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Has COVID-19 Affected Students' Attitudes towards Online Education? A Case Study of Azerbaijan

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Abstract

The article analyses changes in attitudes towards online education in Azerbaijan during the unprecedented global lockdown resulting from the COVID-19 pandemic. The pandemic led to the total closure of all educational institutions in Azerbaijan and marked the beginning of massive online learning in schools and universities across the country. The present study is based on analysis of data collected from a survey of 1300 students representing 20 universities in Azerbaijan. The starting point for the analysis was to ask whether the students had online learning experience prior to the mandatory shift to distance learning or not. The students were also asked to provide their opinion regarding both traditional and online learning tools. This information enabled the research group to examine the weaknesses and strengths of both educational models. Having little to no experience with online education, about 36.5% of Azerbaijani students nonetheless expressed willingness to continue their education in an online mode, most preferring online courses over online degree programs. Difficulties with technical issues and unprepared instructors were cited as key issues among the remaining 63% of students who preferred the traditional mode of education.

Introduction

Since the outbreak of COVID-19 in January 2020, schools, colleges and universities across the globe started to close campuses and suspend all activities (Adnan & Anwar, 2020; Ali, 2020; Hodges et al., 2020). Traditional classes shifted online and educational materials were moved onto various virtual platforms.

Even though online learning options existed before the pandemic, some educators argue that the current state of online learning is unique and incompatible with a normal digital learning situation. These educators describe the current situation alternatively as "crisis learning" or "emergency remote teaching" (Pace et al., 2020; Hodges et al., 2020). According to Hodges et al. (2020), in comparison with a learning experience that is designed from the beginning to be online, Emergency Remote Teaching (ERT) is introduced as "a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances". Due to a lack of literature on this type of online learning, there is not enough information on students' perception of emergency remote teaching and learning (Hodges et al., 2020). Students' perceptions are particularly important as they did not opt for this mode of learning, but rather had to switch to it as part of the global emergency (Hodges et al., 2020; Aguilera-Hermida, 2020; Ali, 2020).

Despite worldwide technological advancements, the transition to online learning from traditional face-to-face education in less digitally developed countries has been quite challenging (Ali, 2020; Adnan & Anwar, 2020; Jena, 2020; Hoq, 2020). A lack of access to affordable and fast internet connection, limited access to computers at home, and low preparedness of teaching staff to use information technology for instruction hindered the transition to online learning in many emerging economies (Ali, 2020; Jena, 2020; Adnan & Anwar, 2020), including Azerbaijan.

Adaptation to online learning is not only an issue of technology (or lack thereof), but is also a pedagogical and instructional challenge. According to Ali (2020), since teachers and staff are the key players in the implementation of online learning, their perceptions and attitudes towards the use of information and communication technology (ICT) is key to the successful integration of online learning and teaching.

Since the spread of the pandemic and the closure of all educational institutions on March 3, schools and universities in Azerbaijan started employing different online platforms such as Zoom, Google Meet, and Moodle (Hoq, 2020; Ali, 2020; Basilaia & Kvavadze, 2020). Microsoft signed a contract for free use of its online communication platform (Microsoft Teams) in all Azerbaijani secondary schools and universities starting in April (Ministry of Education of Azerbaijan, 2020). In addition, the government introduced virtual schooling and a TV program called "Lesson Time" aired on local TV channels, covering various subjects for primary and secondary school students. The transition from face-to-face to online learning required administrative and organizational efforts on a national level. In some schools and

universities, the transition was successful, but the quality of instruction requires further investigation (Basilaia & Kvavadze, 2020).

In addition to technical, administrative, pedagogical and instructional challenges, students' motivation and perception directly impacted the transition to this new learning environment (Aguilera-Hermida, 2020; Ali, 2020). As Aguilera-Hermida (2020) concluded, students' motivation, self-efficacy and cognitive engagement decreased as students had to adapt to online learning without any preparation during the transition period. All this contributed to students' negative perceptions of their higher education experience with online learning (Aguilera-Hermida, 2020).

Azerbaijan was also among the countries which decided to temporarily close all educational institutions at an early stage, following the World Health Organization's recognition of COVID-19 as a pandemic. By that time, around 40,089 full-time students were completing their final year in higher education institutions and were involved in independent coursework, while the remaining 171,627 students and 20,514 educators were in need of distance education (Ministry of Education of Azerbaijan, 2020). According to the Ministry of Education's 2020 report, only two out of 52 higher education institutions possessed solid distance learning arrangements that included a relevant software solution, trained faculty, and digital content. The mandatory shift to online methods of education forced all educational institutions to make rapid plans for a transition from face-to-face teaching to online education. Taking into account that online teaching was hardly employed in Azerbaijan before the pandemic outbreak, this transition took some time and effort on both the administrative and teaching sides. The unpreparedness for the emergency collective shift to online education and lack of prior experience were problematic during this transition period. In fact, these aspects played a significant role in shaping students' attitudes towards the new mode of learning.

Research Design

While studying this transition to online learning, the research team considered various topics related to the effectiveness of online learning and its impact on students and academic performance before deciding to focus on perception and attitude changes toward online learning among Azerbaijani students during the pandemic. Additionally, we tried to find out to what extent different challenges related to online education, such as issues with self-discipline, suitable materials, good learning environments, and teaching inefficiencies, were

affecting students' decisions. Thus, this study examines the effects of the mandatory shift to online education on students' preferences. In addition, we explore whether the mandatory shift has influenced Azerbaijani students' acceptance (desirability) of online (vs. traditional) learning in the future as well.

The questionnaire[1] surveyed over 1400 respondents, namely students pursuing bachelor's or master's degrees from 20 different universities (15 public and 5 private) across Azerbaijan, including students of various disciplines in the humanities and medicine. The majority of respondents who completed the survey were female. In terms of age distribution, the dominant category was ages 17–21 (86%).

The research team filtered some respondents, ultimately including only those 1286 students who completed the survey by stating the university they belonged to. The survey was composed of four major parts, totalling 30 questions based on the Likert Scale (strongly agree/agree/disagree/strongly disagree/neutral). The four parts of the survey were:
A) Online learning experience
B) Psychological impacts of COVID-19
C) Online learning versus traditional classes
D) Future choice of educational mode
Each group of questions pursued different aims. Firstly, we wanted to identify whether the online learning experience was as unfamiliar to Azerbaijani students as was generally assumed. We used the term "online learning experience" in the questionnaire to generalize all experiences the students may have had prior to the mandatory shift, including online courses and non-degree programs from various providers.

In the second section of the questionnaire, the team wanted to investigate respondents' state of mind. Assuming most students are going through stress during the pandemic, we sought to better understand the impact the pandemic has had on their mental health. The comparative analysis of "before" and "after" the pandemic was designed to understand how the pandemic affected their preferences regarding online learning.

The third and fourth groups of questions were constructed with the aim of identifying the motivation behind the respondents' preference of a learning mode. Questions regarding identification of preferred mode of education were followed by the list of potential reasons suggested by the research. Students who opted for the choice "I prefer online learning" were also asked to indicate the reasons for not preferring traditional learning. Cross checks enabled an in-depth analysis of factors that were crucial to their decision-making process.

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1   Available here: https://bit.ly/3oLzHxy

The last section provides demographic information for grouping the students by age, gender, level of study and university.

Consent, voluntary participation and anonymity of respondents are among the most basic principles of ethics which need to be addressed in any research. Participation of all respondents was voluntary, and responses were provided without influence.

Like any research, our study has a number of limitations. The first methodological limitation is the number of respondents. The number of students who took part in the research survey [*N*=1267] constitutes only 0.84% of all the Azerbaijani students (out of a total of 151,113 active student users) (Ministry of Education of Azerbaijan, 2020). However, in the related research conducted during the pandemic in China (Chen et al., 2020) there were 712 respondents, while in a U.S. research study only 412 students were surveyed (Barnes & Noble College Insights, 2020). Second, as an Internet-based survey there are issues with (non-)probability sampling and undercoverage because not all users have access to the Internet (Pew Research Center n.d.). While sampling is non-representative, it allows exploration of the specific question in detail.

Findings and Analysis

Any experience with online learning, as well as its absence, carries the importance of shaping students' approach to online learning. During the inception of mandatory online learning in Azerbaijani universities, the majority of students surveyed (76%, *N*=1267) noted that they were new to online learning, whereas only a relatively small number of the respondents (24%) had already taken online classes prior to the pandemic.

Prior experience with online learning serves as a strong predictor for the wish to continue studies online in the future: about 36.5% of all respondents (consisting of 21.4% with prior online experience and 15% without it) reported a preference to continue with online learning. We thus see that nearly all of the 24% of students with previous online education experience are willing to continue their studies in an online format. Of the 76% with no prior experience only a fifth (equal to 15% of the total number of respondents) report that their attitude to online learning changed as they became acquainted with this mode of education due to the mandatory shift.

Those respondents who reported having past online learning experience can potentially be added into the category of inexperienced students as well, as their previous experience was not provided by their university and thus could not be categorized as Emergency Remote Learning (Hogdes et al, 2020). For example, online learning programs provided by massive open online courses (MOOCs) are different from the ones conducted by respondents' universities. MOOCs do not usually provide synchronous interaction with the lecturer or online group work, the grading is processed by the computer, and there is less (or no) oversight during the course.

The research group analysed the answers of students with no prior experience who were in favour of continued online learning after the pandemic to ascertain the factors that influenced their decision. Examining the motivations for choosing online learning, the reduced costs and increased free time for studies motivated those students to prefer it over traditional modes of learning (see chart 1). The opportunity to improve self-discipline was the least popular reason for choosing online learning; by contrast, more students preferred the feeling of relaxation and the possibility to create their own flexible schedule.

Figure 1: **Why Students with No Prior Experience with Online Learning Prefer It over Traditional Teaching**
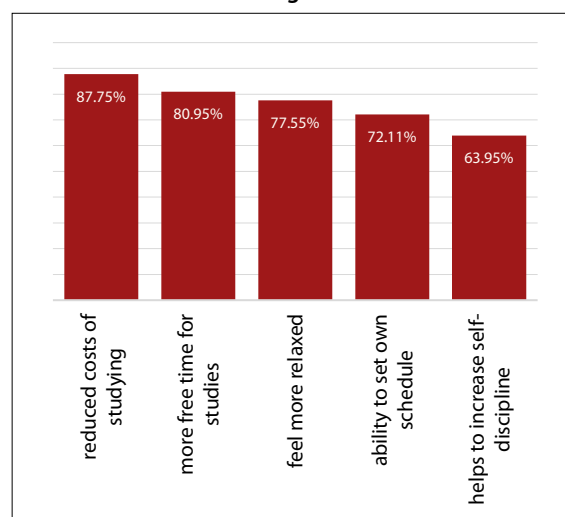
Technical issues related to online learning, such as lack of access to a computer (PC), speed of internet connection, and knowledge of program management were major concerns for all respondents, no matter their level of experience. The students who became familiar with online learning as a result of the COVID-19 pandemic mainly expressed a preference for traditional learning because of the aforementioned technical difficulties (89.6%) and unprepared instructors (75%). These results are understandable, as not only students but also instructors were caught unprepared for the shift, and having no prior experience in online teaching impacted respondents' answers negatively.

The reasons why respondents between the ages of 17 and 21 (86% of our sample) find traditional learning more beneficial is also interesting. Respondents were asked to choose from among the following fac-

tors: motivation gained through face-to-face interaction for better understanding of the subject, preference for face-to-face interaction with peers, the impossibility of all subjects being taught online and the matter of accountability maintained by the system. While the role of interaction with peers and the issue of the responsibility maintained by the system itself were nearly the same, being 83.5% and 85% respectively, the importance of face-to-face interaction for gaining deeper insight on the subject stood out, with an 89.8% positive response rate. This makes us consider face-to-face interaction as the leading factor in favour of traditional modes of learning. This factor is also dominant (91%) among students with a background in online learning who favour traditional learning. The second most popular answer among these students is also about communication ("social interaction with peers motivates me"), constituting evidence for the explanation that the popularity of traditional classes comes from fundamental needs for socialization.

The difficulty of teaching all subjects online was also indicated often, with 89% of respondents considering it to be an issue. We assume that the appropriate methodology of online teaching differs by subject. For example, lab work for biology students or practical experience participating in surgery for medical students cannot be replaced by online classes. Consequently, this argument impacted students who were already more inclined toward traditional modes of learning.

As we explored the consistency of students' choices, it was interesting to find out how many students would prefer to study online even after the pandemic is over. Our research showed that during the emergency, online class experience was regarded positively by 36.5% of respondents, but this figure decreased to 15% when the students were offered this choice in the context of normal (non-pandemic) conditions.

Analysing the students who consider online learning as their preferred future mode of education, we see that the plurality (45.5%) of students would like to take short-term online courses (MOOC) and 32% would prefer long-term online degree programs. Thus, even if the privileges of short-term certificates and long-term degree programs are not the same, today's students are more willing to spend less time and quickly obtain the necessary credentials for building their career path, rather than spending years on online education.

The answers to the question of how much stress students felt during mandatory online classes were analysed from the perspective of examining the correlation between the respondents' stress level and the choice of educational mode they plan to utilize in the future.

Over half of the respondents who experienced stress are looking forward to returning to campuses and continuing with traditional learning (55%) whereas only 36% of students going through stress during the pandemic prefer continuing online.

The survey also helped determine the number of students lacking a clear opinion on a number of issues. Students mostly expressed neutral positions about uncertainty and stress caused by the current situation (the spread of the pandemic), the possibility of making a choice in favour of degree programs (bachelor, master or PhD), and technical issues of online teaching. The survey revealed that 5% of respondents are doubtful whether to consider technical issues of online teaching as a problem or not, whereas 25% were undecided about insecurity and stress, and 21% indicated being uncertain about further online education.

Conclusion

This research revealed that the majority of students participated in online programs solely due to the COVID-19 pandemic and would not be likely to choose this mode of education given the chance to participate in traditional classes. However, the large majority of those students with prior online experience expressed the desire to continue studying online after the COVID-19 pandemic, indicating the positive dynamic in attitude shift. An important factor which distinguishes the online teaching studied here was the stress both groups of students were going through due to the COVID-19 pandemic.

The present study highlights for the first time the problems both teachers and students in Azerbaijan encounter in the process of online teaching and learning. Moreover, it presents data concerning not only the respondents' experience, their mental state during mandatory online classes, and the obstacles they encounter in this mode of learning, but also their future intention of learning in the online environment, which is extremely important for the future path of the development of online education in Azerbaijan.

Although some educational institutions abroad provide online degree or non-degree courses, as this study has demonstrated, relatively small numbers of adult learners at Azerbaijani universities had sufficient technical experience to ensure high quality online education prior to the ongoing pandemic. The learners indicated the obstacles preventing them from successful online learning, which can serve as foundational data for future researchers and educators.

About the Authors

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# Statistics: COVID-19 Cases in the South Caucasus in Comparison

Figure 1:   COVID-19 Cases in Comparison (cases per 100,000 inhabitants, 1 February 2020 – 29 January 2021)
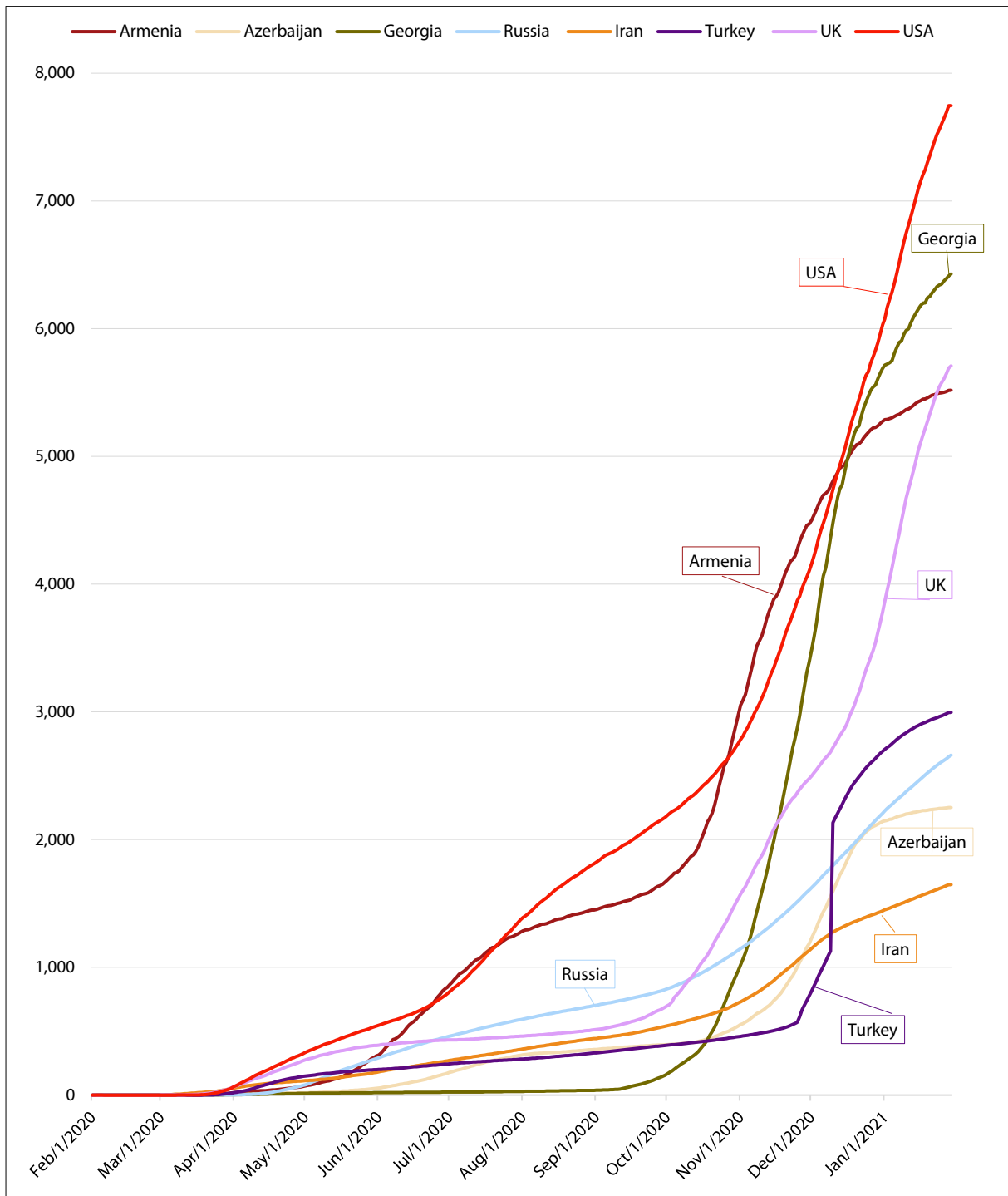
Experts assume that the official figures are significantly lower than the actual figures. The actual number of deaths can be estimated on the basis of excess mortality data. The Caucasus Analytical Digest has decided to publish the official figures, as they reflect the publicly communicated assessment of the epidemiologic situation.

Source: Johns Hopkins University. 29 January 2020,10:22 AM CEST, https://coronavirus.jhu.edu/map.html; https://github.com/CSSEGISandData/COVID-19/blob/master/csse_covid_19_data/csse_covid_19_time_series/time_series_covid19_confirmed_global.csv; *population figures: CIA World Factbook,* https://www.cia.gov/the-world-factbook/

Figure 2:   COVID-19 Deaths in Comparison (deaths per 100,000 inhabitants, 1 February 2020 – 29 January 2021)
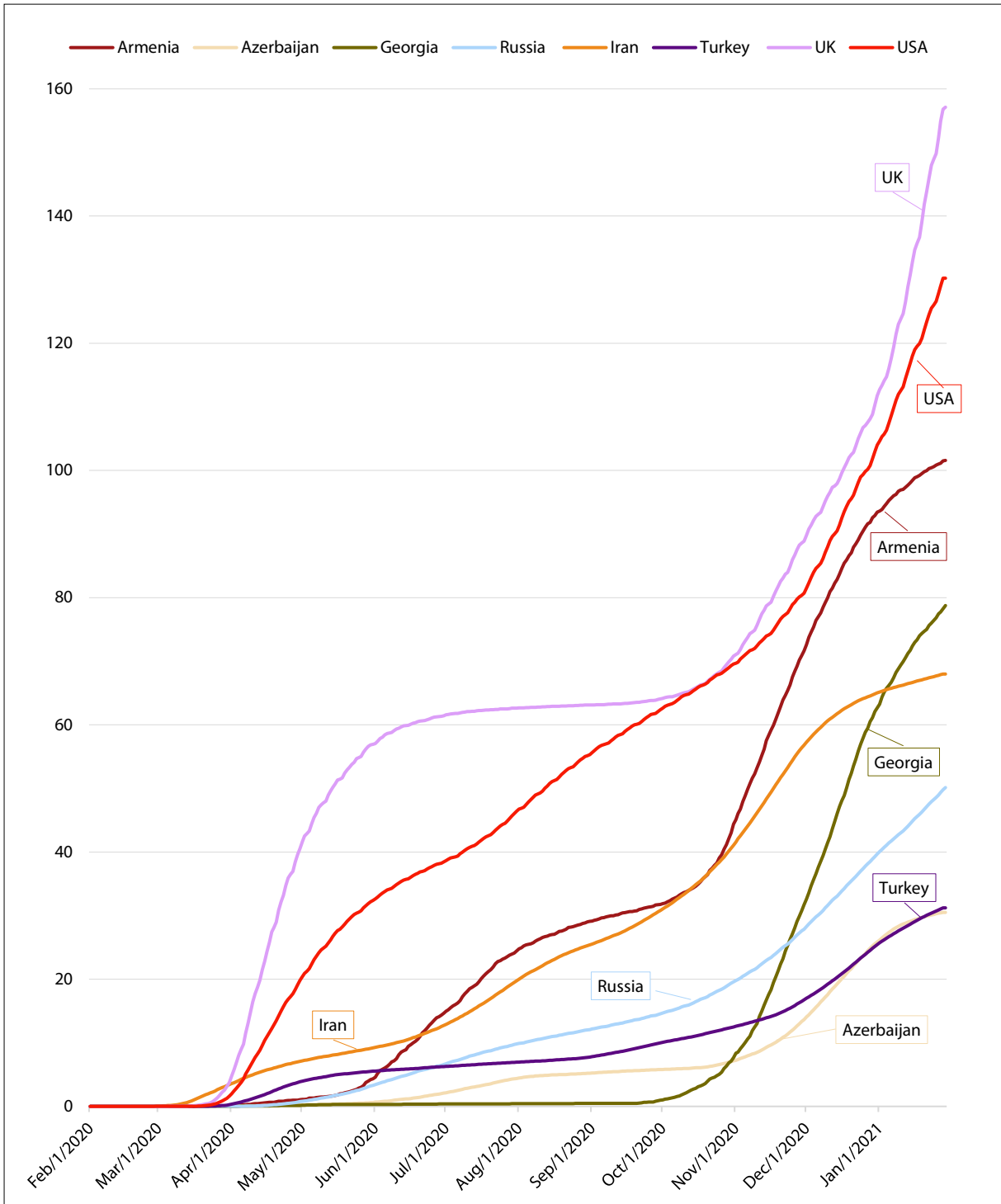
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