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IMPACT OF THE COVID-19 PANDEMIC ON STUDENTS IN THE REPUBLIC OF KAZAKHSTAN

Abstract: Kazakhstan, as many other countries in the world had to urgently switch to online learning when it became clear that the Covid-19 was a highly contagious disease and it was necessary to 'social distance' to slow down its spread. This study aims to explore the influence of the pandemic on lives and education experiences of the Kazakhstani undergraduate students. An online survey and online interviews were conducted via the social media platforms and 161 fully completed questionnaires were sorted out for the analysis. The findings indicate that during online learning students reported both positive and negative effects of pandemic on their lives and study experiences. More students started to work in part-time positions, however, their online class attendance fell considerably, and in order to cope with the increased amount of home assignments they started to cheat more often. Students were rather unhappy about the lack of interaction with peers and faculty members. Also, they were frustrated with the poor Internet connection as well as the need to self-isolate in the environment which does not always contribute to the productive education process. However, students also reported benefits in terms of more time spent with family and for self-development, self-care and hobbies.

Keywords: COVID-19 pandemic, quarantine, online platforms, higher education, online learning.

Introduction

The global Covid-19 pandemic was declared in March 2020 [1]. Due to the highly contagious nature of the disease, the Kazakhstani government, as many other governments around the world was forced to impose lockdown by restricting in person meetings and travelling. To date, there were overall 406 383 confirmed cases and 4211 deaths in the country, and around 15% of the population is vaccinated at least with the first dose so far [2]. The education institutions were among the many first organizations closed when the country-wise lockdown was announced. There are 128 higher education institutions in

organizations had to go to the so-called “Education in Emergency” mode [4] by switching from face to face classes to remote instructions. The Kazakhstani higher education institutions used different eLearning platforms, the most popular of which are Zoom and MS Teams.

The “Maslow before Bloom” situation due to the global pandemic, [4] and an unexpected transition to the mass digitalization of the almost entire process of education exposed weaknesses of the system such as “digital inequality” [5] and unpreparedness of the people involved. Additionally, “the online videos, digital content, and discussion forums may not provide a holistic teaching-learning outcome” [5], because education outcomes are not only measured by the amount of knowledge and skills acquired and level of grades. A crucial part of higher education is interaction and communication with peers and faculty members as well as the overall academic environment and scholarly community [6]. Besides, socio-economic background, personalities, interests and academic abilities of students considerably influence the effectiveness of courses and study programs [6]. Such differences could be much more difficult to detect during online learning. As a result, students with the innate interests in education are affected markedly less in comparison to “the vulnerable group consisting of students” who are much weaker in learning and self-motivating [4].

Such situation results in many difficulties, particularly, students reported feelings of depression, stress, anxiety which was further exacerbated by problems with the Internet speed, shortage of the necessary education equipment and unfavorable environment at home [7]. Understanding the effects of transition to online learning on student lives is imperative in order to learn the ways of improving their well-being as well as improve the online instruction techniques and adapt the content of the study programs to digital learning. Bearing this in mind, the purpose of the study is to shed light on how the switch to online education affected a range of aspects of student lives. Based on the analysis of the findings of this study several recommendations for higher education institutions will be suggested to better support the student population during the distance learning.

Previous research

The body of literature on the influence of the global pandemic and transition to distance education is being built actively by researchers from many countries throughout the world. Since Kazakhstan belongs to the group of emerging economies of the Former Soviet Union, the studies on the impact of the pandemic on higher education systems in developing countries were of particular interest to us but not limited to them. The first reaction to COVID-19 pandemic was to close universities and colleges, cancel or suspend examinations as well as domestic and international conferences, seminars, workshops and seasonal schools [16]. Then, when it became clear that the lockdown could be prolonged till uncertain date, the massive transition to online learning was necessitated. As a result, many shortcomings of the existing higher education systems were brought to light [5]. High uncertainty was observed among the Pakistani students in relation to their academic performance during the distance education, completion of the current semester, and the organizational status of the next semester [8]. According to the findings of the authors, one of the pronounced unpreparedness of the education system in such a developing country was lack of digital skills among the educators, who had difficulties adapting to the online teaching format which resulted in “overwhelming assessments given to students, which seems to be the principal origin of stress for most students” [8]. Similar situation was observed in the Kazakhstani context, where in addition to teachers, parents and students themselves required time and efforts to adapt to distance learning [9].

The evidence from the previous research shows that “social distancing” and “self-isolation” measures negatively influenced mental health of students [8][9]. Undergraduate students reported increased anxiety when thinking about the future, a decrease in mental state and general life position than graduate students; and concerns about the future were considerably higher among international students than local students [10]. It seems some of the higher education institutions organized financial and psychological support services [11][9]. When it comes to the practical side of the switch to online learning, the most wide spread problem was limited access to the Internet or low quality of the connection; shortage of proper learning devices and ineffective technology [12][7]. Also, unfavorable learning environment at home, domestic abuse, especially in remote areas of developing countries such as India and marginalized population generally face enormous challenges with distance education [7].

Despite so many challenges associated with distance education, some advantages of the situation were also observed. One of the most comprehensive studies on this topic, conducted in early 2020, involved 30,383 students from 62 countries found that self-isolation allowed students to take better care of their health, improving their eating habits, personal hygiene, spend more time on their hobbies, sports, family and relatives [11].

Most of the reviewed studies as could be expected during the global pandemic, collected data via the online surveys and online interviews. Some researchers came up with new approaches to data collection. A qualitative study in the form of an interview podcast was carried out at Cambridge [13]. The author used a new action-driven method called podcasting. Based on the Cambridge Quaranchats podcast, the study involved ten participants who took notes of their observations and emerging images while listening to different voices in the podcast about hopes and fears for the future of higher education before interviews. The findings of this study revealed participants’ somewhat deeper understanding of the complexity of the transition to online education after the pandemic. Most of them explained that an entirely online university was the bleakest dystopian outcome they could imagine at the same time a full return to pre-pandemic education was not really possible. The future is closely tied with blended education that gives more freedom and accessibility keeping the sense of embodiment and community at universities [13].

After all, education is much more than just obtaining knowledge and skills. Interpersonal communication, which is an essential part of the learning process and crucial for development of young individuals, was curtailed during the pandemic. Different universities throughout the world are trying to find a way of resuming in person education and minimizing the risks of transmission within the community [14]. One of the recommendations is that small size groups could be taught face to face but medium and large-size courses should be organized in the online format [14]. There were also suggestions for future curriculum content that included an integration of environmental and health courses; creation of online mental health and medical services; aligning curriculum competencies with expanding teacher training for online learning; support of the research efforts on the continuous impact of global pandemic on education, data monitoring and evidence-based practice [15].

This research attempts to contribute to a better understanding of the impact of pandemic on the student lives within the education system of an emerging economy such as Kazakhstan. In addition to the contribution to the contextual literature, with this study we aimed to gain an empirical experience of fully digitalized approach to data collection, which became quite relevant these days.

Materials and methods

Sample population

The target population of this study were undergraduate Kazakhstani students studying at various universities of the country and abroad. In total 161 individuals participated in online survey. We do not aim to generalize the results of this study. Thus, all the observations made in this study relate only to the sample population.

Data collection and procedure

The questionnaire and interview questions were developed based on the analysis of the previous research published on the topic. The questionnaire was developed in Russian since the majority of the participants could be expected to know it well compared to English or Kazakh languages. After the questionnaire was built into the Google Forms it was tested on two participants. This was done in order to check the look and feel of the online survey. These responses were removed from the overall data pool.

An online survey was conducted from 1 April to 31 May of 2021 to collect the quantitative data. A questionnaire link using 'Google form' was sent to students through the different social media platforms such as Telegram, WhatsApp and Instagram. A description of the study and all the possible risks and benefits for participants were explained in the introduction to the survey. Confidentiality was guaranteed and the anonymity of participants is preserved through aggregation of the types of the HEI. No other sensitive and personal information was collected. A total of 161 participants fully completed the survey. All the incomplete attempts were sorted out of the data set. Additionally, five volunteers from survey respondents were interviewed.

Data analysis

Before starting data collection, we applied to the Institutional Review Board (IRB). The questionnaire, interview questions and informed consent form were reviewed and approved by the IRB. The anonymity and confidentiality of the research participants were guaranteed by removing identifying marks, aggregating most of the interview data as well as ensuring that no one else has access to raw data except for the research team.

The quantitative and qualitative data sets were analyzed separately using appropriate procedures. It was necessary to obtain an initial understanding of the two databases before merging them in the conclusion section.

To illustrate the main characteristics of the participants the descriptive statistics were performed. Simple percentage distribution was estimated to assess the type of HEI, the year of study, employment status, GPA change before and during the pandemic. Also, several cross tabulations and frequency of problems related to online learning and self-isolation were carried out using SPSS Version 21. At the end of the survey there was a question on follow up interview. Only five participants volunteered. Despite the few numbers those narratives were very useful to complement and enhance interpretation of the quantitative data set. All interviews were conducted online in Microsoft Teams due to the social distancing restrictions. They started in March 16th 2021 and finished in March 18th 2021. In total, five interviews were conducted in Russian language from three different Kazakhstani universities. One of the students was from foundation and four others were second year students. All students were from major cities of Kazakhstan and did not experience any difficulties with Internet connection. Interviews were semi structured but participants had opportunities to elaborate on different aspects of their experiences freely. Due to the pandemic situation the consent from participants was collected orally.

Results

Participant characteristics

Due to the method of the survey distribution via the social media platforms, we received responses from the Kazakhstani students enrolled in higher education institutions of other countries. We decided not to remove those responses since they are most probably living in Kazakhstan under the lockdown as other participants enrolled in the local universities and undergoing similar distance learning process. To preserve anonymity, we decided to aggregate all the local universities into one group and international HEIs into the other group named foreign HEIs (see Table 1). As could be expected, the majority of the participants (92%) were enrolled in the local HEIs at the time of the survey (see Table 1). There were almost equal proportions of first- and second-year students around 42% each. Less than 20% of participants combined education with work before the pandemic; and mostly it was part-time employment (19%) with very few (8%) occupied full-time.

The transition to online learning led to more or less notable changes in GPA levels, particularly in the group of students with highest level of GPA 3,5-4 which fell slightly during the pandemic from 35% to 32%, and in proportions of students with 2,5-3 GPA which increased from 18% in 2019 to 22% in 2020. None of the students reported having taken an academic leave.

Table 1. Characteristics of study participants (n=161)

Characteristics	Distribution (n)	Percent (%)
University type		
Local	151	92
International	10	8
Year of study		
Foundation	5	3
1 year	67	42
2 year	69	43
3 year	16	10
4 and above	4	2
Collaborative learning with work before the pandemic		
Yes	31	19
No	130	81
Employment type		
Full time	13	8
Part time	31	19
Online	9	6
I study	108	67
Average grade 2019		
3,5-4	56	35
3-3,5	67	42
2,5-3	29	18
2-2,5	4	2
Ниже	5	3
Average grade 2020		
3,5-4	52	32
3-3,5	69	43
2,5-3	36	22
2-2,5	3	2
Lower	1	1
Academic leave		
Yes	161	100
No	0	0

The crosstabulation of the year of study and employment type shows that second-year students are majority in the full-time, part-time and distance work categories of occupation (see Table 2). After one year of studies, some part of students might have felt confident enough to seek employment, which could have been further spurred by the switch to distance learning. Indeed, the findings show that the number of working students doubled during the pandemic (see Tables 3, 4).

Table 2. Year of study * Employment type Crosstabulation

Year of study	Employment				Total
	Full time	Part time	Online	Study	
Foundation	1	0	1	3	5
1-year	3	13	3	48	67
2-year	7	14	5	43	69
3-year	2	4	0	10	16
4-year and above	0	0	0	4	4
Total	13	31	9	108	161

The crosstabulation of attitudes toward online learning with combination of study and work before and during the pandemic shows that the majority of students were rather neutral to online learning both before and during the lockdown. However, as was expected during the online education more students started to work and as a result their numbers with positive attitudes to it have increased as have people with very negative ones (see Tables 3, 4). So, a smaller number of students felt neutral while two extreme opinions have grown.

Table 3. Combined study with work before the pandemic * Attitudes toward online learning Crosstabulation

Question	Answer	Attitude towards online learning					Total
		Negative	So-so	Neutral	Somewhat positive	Very positive	
Collaborative learning with work before the pandemic	Yes	5	4	13	5	4	31
	No	14	14	51	26	25	130
Total	161	19	18	64	31	29	161

Table 4 - Combined study with work during the pandemic * Attitudes toward online learning Crosstabulation

Question	Answer	Attitude towards online learning					Total
		Negative	So-so	Neutral	Somewhat positive	Very positive	
Collaborative learning with work before the pandemic	Yes	11	5	22	12	11	61
	No	8	13	42	19	18	100
Total	161	19	18	64	31	29	161

Increased employment of students doubtless would influence their class attendance. Indeed, the number of students always attending classes fell from 65% before the pandemic to 49% during the pandemic, while the proportions attending rarely and sometimes increased from 2,5% to 8% and from 9% to 17% respectively. The descriptive statistics in Table 5 illustrates the change in Mean of before and during the pandemic class attendance of participants from 4.36 to 4.05. The decrease in attendance could also relate to the worsening

health conditions of students. Participants were asked about their overall well-being which fell considerably (Mean during face-to-face learning 3.91; Mean during distance learning 3.57) (see Table 5).

Table 5. Descriptive statistics

Questions	N	Minimum	Maximum	Average	Standard deviation
Attendance before Covid19	161	1	5	4,36	1,076
Attendance during Covid19	161	1	5	4,05	1,150
The general well-being of students during offline learning	161	1	5	3,91	1,137
General well-being of students during distance learning	161	1	5	3,57	1,219
Cheating during a pandemic	161	1	5	2,94	1,298
Cheating before a pandemic	161	1	5	2,04	0,983
Valid N (by list)	161				

Another influence of the pandemic on the higher education is increased incidents of cheating among students, which is also true for our participants (Mean before pandemic 2.04; Mean during the pandemic 2.94). Findings illustrate that the proportions of students reporting never and rarely cheating fell significantly from 34% to 17% and from 37% to 23% respectively. Whereas, the percentage of students cheating often and always rose dramatically from 7% to 23% and from 4% to 14% respectively (see Table 6).

Table 6. Student cheating before and during the pandemic

Answers	Cheating before a pandemic		Cheating during a pandemic	
	Frequency	Percent	Frequency	Percent
Never	55	34	27	17
Seldom	59	37	37	23
Sometimes	36	22	38	24
Often	7	4	37	23
Always	4	2	32	14
Total	161	100	161	100

According to the survey results (see Table 7) the most wide-spread problems that students encountered during the online learning were the poor Internet connection quality, constant interruptions from the surrounding environment and lack of motivation. Interestingly, only 2% of participants reported the lack of learning devices as a problem. The problems with the university website, the unexpectedness of the transition to the online format of education and time management were mentioned equally at the level of 11% each, while the lack of time was mentioned a bit more often (13%).

Considering the importance of communication and interaction during the education process, there was a separate question in the survey on the influence of self-isolation of students from their peers. Equal percentage of respondents reported that they have lost interest in their studies and they felt pressure from increased amount of homework. Very often distance learning involves increased self-education which comes in the form of home assignments with which some students struggle without the everyday help of their peers. So, 22% of students reported that they were unhappy because they lacked in person communication with their peers (see Table 8). Around 20% said that they felt the lack of overall communication, which

could mean that despite the available various online interaction software students failed to establish the satisfactory level of communication with their peers. Very few participants claimed that self-isolation has not had any influence on them (see Table 8).

Table 7 - What problems did you encounter during online learning?

Answers	frequency	percent
Poor internet connection	95	17
Breaks during classes	96	18
University website did not work	60	11
Fast transition to a new training format	59	11
Lack of time	70	13
Lack of motivation General	97	18
Time management	61	11
Lack of a device for online learning	9	2
Total	547	100

Table 8 - How has self-isolation from your peers influenced you?

Answers	Frequency	Percent
I have lost interest in learning	74	23
My interest in learning has increased	12	4
I felt pressure from the increased amount of homework	73	23
Dissatisfied with the lack of personal meetings	69	22
I lacked communication	64	20
Hasn't influenced in any way	27	8
Total	319	100

Overall, according to the quantitative findings, during the pandemic more students started to work in part-time positions, as a result their class attendance fell, and in order to cope with the increased amount of home assignments they started to cheat more often. They were rather unhappy about the lack of interaction with peers and poor Internet connection as well as the need to self-isolate in the environment which disrupted the study productivity.

Qualitative analysis

Education organization at HEIs

According to the participants due to the unexpectedness of the transition to online learning not all the aspect of the process was organized and prepared well. It related to schedule overlaps and convergence of all the midterms or final exams in one short period. As one of the participants explained “the inconsistency among the professors and their courses makes you very nervous”. Having all the online exams or final papers within a week or two made them feel rather stressed and anxious. Also, some of the instructors had difficulties with eLearning software. At the same time, participants said that most of the professors were very understanding and ready to help by giving extensions and changing deadlines.

Transition to distance learning

Findings suggest that during the distance education for part of the student not wasting time travelling to and back from a university was a good advantage so that they could devote more time, as one participant explained, “cooking meals, good and tasty meals; spending more time

with the family”. Another student said that “my problems are solved quite well ... much easier, considering that I am at home and life has become easier compared to the period when I studied in person”. However, for the other part of the respondents the increased sedentary lifestyle negatively influenced their health. One of the participants explained “my health became a little worse because I practically do not go out into the street. On campus, you still had to walk from the dorm to the university. It was necessary sometimes to run between the offices”. Another responded said that “my eyes hurt a lot when I sit behind the screen for too long”. The self-isolation and inactivity depending on the circumstances was either a blessing in disguise or a stressful situation that brought about difficulties with health and relationships with the family members. One of the participants reflected that in such enforced closeness “some problems that I had in communicating with my parents were strongly revealed”.

The study process during the lockdown

The main difficulty according to the student stories during distance learning relates to increased assignments. One of the participants explained “I understand the zeal of the professors and teachers to deliver a lot of different exams, mini-essays, mini-assignments, but they do not take into account that every, literally every, professor does this, because of it the time you spend on studies and the volume of work has become a million times more, honestly”. In similar lines another student “I’ve never spent so much time studying in my life. I had something like 25 disciplines at school, but now at university I have only 5”. Also, the participants felt that in some cases “the material is not so well mastered, because the teacher cannot always convey what he wanted to explain through the computer screen. Household chores also distract you a lot and it is a significant disadvantage”.

For disciplines with assignments in labs students felt deprived of practical classes which were clearly cancelled. Additionally, time management fell fully on the individual shoulders of students, they reported difficulties with focusing their attention on online classes “you can really move away from the computer and not listen at all, so I think that face to face learning was somehow more useful with lectures than online”. Likewise, another respondent “since I am at home, I am not very good at studying and often don’t listen to lessons”.

It seems not everybody was ready to take responsibility for their own education, one of the participants says “now, it doesn't matter if I sit at the lecture and fall asleep or I will not sit at the lecture and fall asleep...The perception has definitely changed because I spend a lot more time on studying, but I would not say that the quality has improved a lot”. If a student is not prepared for independent studying, it might be hard to keep up with the peers who are more disciplined. One of the respondents about her study approach “before the pandemic, I tried to write down everything that the teacher said, but now I'm just doing self-study. I teach myself; I search for information myself...”

Despite many inconveniences of the lockdown, some of the participants mentioned several positive aspects of distance education such as better planning of activities and more time to look after themselves. “There are definitely advantages. Considering the fact that during face to face studies there is not much time at all for the development of some of your hobbies, and so on. Well, at home it will still be quieter in this regard. You manage your time yourself.” Additionally, during the online sessions very often the lessons are recorded and a participant explained that “we can listen to it at any time and take notes, while during the face to face classes sometimes it was a little difficult to keep up with the teacher. I think online lectures seem much more convenient”. Another student even claimed that “since you can listen to the lectures or watch some moments and so on at any time and repeat. I think my grades have improved”. Also, students who already had an experience of online lessons before found it much easier to switch to fully online education.

Social life during online learning

The country-wise lockdown and switch to distance learning severely limited social interactions for everybody, including students. As one of the participants put it “during online education socialization was annulled”. They explained that even though they had group chats in different social media platforms such as Telegram or WhatsApp “we usually share with each other something like “Don’t forget the exam today!” ... But I really didn't even try to get to know any of these people”. It seems such chats do not give students much opportunity to learn each other well. This seems particularly difficult for the first-year or foundation year students who had no time to get to know their group mates in person at the beginning of the academic year. A participant described that her “social communication decreased to the maximum number of people I know, and it was always only for some important business or urgent business that they or I needed directly” Another respondent explained that during the face to face classes “socialization was intuitive...You always try to learn something, someone new and there is a feeling of connection”. Whereas during the online learning “there is often no real contact with people” said one of the participants and “my activity in this regard has faded a little” Similarly, another student described that “In terms of socialization, I became more closed. I have already lost the habit of talking to people”. She further explained that she had to make an effort to “somehow not to lose contact, because when you lose contact, you feel that something is wrong”. In some cases, students reported issues that arose in relation to their mental health. One the participants shared” there is very, very little social communication because of this I would say that my mental health has suffered a lot because over time you get tired of sitting alone in four walls without interaction”. However, there was a student who said that actually “I got to know myself better during a pandemic”. It is clear that students felt keenly the lack of communication and social interaction. It was a serious issue for many of them, while there were the ones who were able to use this time advantageously. Indeed, it is so rare when one has so much time to oneself to reflect and analyze, however, a person should be ready to appreciate it and be able to benefit from it.

Conclusion

The aim of this study was to explore undergraduate student online education experiences during the global pandemic and its impact on different aspects of their lives. Findings of the study align with the previous research that there were both negative consequences of the rapid switch to online learning as well as advantageous aspects.

The biggest disadvantages of distance learning - the lack of social interaction, self-isolation, increased stress and anxiety, issues with mental health observed in previous studies (Baloch et al., 2021; Dodd et al., 2021; Rahman et al., 2021) were confirmed by the participants. According to the respondents, the curtailed social communications led to the loss of motivation, interest in studies and feeling of unhappiness. Moreover, with transition to online learning home assignments became numerous so that they were rather overwhelmed by the amount of time and effort it took to complete them (Baloch et al., 2021). Also, the survey results demonstrate that cheating became alarmingly common during distance education.

Another difficulty experienced by the Kazakhstani students like many students in other developing countries is the poor Internet quality [17][7] which leads to disruptions and misunderstandings during the online classes. In such learning atmosphere it is rather hard for teachers to build a rapport with their students. The interview results show that students felt bewildered to work with instructors whom they have never seen or heard in person. Additionally, some participants talked about disturbing environment at home due to noise, siblings, shortage of devices, domestic chores and family circumstance, which was also observed in earlier studies [7].

However, there were also students who benefited from transition to distance education because they had more time for self-development and personal care. They enjoyed their hobbies, found new interests and improved their eating habits. Despite many complaints on the difficulties with time management a part of study respondents reported finding employment during distance education. That probably depends on the sector and skills of young individuals.

This study was limited to the student perspectives on the impact of the global pandemic on higher education in a developing country. Further research is necessary to understand how faculty members and university administration fared while organizing the transition to online learning and adapting to the situation. They can give a more complete picture of the educational process. Some of the students and instructors need a special training to handle the digitalized classes. Moreover, it seems the Kazakhstani universities where the participants of this study were enrolled did not focus much on organizing the psychological help and mental health assistance initiatives, which is crucial in such circumstances.

Based on the findings of this study and bearing in mind the previous literature, we suggest the following recommendations to faculty members and university administrations:

- Special training workshops should be organized for some of the faculty members to ease their adaptation to the increasingly digitalized education environment;
- The psychological assistance services for students should be made available in as many HEIs of the country as possible;
- Considerable changes to curriculum should be made to adapt it to online learning based on the thorough analysis of the previous years' experience;
- Already popular MOOC courses proliferated further during the pandemic.

Many traditional programs could benefit enormously by incorporating such courses into their content.

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