sex	Female	Male		
	57.14%	42.86%		
Age	Min	Max	Median	Mode
	17	40	22	20
Nationality	People's Republic of China	Vietnam	Egypt	Other (listed above)
	65.21%	6.52%	4.34%	23.93%
Native language	Mandarin Chinese	Arabic 10.87%	Vietnamese 6.52%	Other (listed above)
	65.21%			17.4%
Level of proficiency in English	> CEFR A1	<CEFR A1		
	76.08%	23.92%		
Level of proficiency in Russian	CEFR A1	CEFR A2	CEFR B1 or higher	
	28.26%	30.43%	41.30%	

Data Collection

Several sorts of data were collected for research in line with research goal, questions.

First, the academic publications on on-line learning and emergency transition to on-line studies during COVID-19 were selected.

Second, quantitative information about the students' academic performance results was aggregated. These data were represented in scores measured against students' individual weekly learning plans and fixed in the university electronic database of students' academic records.

The individual performance records of the participants were extracted from the university's Moodle-based learning management system. The records were compared with the results of the previous years. The daily attendance record charts were compiled into a single database for their further quantitative analysis. The statistical quantitative data obtained during the observation stage were processed using the IBM SPSS Statistics software.

Third, the data covered on-line surveys and interviews of students by the author of this research from 17 March 2020 to 16 June 2020 on a weekly basis, provided their feedback on online learning and shared their vision of various adjustments that they deemed necessary to improve the process. Fourth, the data included high-definition full video recordings of every synchronous online lesson that was conducted after the university had acquired written consent from all the students.

Finally, the data included the results of on-line survey constructed within Microsoft Forms.

The survey was offered in English and Russian and completed by all the research participants (N=46) with the average completion time of 4 minutes 27 seconds, the results were submitted on June 16 when the restrictions were still not lifted. The participants were classified as PT1 – PT46 in order to keep their personal data confidential.

The answers in Russian were translated into English with minimal modifications of grammar and lexis; to preserve the authenticity of the student's responses, the text in English was not modified. The online survey prompted the students from different groups to answer various questions using the following formats: multiple choice, single choice and open-ended questions. The topics covered by the survey included the platforms used for all types of online learning activities (synchronous, limited synchronous and asynchronous) and student satisfaction with the process compared to the traditional face-to-face learning. The students were also asked to report any issues they encountered when studying online and suggest their ideas on how the process could be improved. All the research participants respondents completed the survey by 16 June 2020.

The results were later analyzed with an aim to calculate percentages and build tables; the text data was exported into a text file for its subsequent thematic analysis and categorization.

Data Analysis

To shape the academic framework of the research, Ngram Viewer was used to analyse the frequency of the term online learning during the last two decades. Google Trends tool was used to explore the changes in research between the start of the global lockdowns affecting educational institutions and the worldwide peak of interest in the search term online/emergency learning.

To explore students' perceptions, a number of software and tools were used. Microsoft Forms was used to create the surveys and conduct them, integrating the students' data from their corporate Microsoft Teams accounts and the internal university database.

Further, in order to examine the interaction between the students and teachers, the video footage obtained using capturing software Bandicam and Microsoft Stream was processed using Sony Vegas video editing software to analyze the average input lag, video and audio delay and other issues of synchronous online classes. The bandwidth consumption was measured using the built-in tools in the operating systems.

Then, the data was processed and exported to Mindmeister, a tool used for creation of mind map diagrams, with the aim of creating a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis diagram of transition to online learning. This sort of tool has been recognized by academia as an effective situation analysis technique (Gürel& Tat, 2017).

The SWOT mind map diagram was built based on the following: the findings obtained during the video footage analysis; the analysis of the data collected before and after the lockdown; the survey results and the verbal feedback provided by the respondents-participants to the empirical activities.

Results and Discussion

This section provides the results of the data analysis with three research questions that have been specified earlier, namely the following:

1) What is the immediate and mid-term impact of an emergency transition to online learning on the performance and adaptability of international students?

2) What types of issues do the international students encounter and perceive as disruptive during their transition to online learning?

3) What strengths, weaknesses, threats and opportunities can be identified within emergency transition of international students to online learning?

The section also provides the author's deliberation on the obtained results and suggestions for further university practice with regard to the educational context under study, bearing in mind the RUDN university experience during lockdown.

Immediate and Mid-Term Impact of Emergency Transition to Online Learning on Adaptability of International Students

One of the aims of the faculty during the transition to online learning consisted of making the process seamless while maximizing its efficiency and recreating the classroom experience.

In order to ensure that both teachers and students were provided with an opportunity to adapt to the transition, the process was implemented gradually, with optional face-to-face groups being offered throughout the first 10 days and no requirements regarding the learning platform. While the majority of international students opted for online classes, 12.5% were strongly opposed to the change and preferred to be transferred to the groups which continued face-to-face studies for 10 more days.

The sole form of control introduced by the faculty at that stage, which lasted until 14 April 2020, included weekly lessons plans listing the content and the tools used for remote teaching. Afterwards the degree of control was increased by establishing Microsoft Teams as the default online platform with mandatory video recordings as well as by monitoring the observance of the timetable and the introduction of daily attendance reports.

The types of lessons offered to first-year international students at RUDN University include language classes, lectures and seminars. In order to improve their adaptability, the curricula are composed with the highest priority assigned to language classes which account for 100% of learning hours at the beginning of the first semester; this percentage is reduced to 66% during the second semester with the focus shifting on cultural studies and the specialization of the international students.

It has been noted by the academia that models of student retention and their persistence in face-to-face and online learning environments manifest in significantly different ways (Boston & Ice, 2010). The analysis of the retention rate across the observed groups reveals that the process of transition to online learning had a negative impact on the retention rate, which decreased by 13.04% immediately after the announcement was made, with some international students quitting the university and leaving Russia. However, some of the students residing in their hometowns (4.34%) demonstrated a high level of motivation, participating in online lessons despite the technical issues caused either by the safety policy restrictions introduced by their countries or the lack of a high-quality and low-latency internet connection with the university servers located in Russia.

The online course content and instructions were offered in Russian in order to improve students' reading skills and prepare them for their future studies whereas the software interface and instructions were offered in Russian and English. However, the formal instructions provided by the software developers were characterized by some students as complicated and non-intuitive,

which led to teachers creating concise video instructions with voiceovers in English and improving the reliance on student-to-teacher individual consultations provided via instant messaging.

The data obtained through the analysis of the daily attendance rate in the observed groups reveals an immediate negative influence of the transition evidenced by the decline to 66% within the first month. This time was required by the students to adapt to the new form of the learning process, acquire the necessary equipment and receive technical assistance from their peers and the faculty. However, the analysis of the subsequent attendance rate data demonstrates a recovery to an average of 85% which does not deviate from the pre-lockdown percentage.

The results of the video data analysis reveal that the aforementioned daily attendance rate is not fully indicative of student participation in the synchronous online lessons due to a number of technical and psychological issues faced by the students, listed in the survey results below. With the number of classroom hours per day ranging from 4 to 8 (mean = 6), the attendance fluctuated, demonstrating the absence rate ranging from 42% to 15%.

The technology-related issues were primarily influenced by the two factors listed below. First, 71.42% of the international students accessed the internet from their dormitory rooms where the Wi-Fi connection speed was not sufficient for multiuser real-time high-definition video communication. The second factor is the reliance of some students. It changed from 42.85% at the start of the observation to 14.28% as the university equipped with the laptops all the students who had requested them. The challenge was that mobile devices such as tablets and smartphones prevented students from being able to see the participants and the screen simultaneously and prompted the teachers to use various font and image scaling options, reducing the ease of use and the visibility of the learning resources. The respondents also mentioned that they were forced to use metered mobile data connection with an average hourly bandwidth consumption ranging from 700 Megabytes to 1.3 Gigabytes on their limited data plans as a reason for not attending some of their online lessons during the hours where the peak network usage was recorded.

Furthermore, the audio and video input and output delays caused by the low bandwidth of the students' Internet connections had a significant negative impact on conducting seminars and language classes, which require the highest degree of interactivity. According to the lesson footage analysis, the delay time in the interaction between students and teachers ranged from 2 to 10 seconds provided that the students were ready to answer the questions and no misunderstanding was discovered.

These circumstances greatly increased the time required for teachers to conduct productive dialogues with the students and initiate groupwork activities, rearranging their priorities and prompting them to allocate more time to monitoring student-centered work. The additional time was also spent on creating self-study materials for the students, using the learning management system and working extra hours, scheduling private consultations and providing technical and academic online support. In addition to the issues encountered during the synchronous online lessons, both teachers and students reported an increase of time spent on submitting and marking homework assignments designed to be handwritten and submitted in the paper form. As a result of the aforementioned circumstances, the overall teacher's workload has significantly increased. Moreover, the inability of some teachers to adapt to the process led to an increase in teacher attrition rate.

Following the transition to online learning, the reliance on the Moodle-based learning management system for both assessment and new learning content delivery has increased. The emergency adjustments implemented by the faculty included the transfer of the paper-based end-of-course Russian language test to the learning management system, which, due to its technical limitations, does not possess the capacity to replicate all the exam procedures and caused additional difficulties for the students. In order to prevent such misconduct as the unauthorized use of electronic devices, the outside interference and various forms of cheating, the university introduced a proctoring system with synchronous and asynchronous audio and video input monitoring.

The video data analysis also reveals a positive change related to the transition to online learning - the improvement of students' attention concentration during their language lessons and seminars as the format requires them to actively participate in the process and does not present any opportunities for voice communication outside of the meeting. Therefore, such negative factors as student-to-student distractions were minimized. Additionally, the screen sharing function available to the students as well as the teachers greatly improved their ability to use a variety of multimedia resources, which is a feature that was had been unavailable in some classrooms lacking the necessary equipment. This function also empowers the students to improve their public speaking skills in a foreign language and facilitates conducting project-oriented activities.

Furthermore, the analysis of the academic performance results reveals that the form of learning did not have any considerable effect on the students' exam results, with 73.42% being the average final weighted grade across all the groups of the respondents.

The above data enhances the higher education experience with respect to on-line learning in specific context, namely in emergency transition to full scale on-line learning. It means shift from standard form of blended learning which combines face-to-face classes and students' individual studies in an institutional electronic managements system, to group training in digital classes which are managed by the teacher.

The above data makes it possible to set forth some thoughts with regard to immediate and mid-term impact of the emergency transition to online learning on adaptability of international students. To our mind, immediate impact concerns students' adaptability to training with regard to technical, organizational, and disciplinary issues. Students' adaptability to training in new settings requires the university support in terms of technical issues, choice of platforms and digital tools for training. Our university experience confirms that there should be a comprehensive university policy and management which cover the mentioned aspects. The timely and concrete decisions at the university management level to select the tools, inform both students and teachers, and provide additional training , if necessary. Further, the findings reveal that in terms of educational discipline, within the framework of full-scale digital education in emergency conditions, a proctoring system with synchronous and asynchronous audio and video input monitoring is relevant. The idea of such a system was earlier mentioned by experts in education with respect to on-line training in general (Hylton et al., 2016).

Another aspect of immediate impact concerns students' perceptions of their on-line workload . With regard to this point we would suggest that the self-study assignments be arranged in such a way that they would allow student to work off-line to minimize their dependence on the internet connection quality and speed, etc.

Further, with regard to mid-term impact of emergency transition to on-line learning on international students' perceptions, we should mention that some aspects of international students' adaptability largely depend on their individual features. Scholars earlier mentioned that it is positively related to cross-cultural adjustment (Hua, 2017; Soltero Lopez, & Lopez, 2020). The findings obtained during the observation and interview analysis reveal that the rate of international students' adaptability to online learning also depends both on their language skills and their technological literacy. Thus, when designing the course, it is necessary to take into consideration the diversity of the students' backgrounds and the potential inequality of the opportunities they were presented with as children in order to observe their student rights (Atabekova et al., 2019).

Additionally, the research has revealed the increased importance of constructive peer feedback in an online environment, which had been previously noted by academia (Van Popta et al., 2016). Particular attention should be paid to teachers' work as well. Heads of the departments are expected to systematize the educational aids format, identify students' workload per week, specify evaluation and assessment criteria, as well.

Types of Issues that International Students Encounter and Perceive as Disruptive during their Transition to Online Learning

The findings have shed light on those points that first-year international students perceive as disruptive and led grounds for minimizing the risks related to online learning, improving the students' adaptability, maximizing their satisfaction with the learning process and its efficiency.

Table 2

Platforms used for Synchronous Online Lessons (Author's Data)

Platforms used for synchronous online lessons	**N**
Microsoft Teams	34
Zoom	15
WhatsApp	6
Google Hangouts (Google Meet)	5
Whereby	5

The results of the survey indicate respondents did not limit to one and the same platform and tool. While Microsoft Teams was recommended by the university as the default platform for remote teaching with 52% of respondents using it as the main application, 23% used Zoom, 8% took part in Google Hangouts meetings, 9% have used WhatsApp for synchronous learning whereas 8% opted for the use of a less-known, albeit minimalistic and intuitive platform Whereby.

It has been discovered that each introduction of a new platform or application for on –line learning format was followed by a temporary average drop in participation. Microsoft Teams was used to conduct exams and online meetings since it was integrated into RUDN University's Office 365 ecosystem. However, some students requested using such platforms as WhatsApp, Whereby and Zoom, citing their stability, intuitiveness and familiarity as the reasons for their preference (abbreviation PT stands for a participant of the empirical studies):

PT 4: "First, we suggest improving the Internet or working on a faster program, such as WhatsApp".

PT 42 "A better, more stable software would be better".

The aforementioned responses as well as the feedback provided during the lessons reveal that international students may perceive the ease of use and the familiarity of the software as more important features than its functionality and the range of specialized learning-oriented features.

Table 3

Tools used for Homework Assignment Submission (Author's Data)

Tools used for homework assignment submission	**N**
Email	30
Moodle-based learning management system	22
Microsoft Teams	18
WhatsApp	13
Google Classroom	2

The analysis of the responses of the online survey items revealed a number of issues. It has been established that the majority of the respondents have used traditional non-specialized tools in order to submit their assignments. 65% cited personal or corporate email as a tool utilized to send files to their teachers and 28% mentioned WhatsApp. This data confirms the findings of this research, stating that both teachers and students attach a higher value to the familiar platforms that they perceive as user-friendly, avoiding the use of software they have little experience with, unless specifically instructed to do so by the faculty.

While the use of the Moodle-based learning system created by the university was mandatory for every member of the faculty, it was mentioned only by 47% of the respondents, which may indicate that they did not perceive it as the primary platform used for student-to-teacher interaction. While 52% of the students acknowledged having used Microsoft Teams, only 39% of them said they used it to submit homework assignments. Furthermore, 4% of the respondents belonging to the same learning group mentioned using Google Classroom, which demonstrates the willingness of the teaching staff to explore various options available in order to optimize the students' experience.

Table 4

Issues Encountered during Remote Learning (Author's Data)

Issues encountered during remote learning	**N**
Bad Internet connection	36
Disturbance caused by the roommates	19
Not being provided with the necessary literature	16
Difficulties encountered while viewing the teacher's screen on the phone (laptop)	11
Difficulties encountered while submitting homework assignments	11
Other	3

The results of the research indicate that during the process of transitioning to online learning international students face various challenges that some of their Russian peers may avoid. The overwhelming majority (78%) of them cited internet connection issues as a major factor that had a negative impact on their learning process (abbreviation PT stands for participant of the empirical studies):

PT 5 "We all did acknowledge that the communication of video call is always poor."

PT 32 "Better internet access."

PT 8 "The internet connection of university's hostel should be better since it's so bad."

PT 9 "The internet connection in the hostel is so bad and there is no way to connect sometimes to the session which leads to using our own internet that is expensive."

PT 34 Internet access needs much improvement

PT 37 The only thing I would say is to improve Internet connection if possible.

While the respondents did not distinguish between various hardware, software and connectivity issues that were negatively affecting their learning experience, a further investigation confirms that some of these issues can be solved by properly informing the groups and providing individual technical support. However, some of these issues lie beyond the scope of the faculty, such as offering technical assistance to the students who were studying abroad – in particular, in China and Iraq.

The Wi-Fi connection at the university campus was not initially designed for multiple simultaneous high-definition group video calls, which caused the network to underperform during the peak hours. Any immediate upgrades of the system were not possible at the time of the emergency transition to online learning, yet the university addressed that issue by offering special

learning spaces with the necessary equipment and high-speed internet access, provided that the users practice social distancing.

The hardware issues, including the use of lower-end devices incompatible with the modern software, were resolved by the university providing the students with personal laptops optimized for online learning use.

The students who reported not having been able to connect to the sessions and using their own mobile data connection were contacted by the faculty. Further it was discovered that they were using suboptimal data plans due to not being informed of the unlimited traffic options offered by other mobile network operators when arriving in Russia and purchasing their SIM cards. This example emphasizes the importance of creating a user-friendly knowledge base with simplified visual explanations and instructional videos as well as troubleshooting guides translated into several languages, aimed at providing students with immediate technical support or instructing their teachers to do so on the condition that the issue is common and does not require any special technical expertise.

Another issue especially relevant for students who live in dormitories in the period of self-isolation is interruptions caused by the roommates: 41% of respondents mentioned that they prevented them from studying efficiently, this includes the situations where two students were having lessons simultaneously in one room:

> *PT 35 "Students need access to reliable internet, devices, and a quiet space dedicated to studying."*

This issue can be partially solved by instructing the students to use headsets and mute their microphones unless they are speaking.

Additionally, 34% of the respondents mentioned not having the access to the necessary paper-based learning materials while studying online; this particular issue is unique to the lockdown situation. One of the solutions proposed by the faculty consisted of compiling the lists containing the necessary literature and making requests to the library to deliver the books to the campus.

Some respondents (24%) cited the difficulties encountered while viewing the teacher's screen on their mobile devices due to the scaling issues they encountered (abbreviation PT stands for participant):

> *PT 43 "Tutors making their screen (power point format) more viewable to the class."*

In order to minimize the negative impact of this issue, it is recommended that teachers use text and image scaling functions, magnifying the contents of their screen by up to 400% and analyzing feedback from the participants.

Another 24% of respondents cited taking pictures of their assignments and sending them to the teachers as another issue encountered during the lockdown, which is also especially relevant for international students focused on foreign language studies and improving their handwriting.

In addition to the abovementioned technicalities, the respondents also cited methodological and psychological issues. Some students expressed their willingness to study in a digital environment that fully recreates the classroom experience:

> *PT 46: "For teachers to carry out classes as close to normal".*

Some survey participants considered face-to-face lessons to be of the highest importance for their Russian language studies:

> *PT 23 "I do not know Russian very well, so I want to return to the classroom and talk with the participants to check for errors."*

However, some participants mentioned the importance of completely restructuring the learning process, which should be taken into consideration in the long-term perspective:

> *PT 38: "Resources designed for online learning instead of quickly altered lesson plans"*
>
> *PT 3 "Patient teachers and know how to use online lessons"*

The perceived lack of teachers' patience related to delayed responses is a known factor in real time online conversations (Schoenenberg et al., 2014). Furthermore, the stress induced by the video call fatigue reveals a need of raising awareness of its psychological effects among both students and teachers:

> *PT 9 "Teachers should be more patient and able to understand students since the language is new and a hard one."*

This particular effect was cited multiple times, leading to lowered levels of motivation:

> *PT 7 "It's just really hard to focus if you have online classes every single day"*
>
> *PT 14 "i have no idea. i think it is very difficult for me to take online class. it is hard to understand class to me. i feel sad and anxious everyday...."*

Additionally, some students emphasized the perceived importance of adapting the procedure of reviewing the material in order to facilitate its comprehension and centralize its distribution:

PT 5 "I think prior to the lectures, the lecturer should go over the topics and lessons, that are going to be covered during the day or week with the students."

PT 21 "Teacher writes an important point in the chat."

Furthermore, the respondents expressed their opinion of the need to simplify the online lessons and make its content more accessible to the international students:

PT 4 "We just want to talk and listen to programs online with people who speak slowly, like a teacher, and listen to videos and music slowly".

PT 2. "In my opinion Facilitate the explanation and simplify the information due to the difficulty of transmitting information to students".

Table 5

Degree of Satisfaction with the Online Learning Experience (Author's Data)

Degree of satisfaction with the online learning experience	N
Neutral / slightly negative	22
Highly negative	18
Positive	6

According to the survey results, while the majority of students (86.95%) preferred traditional face-to-face learning and would opt in for such lessons provided that they had a chance to do so, 47.82% of them stated that they found their online lessons to be of a comparable efficiency with their classroom experience. A lower percentage of the respondents (39.13%) mentioned that various technical, cultural and other issues prevented them from making the learning process efficient and enjoyable.

The further analysis of the negative opinions reveals that the students realize their inability to change the circumstances which caused them to study online and demonstrates their demotivation (abbreviation PT stands for participant of the empirical studies):

PT 5. "Online classes are very complicated and demotivating in my view"

PT 22 "But you know that we don't have an option, because everyone wants to get rid of the virus".

PT 16 "I don't know how the online lesson will be better, I don't like it!"

PT 32 "Having live classes is too hard"

Some students expressing a certain degree of indifference:

PT 10 "all is well"

PT 19 "I have no questions."

Furthermore, a lower percentage of the respondents (13.04%) expressed the highest degree of satisfaction with their experience of online learning, saying that they would prefer to study online despite having previously chosen a face-to-face course.

The above data reveals that generally international students perceive two types of issues as disruptive during their emergency transition to online learning. First, it is all kind of technology-related points.

With respect to this point, we should bear in mind , that individual's adaptability to on-line learning is linked to the overall level of technological literacy, which greatly varies by country, as scholars mention (Falck et al., 2016). Its effect is amplified by the diversity in software practices traditionally used by students at home. Moreover, understanding technical instructions in a foreign language introduces an additional layer of complexity for the international students whose language proficiency level is not sufficient for that task.

Therefore, a systemic technical support should be provided to students. In case of RUDN university is was cross-faculty campus dormitories-based students' volunteering team (organized by the students self-governing bodies in cooperation with the dean offices at the faculties) whose members turned out to be more advanced in technology and language use and managed to help their peers in the campus dormitories.

Another area seems to be more sensitive as it refers to social and cultural issues. The empirical data revealed relatively low percentage of positive verbal feedback in the survey results. To our mind it may be linked to the negative bias focus in open-ended responses. Academia has been established that the dissatisfied respondents are more likely to provide feedback than their more satisfied counterparts (Poncheri et al., 2008).

However, in case of RUDN University that has a long-standing experience as an international university, we consider that much depends on the teacher, whose objectives during emergency transition to on-line learning go far beyond the educational materials development and students' works check. It is the academic staff who is responsible for maintaining the positive psychological climate in the digital classroom. The teachers are expected to balance the attention among all the students, identify their common and individual learning troubles. Therefore, such issues should be subject for consistent consideration and discussion at the academic staff meetings during the

emergency transition to on-line learning. Such a practice was introduced at RUDN University and help both each teacher and the training departments in general to avoid students' deep and long lasting depression related to emergency related changes in the training process.

Strengths, Weaknesses, Threats and Opportunities within Emergency Transition of International Students to Online Learning

The research findings demonstrate the impact of various methodological, technological and psychological issues caused by the emergency transition to online learning on the adaptability of international students and offer an insight into the perceived advantages and disadvantages of the system as well as its opportunities and threats both in the short-term and the long-term perspectives. In order to categorize these variables and present their overview, the principles of strengths, weaknesses, threats and opportunities (further SWOT) analysis were implemented to build the SWOT mind map diagram, see Figure 3:

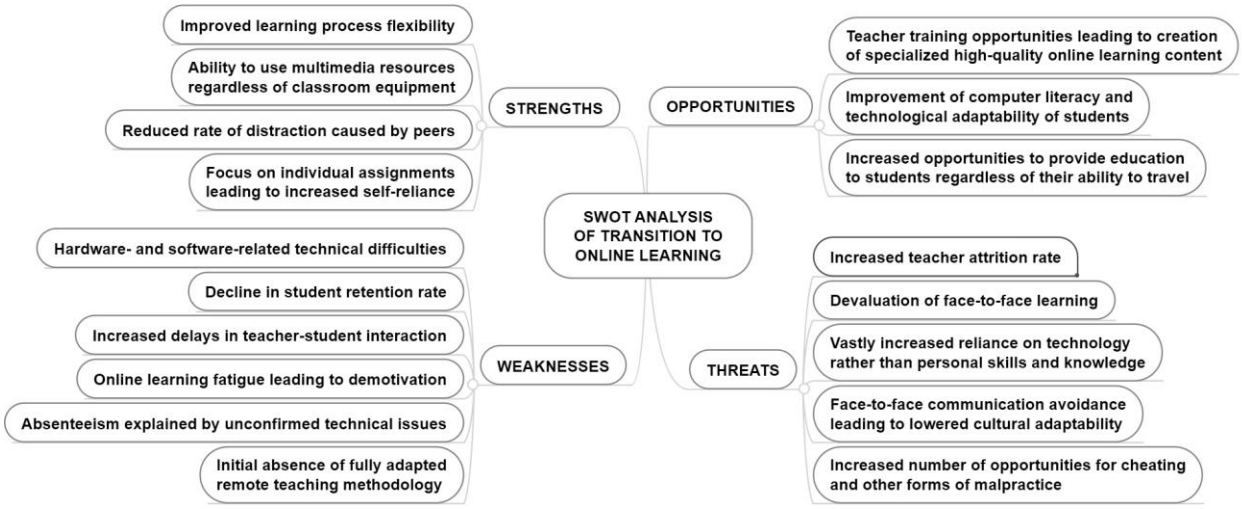

Figure 3. SWOT Analysis of Transition to Online Learning (Author's Data)

According to the research findings, the advantages of online learning include an improved flexibility of the learning process with teachers being able to improve their degree of control and organize online lessons depending on their methodological preferences, taking into account the individual characteristics of their students.

It has also been established that various online learning formats offer a wide range of possibilities for using multimedia content and interactive resources. This removes the dependency on the classroom equipment, which is highly relevant for international students primarily focused on

language training, generally provided to a large number of smaller groups simultaneously, reducing the chance of each individual group to be able to access a computer laboratory.

Another characteristic of online learning is the ability of the teachers to draw the students' attention to the importance of individual home assignments and promote project-based learning either through the use of the university's learning management system or other tools chosen by them based on a specific task.

The findings obtained during the observation also demonstrate the improvement of the students' concentration related to a reduced rate of distraction caused by their peers during the synchronous online lessons.

As mentioned earlier, the disadvantages of transitioning to online learning that had an immediate effect on the learning process can be categorized into three groups: technical issues, methodological issues and psychological issues.

The immediate effects of an emergency transition to online learning include a lowered student retention rate due to some students not being able to adapt to the change in the learning process, and a decline in the attendance rate, explained by the unverifiable technical issues.

The technical difficulties include a range of issues related to the absence of the necessary equipment as well as software and hardware incompatibilities. Additionally, both students and teachers may lack the required skills of using various online learning tools. The video footage analysis revealed a major increase in communication delays between the students and the teachers, which reduced the amount of content delivered to student during each lesson, leading to immediate significant modifications of the lessons plans, subsequently increasing the teachers' workload.

The research findings reveal the connection between the psychological and methodological issues. It has been established that video-call-induced fatigue may lead to students becoming demotivated and depressed, which dictates the necessity of introducing various methodological measures in order to prevent maladaptation issues amplified by the existence of the language barrier and the difficulties of cross-cultural adjustment.

The long-term opportunities presented by the transition to online learning include the potential for training specialists in creation of high-quality online learning content, significantly increasing their competitiveness, improving the learning management systems and offering new unique programs to international students, regardless of their location.

Additionally, transition to online learning allows students to improve their computer literacy and self-control which have become increasingly important in the modern learning environment. It also encourages international students to become familiar with local practices of using specific software and learning platforms while raising their technological adaptability.

The potential long-term disadvantages include the rise in teacher attrition rate, causing some faculty members with traditional face-to-face teaching experience to leave the university unless they adapt to online teaching practices and master the technology.

Furthermore, the newly established online learning practices may lead to devaluation of traditional face-to-face education, rapidly changing the global learning environment, increasing the competition between long-term oriented well-established universities and short-term oriented companies specialized in content creation and advertising, potentially lowering the competitiveness of the former.

Online learning has also been found to increase the reliance of international students on computers and mobiles devices, lowering the number of face-to-face social interactions, which may reduce the rate of their cross-cultural adaptation.

In addition to the aforementioned issues, the analysis reveals an increased number of opportunities for cheating and other forms of misconduct which can be partially, albeit not fully prevented by utilizing proctoring software during tests and exams. The information obtained during the present SWOT analysis may be used to improve the future online learning experience of international students.

Conclusion

The research provided the data according to which an impact on students' perceptions operates as a multidimensional phenomenon, which could cover immediate and long-term impact, diverse types of disruptive issues and threats, as well as might contribute to certain strengths and opportunities.

The analysis of the immediate and mid-term impact of online learning on international students reveals that various issues persisted throughout the semester, such as noticeable delays in the response time experienced by the students and teachers during the synchronous lessons, an increased probability of students cheating as well as the substantial rise in teachers' workload.

The latter is caused by an increased number of hours dedicated to converting the content into the digital format, compiling and submitting reports designed to improve the online learning process and providing technical assistance to the students. However, mid-term impact refers to individual and social aspects. The research results reveal that the efforts of the faculty resulted in stabilization of the overall students' performance as well as the recovery of their attendance record, despite the significant changes in the learning process.

The analysis of the research data demonstrates the way in which first-year international students perceive the issues of transition to online learning and offer an insight into possible ways of minimizing the risks related to online learning, improving the students' adaptability and maximizing their satisfaction with the learning process and its efficiency.

The results of the analysis indicate that a rapid transition to online learning is accompanied by a number of short-term effects with the disadvantages being more perceivable than the advantages by both teachers and students. While taking immediate action during such emergency situations might not be possible, it is suggested that faculties create contingency plans and focus on risk management in order to minimize the negative impact of such situations on cross-cultural and technological adaptability of international students.

A number of opportunities presented by the transition to online learning are related to improving the quality of content and methodology as well as entering the rapidly-growing global market of online education. The long-term negative effects include a potential devaluation of traditional classroom education and a decrease in the cross-cultural adaptability of international students due to a minimized number of face-to-face social interactions.

Furthermore, the research results lead to the conclusion that in order to ensure that the standards of quality are maintained during a transition to online learning, universities should be able to make specific efforts. They are supposed to complete such projects as converting the content designed for face-to-face learning into the digital format, making it more user-friendly, creating knowledge bases that offer the necessary information to international students, translating it into multiple languages in order to make it accessible.

It is also recommended that they provide high-intensity adaptability training for teachers and students and introduce various technical and methodological quality-of-life improvements, considering the issues specific to international students.

The research findings confirm the importance of addressing the impact of the current situation by conducting an interdisciplinary research on the way in which a forced emergency transition to online learning affects the adaptability of international students. The research findings contribute to the establishment of best practices aimed at improving the quality of online learning in general, preventing the adaptability issues of international students caused by a rapid transition to online learning and making this process a seamless one.

The present research has some limitations. We should say that it has been a kind of pilot study with a limited number of participants and general sort of questions they were offered to reply. Further investigation is supposed to be implemented with diverse trajectories of studies. They should take into account the students' social-cultural background, geographical origin, level of technological literacy, age, gender, etc. Such an approach would help to tailor the digital training within emergencies to particular student audiences at an international university. Further studies should also include the response from the university management and academic staff, in terms of their perceptions od those issues that should be taken into account when working with first year international students within emergency settings due to pandemics.

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