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Throwing light on fee-charging tutoring during the global pandemic in Kazakhstan: implications for the future of higher education

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Abstract
This mixed-methods study explored the nature, effectiveness, and policy implications of the fee-charging private supplementary tutoring (PT)—including online—that first-year Kazakhstani university students attended over the last 12 months. The data were collected from 952 participants using a close-ended questionnaire followed by semi-structured online interviews with 22 participants. The study found that the PT market expanded during the COVID-19 pandemic, during which 750 out of the 952 participants (81%) received PT. Lack of parental follow-up, limited preparation by schoolteachers on how to deliver online classes during the pandemic, and insufficient support by regular schools for students taking university entrance examinations prompted the participants to seek PT, mainly to obtain state tuition grants for highly selective universities. Despite the health risks of face-to-face PT during the COVID-19 pandemic, several participants did take part in it. The participants exercised their agency by reflecting not only on the drawbacks of online PT but also its advantages, including saving time, energy, and money and being able to revisit the taught material several times, thus, enhancing comprehension. The pedagogical implications of fair access to higher education and regulating PT by introducing codes of practice are presented.

Keywords Private supplementary tutoring (PT) · First-year university students · Access to prestigious universities · High-stakes examinations · A mixed-methods study

Introduction

The World Health Organization declared the Coronavirus outbreak a global pandemic on March 11, 2020. Following this, people around the world found themselves quarantined, working, and studying from home. The global pandemic unsettled normal operations in almost all sectors, including education, shifting from mainly face-to-face instruction to emergency remote teaching and learning (ERT&L) and causing difficulties for students, parents, teachers, and administrators (Hajar & Manan, 2022). The United Nations Education, Culture and Science Organization (UNESCO, 2022) calculated that the pandemic affected approximately 1.6 billion students and their families worldwide due to the closure of schools and institutions. In Kazakhstan, the site of this study, the state of quarantine was declared in March 2020, after which most cities implemented ERT&L. According to Bokayev et al. (2021), more than 900 colleges and universities and 7000 schools adopted ERT&L in Kazakhstan in 2020.

As online education has become a panacea to solve the problems created by the COVID-19 pandemic, Hodges et al., (2020, p. 7) asserted that the central purpose of ERT&L is to offer "temporary access to instruction and instructional support in a manner that is quick to set up and is reliably available during an emergency." ERT&L faces many difficulties, including slow network connectivity, crowded family homes, inadequate knowledge by teachers and students, and exposure to digital instructional formats (Ndzinisa & Dlamini, 2022). These challenges can exacerbate educational inequalities, raising concerns about attaining equitable and advantageous ERT&L during the global pandemic. Further compounding the situation was that during COVID-19, many more families—especially where children are at transition points in the education

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system—hired private tutors than before the pandemic. Many parents turn to this option because they are busy with their jobs and unable to track their children's progress, along with being interested in giving their children extra support in the key subjects required for admission to university or highly selective schools. Hajar and Manan (2022) qualitatively explored the ERT&L experiences of a group of primary school students (aged 10–11) in Kazakhstan. The study found that most students criticized their teachers for their overuse of WhatsApp, the lack of cooperative activities, and delays in responding to inquiries. As a result, they turned to PT to receive increased individual learning opportunities and more in-depth explanations of the topics, especially because face-to-face tutoring was not banned by the authorities in Kazakhstan during the pandemic.

PT is commonly known as "shadow education" because it operates in conjunction with regular schooling and, to some extent, mimics the official curriculum and instructional practices (Bray & Hajar, 2023). PT takes different modes, including individual tutoring, small-group tutoring, video-recorded lectures, and online sessions. Zhang and Bray (2020, p. 332) postulate that during the global pandemic, "shadow education has come into the sunlight to be compared with schooling in the virtual space." Similarly, Šťastný and Kobakhidze (2020, p. 10–11) suggest that with the changes to the educational situation after the COVID-19 pandemic, including PT, there is a pressing need to explore "shadow education to reveal any inherent inequalities," with a particular focus on online PT and its new modes such as "education pods, Zutors (i.e., Zoom tutors) and microschools."

The present mixed-method study seeks to address this lacuna by focusing on fee-charging PT—including online tutoring—that first-year Kazakhstani university students engaged in during the preceding 12 months (during the global pandemic) when they were in the last grade of secondary schooling, including coaching for high-stakes examinations to win a place at two highly selective Kazakhstani universities. School education in Kazakhstan is divided into primary (grades 1–4), lower secondary (grades 5–8), and upper secondary education (grades 9–11). Grade 11 is a critical stage in the Kazakhstan education system because, in the end, most students take the Unified National Test (UNT) for admission to one of the state higher education institutions. It is common for students to highly prepare and be tutored for the UNT, especially because receiving the state grant for higher education tuition in Kazakhstan depends on applicant UNT results. The UNT is structured in two sets: the first comprises tests in reading Literacy, Mathematics, and History, and the second consists of tests in two subjects chosen by the student (Chankseliani et al., 2020).

Fee-charging tutoring and its role in facilitating access to higher education in Kazakhstan and beyond

Ensuring equitable access to higher education is considered one of the major concerns of education policy agendas by most countries in the world. After more than four decades, the challenge of achieving equity when moving from high school to university has not diminished: "the question of the principles and processes of selection and admission to higher education is the crucial point where higher education touches most closely on the social structure" (Trow, 1973, p. 25). Prakhov and Sergienko (2020) observed that while university admission requirements vary across countries, many involve entrance exams. Consequently, able students from disadvantaged backgrounds may fail to be admitted to prestigious schools or universities, not because of their academic ability, but because they are less likely to be able to afford targeted "exam entrance" tutoring. Conversely, students from wealthy families may capitalize on exam coaching to gain admission to higher education institutions and may be accepted by several universities. PT requires considerable household expenditure and, thus, both maintain and intensifie social inequalities, especially during the COVID-19 pandemic. As Luo and Chan (2022, p. 4) fittingly point out, the global pandemic has raised significant concerns about "how shadow education widens the education attainment gap—in the face of school lockdowns, affluent families have more resources to hire private tutors for their children."

According to Kalikova and Rakhimzhanova (2009, p. 98), centralized examination systems have made access to universities "more competitive, and the private tutoring market has been quick to take advantage of this situation." This has been found in many contexts, including Central Asian countries (Hajar & Abenova, 2021; Silova, 2009), Hong Kong (Yung, 2021), the Philippines (Daway-Ducanes et al., 2022), and Russia (Loyalka & Zakharov, 2016; Prakhov & Yudkevich, 2020). For example, Loyalka and Zakharov (2016) reported that more than half of the participants sought PT in Mathematics and the Russian language, mainly because these two subjects were a requirement for university admissions. They also found that PT largely benefited already high-achieving students from a better-off socioeconomic class. These students utilized PT in their attempts to be admitted and to enroll in highly selective universities.

In Central Asia, the PT market has expanded, primarily because of the central testing system, schoolteachers' low official salaries, and growing competition for access to elite higher education institutions (Carlsen, 2020). Hajar

and Abenova (2021), one of the few empirical studies on PT in Kazakhstan, explored fee-paying PT that first-year Kazakhstani university students attended in the last two years, including their preparation for the high-stakes entrance examinations to be admitted to a highly selective university in Kazakhstan. This study found that almost 60% of the participants (86 out of 144) had received PT, indicating that three out of five students had secured their university place after receiving PT. 50% of the participants took PT sessions in groups, and only 5 out of 86 participants (7%) had attended online PT, probably because the data were collected in 2018 and 2019 (before the global outbreak of COVID-19 in 2020). The authors also reported that the participants' main reason for enrolling in PT was to be coached for university examinations, followed by improving their examination grades in school exams and understanding the material better.

Similarly, Kalikova and Rakhimzhanova (2009) conducted a quantitative study in Kazakhstan on the nature and effectiveness of fee-charging PT as experienced by 1004 first-year Kazakhstani university students from six mainstream universities in their last year of secondary schooling. The study found that 60% of students had engaged in different forms of PT to receive adequate training on university entrance examinations (42%). It also reported that the most popular PT subjects were Mathematics (67%), History (36%), Physics (36%), and the Kazakh language and literature (17%), mainly because these subjects are compulsory subjects of the UNT. The UNT was introduced in 2004, is administered by the National Testing Centre in the Kazakh and Russian languages, and is designed for students who would like to continue their studies in higher education institutions. A total of 45% of the participants in Kalikova and Rakhimzhanova's (2009) study received individual face-to-face tutoring, while 55% had in-person PT in groups.

Although the above empirical studies offer some understanding of the reasons for the prevalence of face-to-face PT in Kazakhstan and its influence on access to university, there is little information on students' perspectives and critical reflections on their PT experiences—especially online PT—as well as the nature of PT during the COVID-19 lockdown. This paper adds to this knowledge by uncovering the nature of PT and its perceived effectiveness by a group of first-year Kazakhstani university students reflecting on their PT experience in the previous 12 months, i.e., during the COVID-19 pandemic, using both quantitative and qualitative data. In this study, the participants came from two highly selective universities in Almaty, the former capital of Kazakhstan.

Study details

Aims

This mixed-methods research seeks to understand the nature of PT during COVID-19 and its role in helping students gain entrance to two highly selective universities in Kazakhstan based on the perceptions and experiences of first-year university students. It was inspired by Bray's (2021, p. 5) recognition of the importance of understanding fee-charging PT from "the lenses of physical, political, economic, cultural, and pedagogical geography." Student descriptions of their PT experiences represent the core of the current research, the aim of which is to answer the following research questions:

1. What are the quantities, modes, costs, and subjects of the PT received by the sample of participants in the previous 12 months?
2. How do the participants evaluate their PT experience during the COVID-19 pandemic?

Background and sampling

The data were collected from first-year undergraduate students in the first semester of their undergraduate studies at two highly selective universities in Almaty, the former capital of Kazakhstan. These students were chosen because their memories of their PT experiences at secondary school were comparatively fresh, and they were most likely not inhibited about reflecting on them (Silova et al., 2006). The first university (University A) was established in 2009, and its main programs of study are Information Systems, Computer Science, and Software Engineering, along with management and IT Finance and Electronic Journalism. The other university (University 2) was established in 1996 and has four faculties: Engineering and Natural Sciences, Education and Humanities, Law and Social Science, and Business. The participants in this study were from the Engineering Department because they were more likely to have used PT more than students from the other departments owing to the high level of competition for admission to the Engineering program. All participants were Kazakh, and none were known to the researchers before the start of data collection. The UNT is the main requirement for admission to the two universities in which the current research participants had competed to enroll.

Data collection and analysis

Due to the spread of the COVID-19 pandemic, the data were collected online between September 15 and December 19, 2021 during the period of the total or partial closure of schools and universities in Kazakhstan. The study employed two research methods: a close-ended online survey and individual online interviews. The data were produced in Russian or Kazakh to enable the participants to articulate their perceptions clearly and confidently. The survey sought to elicit the scope, frequency, cost, and modes of PT and the subject choices before the students' admission at the two highly selective universities. In September 2021, the administrative staff at the two universities sent emails to the first-year university students in the Engineering Department with a link to the questionnaire designed in Qualtrics. The questionnaire remained online for just over one month to reach an adequate completion rate for analysis. A total of 952 students over 18 (66% male and 34% female) completed the survey questionnaire. The first part of the questionnaire provided informed consent.

The final item of the questionnaire asked respondents to provide their email addresses if they also agreed to participate in individual online semi-structured interviews. Forty-one students expressed their initial acceptance of participating in follow-up interviews. An email was sent to these participants, including the objectives of the research study, their rights, and the expected duration of the interview and the aspects that it intended to focus on. Only 22 students (12 from University A and ten from University B) responded to this email. According to the participants' preferences, Zoom was used to conduct the interviews. At the beginning of each interview, the researchers informed the interviewees that their participation was completely voluntary and that they could withdraw from the study without repercussions. The interviews allowed the researchers to gain significant insights into the students' experiences, perceptions, and feelings about fee-paying tutoring during ERT&L. Each interviewee was interviewed twice so that the researchers could check the responses from the first interview and provide interviewees with sufficient time to illustrate their PT experiences. Interviews 1 and 2 each lasted around 45 min and were digitally recorded to be transcribed (see Appendix A for sample interview questions).

The multiple linear regression method was used to analyze the quantitative data. Among the respondents, only those who received any type of PT within the past 12 months were included in the regression analyses ($n = 750$ out of 952). The dichotomous variables were recoded with dummy coding (e.g., gender [males = 0, females = 1], medium of instruction [Kazakh + Russian = 0; English = 1], and mode of delivery [face-to-face = 0, online = 1]). Outliers were eliminated, and the required normalization procedures were followed for several variables. The data were examined according to the assumptions of regression analysis, such as linearity, multivariate normality, homoscedasticity, multicollinearity, and autocorrelation (Flatt & Jacobs, 2019). The results showed linear relationships between the variables, the data met multivariate normality and homoscedasticity assumptions, and there was no multicollinearity or autocorrelation. In each step of the multiple regression analyses, a different block of independent variables was entered into the equation using the stepwise option because there were many independent variables in each block; seeing the actual significance might have confused the readers (Agostinelli, 2002). As a result of the stepwise regression, only the significant predictors were left, and the final models were reported in the results section.

Clarke and Braun's (2013) six phases of thematic analysis were adopted to organize the students' PT experiences during ERT&L into themes. The researchers familiarized themselves with the interview data by listening to the recorded interviews and reading the interview transcripts repeatedly after they were translated into English. The data were then grouped to produce the initial codes, particularly for the responses to the second research question. For this purpose, the researchers adopted a selective reading approach, highlighting the utterances they found interesting and relevant to the objectives of this study. After that, codes that shared features were gathered to produce the tentative themes, which were checked across the entire set before labels were formulated that captured the core of each theme. Two central themes were identified: "motives for having PT over the last 12 months" and "effectiveness of PT during ERT&L." Once all the themes had been identified, the researchers provided extracts under each theme to illustrate the participants' explanations of their PT experiences, which will be described in the next section.

Results and discussion

The scope, mode of delivery, and frequency of PT

The quantitative data revealed that 81% (750 out of 952) of the study participants had engaged in PT. This result indicates the expansion of the PT market expanded during the COVID-19 pandemic, which, according to other PT studies on Grade 11 students in Kazakhstan before the COVID-19 outbreak (e.g., Hajar & Abenova, 2021; Kalikova & Rakhimzhanova, 2009), was just under 60%. This point was also reflected in the comments of some interviewees, as shown in the following interview extracts:

Extract 1

I believe private tutoring—especially online—will expand in Kazakhstan and elsewhere after the end of the pandemic. As most students have tried online tutoring in particular, they have recognized that it was often useful…You can study at home. Online education, in general, is convenient. (*Student 5, University A*)

Extract 2

I am certain that online tutoring will increase because during the quarantine, students and their families recognized that studying without leaving home is convenient and useful. It also saves time and money. (*Student 2, University B*)

Regarding the PT delivery modes, 69% of participants attended group tutoring, 52% attended in-person tutoring sessions, and 19% were tutored online (see Fig. 1). This finding concurs with that of Silova (2009), who reported that over 40% of students in Central Asia received group tutoring, mainly because it was often cheaper than one-to-one PT for many families, and group tutoring tended to be profitable for PT providers.

The data analysis also shows that 204 participants (18%) participated in online PT, with 11% of students studying individually and 9% studying in groups, indicating an increase in the percentage of students seeking online PT during the global pandemic. Zhang (2021, p. 49) points out that "COVID-19 increased the power of technology and capital in digital learning, and online tutoring greatly expanded the shadow space." Similarly, Rowe (2022) notes that online tutoring expanded following the COVID-19 outbreak in 2020, leading to the rise of "Zutors–Zoom tutors." Kalikova and Rakhimzhanova's (2009) findings make no mention of any online tutoring that their participants in Kazakhstan might have received then. In Hajar and Abenova's (2021) study, only five participants (7%) attended online tutoring, probably because their data were collected before the COVID-19 pandemic when distance education was widely adopted. Notably, the present study found that most students received face-to-face tutoring, despite this type of tutoring being considered a health risk during the COVID-19 pandemic in terms of disease transmission. Elsewhere, Hajar et al. (2022) point out that Kazakhstan has adopted a *laissez-faire* attitude to regulating PT; hence education in informal settings is considered outside the government's purview.

The stepwise regression shows that the money spent on PT, lecture-style face-to-face tutoring, the time of year the students received PT (holiday period), and the subjects studied by participants (UNT) were significant predictors of the frequency of students' PT classes (Table 1). The four variables with the highest correlations with the dependent variable remained in the model. The ANOVA test result was significant ($F = 24.989$, $p < 0.001$), and the model explains 33.3% of the variance in the dependent variable ($R^2 = 0.333$). Specifically, the participants received more PT when they spent more money on PT services ($\beta = 0.203$, $p < 0.001$). Among the various modalities of PT, lecture-style face-to-face tutoring (with a group of more than ten students) was the most frequent type ($\beta = 0.169$, $p < 0.001$). Students who preferred to take PT during their holidays received PT less frequently ($\beta = -0.099$, $p < 0.05$). Finally, the students who received PT in preparation for the UNT tended to receive more frequent PT sessions ($\beta = -0.093$, $p < 0.05$). That is, the participants who took more PT sessions were those who used it as an enrichment strategy for achieving high scores in significant examinations and securing an offer of admission at one of the highly selective universities.

This finding, related to the tangible gains of PT in relation to measurable educational outcomes for students, aligns with the findings of most previous studies on PT conducted in Kazakhstan (Hajar et al., 2022; Kalikova & Rakhimzhanova, 2009) and in other parts of the world, including Hong Kong (Yung, 2021), Russia (Prakhov & Yudkevich, 2020),

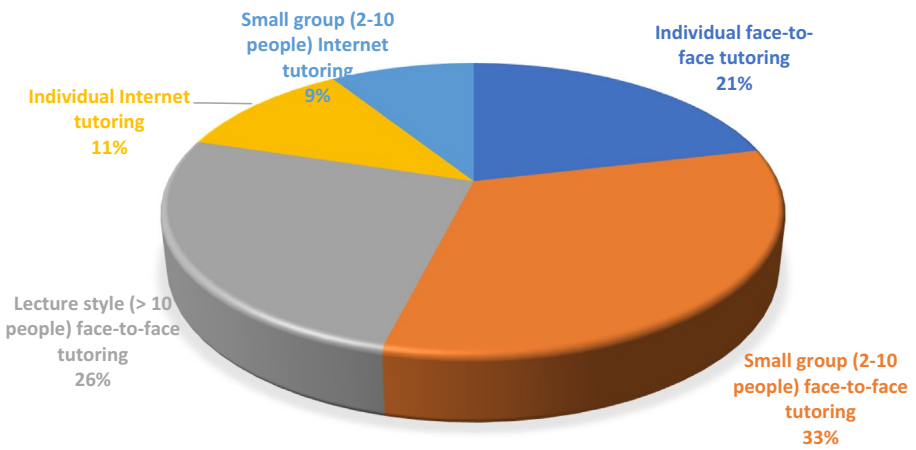

Fig. 1 Modes of PT delivery

Table 1 Results of stepwise regression analyses of students' frequency of having private tutoring ($N = 750$)

Independent variables	Dependent variable		
	Frequency of private tutoring within the previous 12 months		
	β	t	p
Constant	–	17.623	0.000
Amount of money spent on PT	0.203	4.374	0.000
Lecture-style (> 10 people) face-to-face tutoring	0.169	3.672	0.000
The period of the year they received PT: holiday period	−0.099	−2.140	0.033
Subjects studied by individual participants: (Unified National Testing Exam)	0.093	2.036	0.042
$F_{\text{model}} = 24.989$			
$P_{\text{model}} = 0.000$			
$R^2_{\text{model}} = 0.333$			

Sri Lanka (Pallegedara & Kumara, 2020), the Czech Republic (Šťastný, 2021) and the UK (Ireson & Rushforth, 2011; Pearce et al., 2017). According to Bray and Kwo (2014, p. ix), "tutoring tends to reinforce only one dimension of education: learning to know" of the four pillars proposed in UNESCO's Delors Report (1996), i.e., learning to be, learning to do, and learning to live together. Bray and Kwo (2014) attribute this to the overemphasis on high-stakes entrance examinations as the primary aim of PT.

The costs of PT

The findings also revealed that 55% of the respondents who participated in PT reported their parents spent 21,000–40,000 tenge (US$ 47–90) on PT sessions each month, while 19% spent 20,000 tenge or less (US$45) (see Fig. 2). Therefore, PT represents a considerable financial burden for parents. Kalikova and Rakhimzhanova's (2009) study found the average amount spent by participants on PT in all subjects was approximately US$390 per year; thus, the total cost of PT in Kazakhstan was likely to exceed US$20 million.

The results of stepwise regression also showed that only the following independent variables were significant predictors of the money spent on PT (see Table 2): frequency of PT within the previous 12 months; individual face-to-face tutoring; individual online tutoring; time of year PT used (holiday times); the number of family members receiving PT; and PT as a financial burden. The variables with the highest correlations with the dependent variable were retained in the model. The ANOVA test of this model was significant ($F = 24.989$, $p < 0.001$) and the seven independent variables explain 37.3% of the variance in the dependent variable ($R^2 = 0.373$). The frequency of PT participation over the previous 12 months significantly increased the money spent on PT over the same period ($\beta = 0.236$, $p < 0.001$). Of the modes of PT, both individual face-to-face tutoring ($\beta = 0.140$, $p < 0.01$) and individual online tutoring ($\beta = 0.119$, $p < 0.01$) significantly increased the amount of money spent on PT services by individuals.

Students who preferred to receive PT during their vacation spent less money on PT services ($\beta = -0.107$, $p < 0.05$) than those who received tutoring during the term. This may be because demand for PT often intensifies when students approach important examinations and then abruptly drops after they have been taken for some time (Bray & Hajar, 2023). Therefore, some tutors tend to advertise their offerings, especially during less intensive academic periods, in the form of discounts and packaging, according to Kobakhidze (2018). In her qualitative study with 68 Georgian teachers, Kobakhidze (2018, p. 149) found that some interviewees

Fig. 2 Costs of PT

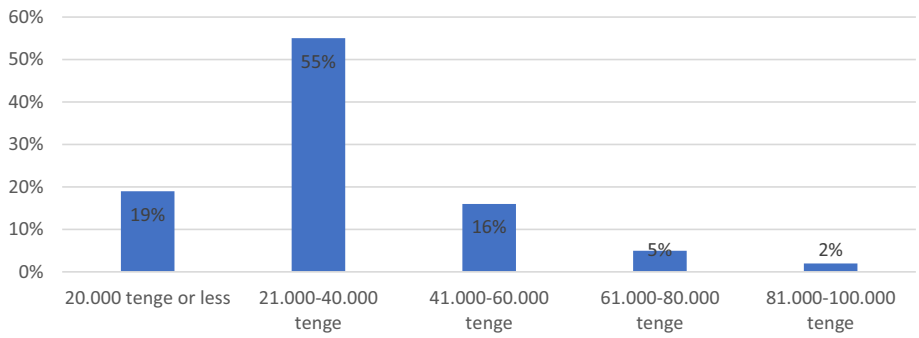

Table 2 Results of the stepwise regression analyses of money spent on PT ($N=750$)

Independent variables	Dependent variable		
	Amount of money spent on PT		
	β	t	p
Constant	–	3.715	0.000
Frequency of receiving private tutoring within the last 12 months	0.236	5.214	0.000
Individual face-to-face tutoring	0.140	3.120	0.002
Individual internet tutoring	0.119	2.657	0.008
Time of the year they have received PT: holiday period	−0.107	−2.350	0.019
Number of family members receiving PT	0.097	2.155	0.032
PT as a financial burden	0.090	2.017	0.044
$F_{\text{model}}=24.989$			
$P_{\text{model}}=0.000$			
$R^2_{\text{model}}=0.373$			

Table 3 Numerical data of reasons for having PT

Reasons	Frequency	Percentage (%)
Preparing for the university entrance exam	609	55
To understand the subject better	205	21
Formal school online classes were badly affected by the COVID-19 outbreak	119	11
Other reasons	84	8
My teachers recommended it	24	2
Many of my classmates were doing it	30	2
My parents chose it for me	14	1

adopted "a buy one, get one free marketing strategy" by granting free tutoring to one child if the family sent more than one child to the same tutor or tutorial center. Bonus tutoring was another strategy used by some tutors in Kobakhidze's (2018, p. 149) study, giving one or more additional sessions as "a gift" to a tutee. In the current study, the students who perceived PT as a financial burden were those who spent more on PT services ($\beta=0.090$, $p<0.05$). Additionally, the number of family members receiving PT services significantly increased the amount of money spent on PT ($\beta=0.097$, $p<0.05$).

Motives for receiving fee-charging PT

Table 3 provides the results of the frequency of the motives for receiving PT. The respondents' main reason was to receive training on the university entrance examinations (55%). The data also revealed that 21% of the respondents sought to understand their subjects better, and 11% of the respondents had PT to obtain additional support during the COVID-19 pandemic. Other reasons, such as teachers' and classmates' recommendations and parental pressure, had no substantial impact on why respondents chose to receive PT.

The qualitative analysis also shows that the overarching reason for having PT for all the interviewees was to prepare for the high-stakes entrance examination to secure a place at their preferred university. Extracts 3–5 elucidate this idea:

Extract 3

I took tutoring in Physics and Mathematics to prepare for the UNT test and IELTS as it is a precondition for attending Nazarbayev University. I wouldn't have had a grant at my current university without tutoring support. Tutoring made me more responsible. (*Student 3, University A*)

Extract 4

The UNT is an important and difficult test. Therefore, I received tutoring to be trained on this test. Even with good knowledge of subjects such as History, students still need strategies to help them answer exam questions…The tutor explained the topic very well and provided us with related tasks to complete. They were taken from the UNT database. (*Student 1, University B*)

Extract 5

I attended private tutoring in Physics, Mathematics, and English to get a high score in the UNT and win a grant to one of the elite universities in Kazakhstan. (*Student 12, University A*)

Thus, the interviewees mainly used PT for what Silova (2009) described as an enrichment strategy, meaning they committed to tutoring to obtain educational advancement opportunities and win a state grant at prestigious universities, which require high results in

the entrance examinations. Chankseliani et al., (2020, p. 996) remarked that the centralized examination systems in Kazakhstan "determine who enters university, how entrants are distributed to higher education institutions, and how the state grant for tuition is allocated." This impacts both social and economic inequality because affluent families can afford more and better-quality PT for their children than families of a lower socioeconomic level. Some interviewees also claimed that the COVID-19 pandemic made PT a necessity for understanding academic subjects sufficiently to pass the UNT test, especially since their regular schools were late subscribers to online platforms such as Zoom and Microsoft Teams, and their teachers did not receive proper training in the use of online platforms (see Hajar & Manan, 2022). The following extract illustrates this point:

Extract 6

> In Grade 11, most lessons were delivered online at school. Our teachers weren't quite familiar with the use of online platforms. Everything was such a mess. Therefore, all the students realized that they had to have private tutoring, as this was the only way to prepare well for the UNT. (*Student 9, University B*)

Similar to the quantitative results, all the interviewees indicated that their parents and classmates played a secondary role in their decision to engage in PT.

Effectiveness of PT

The results of the stepwise regression revealed that the time of year the participants received PT (at the end of the school year), the frequency of participating in PT within the previous 12 months, and lecture-style face-to-face tutoring were the only significant predictors of students' examination grades (Table 4). The ANOVA test was significant ($F = 15.235$, $p < 0.001$), and these three predictors explain 24.4% of the variance in the dependent variable ($R^2 = 0.244$). Having received PT at the end of the school year seems to have negatively influenced students' examination grades ($\beta = -0.155$, $p < 0.001$). This might be because PT as preparation for the high-stakes entrance examination took place for a limited time. Reviewing the PT literature, Guill et al. (2020, p. 283) concluded that "empirical findings on the effectiveness of private tutoring are rather contradictory." Although Berberoğlu and Tansel, (2014) found a positive impact of PT in some subjects, other studies reported minimal effects or none (e.g., Park et al., 2016; Ryu & Kang, 2013). This is because the effectiveness of PT can be associated with diverse factors, such as the quality of tutoring, students' motivation and the duration and frequency of engaging in PT. The frequency of PT sessions within the previous 12 months ($\beta = 0.153$, $p < 0.001$) and receiving lecture-style face-to-face tutoring instead of the other types of PT services ($\beta = 0.092$, $p < 0.05$) significantly predicted higher examination grades in this research.

The quantitative analysis also showed that the frequency of receiving PT within the previous 12 months and the subjects studied by participants (UNT and Mathematics) were significant predictors of student perceptions of their

Table 5 Results of the stepwise regression analyses of readiness for examinations ($N = 750$)

Independent variables	Dependent variable		
	Readiness for examinations		
	β	t	p
Constant	–	18.589	0.000
Frequency of receiving private tutoring within the previous 12 months	0.130	3.028	0.003
Subjects studied by participants: UNT	0.096	2.244	0.025
Subjects studied by participants: Mathematics	0.090	2.114	0.035
$F_{\text{model}} = 12.534$			
$P_{\text{model}} = 0.000$			
$R^2_{\text{model}} = 0.199$			

Table 4 Results of the stepwise regression analyses of examination grades ($N = 750$)

Independent variables	Dependent variable		
	Examination grades		
	β	t	p
Constant	–	15.243	0.000
Time of year they received PT: end of the school year	−0.155	−3.588	0.000
Frequency of private tutoring sessions within the previous 12 months	0.153	3.560	0.000
Lecture-style face-to-face tutoring (more than ten people)	0.092	2.139	0.033
$F_{\text{model}} = 15.235$			
$P_{\text{model}} = 0.000$			
$R^2_{\text{model}} = 0.244$			

preparedness for taking their examinations (Table 5). The ANOVA test was significant ($F = 12.534$, $p < 0.001$), and these three independent variables explain 19.9% of the variance in the dependent variable ($R^2 = 0.199$). The frequency of receiving PT within the previous 12 months ($\beta = 0.130$, $p < 0.01$) and having PT in UNT ($\beta = 0.096$, $p < 0.05$) and Mathematics ($\beta = 0.090$, $p < 0.05$) increased students' positive perceptions of their readiness to take the university entrance examinations. The outcomes of investment in PT can be problematic if seen in terms of expanding existing educational and social inequalities, especially since some students cannot afford PT to prepare them for the entrance examinations, but PT could be beneficial in contributing to the education market as a whole (see Entrich, 2017).

The results of stepwise regression also show that additional help received at home from their mothers, the frequency of having PT sessions within the previous 12 months, lecture-style internet tutoring (with more than ten people), and the subjects studied by participants (IELTS) were significant predictors of students' confidence in their academic performance at school (Table 6). The ANOVA test was significant ($F = 7.256$, $p < 0.001$), and these four independent variables explain 20.3% of the variance in the dependent variable ($R^2 = 0.203$). Additional help received at home from their mothers ($\beta = 0.121$, $p < 0.01$), the frequency of having PT within the previous 12 months ($\beta = 0.112$, $p < 0.01$), and the PT they received to prepare for IELTS ($\beta = 0.084$, $p < 0.05$) account for students being more confident in their academic performance at school. Although the tangible gains of PT, particularly practice and familiarization with the university entrance examinations, constituted the overriding motive for participating in PT, some intangible benefits from receiving PT were associated with raising the participants' self-awareness and interest in learning as well as increasing their self-confidence in their academic abilities (see Hajar, 2018, 2020). Also, this study showed that these intangible gains of PT could be supported through ongoing cooperation between social agents, namely, parents and tutors. However, lecture-style internet tutoring (with more than ten students) predicts lower levels of student confidence in their academic performance at school ($\beta = 0.095$, $p < 0.05$). This finding might be partly due to the difficulty of receiving the individual attention the participants wanted in this form of tutoring.

The interview data showed that four received physical PT, five online PT and 13 had both options. Despite face-to-face PT being a health risk during the pandemic, several participants participated in in-person PT services. As online tutoring attendance has expanded, Table 7 outlines the interviewees' reported advantages and disadvantages of online PT during ERT&L. Almost all the interviewees mentioned that one of the benefits of online PT was that it was more convenient and that it represented a savings of time and money (see Table 7). Four interviewees also reported that attending online tutoring sessions enabled them to save energy because their tutors demonstrated the teaching material on screen, so the participants did not need to copy everything down as they had previously. Many interviewees highlighted the usefulness of recording the tutorial sessions, which allowed them to revisit the taught material several times and improve their comprehension (see Table 7).

Additionally, almost all the participants regarded PT sessions—including online tutoring—as a better environment for preparing for the UNT and for developing their knowledge and engaging in learning rather than being restricted to online classes taught by their regular teachers. They ascribed this mainly to the personalized attention they received from their private tutors, especially those who took individual or small-group tutoring. Also, the participants indicated that most tutors demonstrated increasing agency by incorporating more interactive activities on Zoom— conferencing sessions or face-to-face—to help students have more UNT practice and increase their motivation (see Table 7). This finding seems to align with the point by Bray and Hajar (2023) about the need to maintain their incomes, and being

Table 6 Results of stepwise regression analyses of confidence in academic performance at school ($N = 750$)

Independent variables	Dependent variable		
	Confidence in academic performance at school		
	β	t	p
Constant	–	16.921	0.000
Additional help received at home: mother	0.121	2.851	0.005
Frequency of taking private tutoring within the last 12 months	0.112	2.624	0.009
Lecture-style internet tutoring (more than 10 people)	− 0.090	− 2.105	0.036
The form of PT they have received: IELTS	0.084	1.978	0.048
$F_{\text{model}} = 7.256$			
$P_{\text{model}} = 0.000$			
$R^2_{\text{model}} = 0.203$			

Table 7 Evaluation of online tutoring during ERT&L

Advantages of online PT during ERT&L	Disadvantages of online PT during ERT&L
More convenient I attended both online and offline tutoring during the COVID-19. I preferred online as I saved time and did not need to write down what was on the board. We could revisit the material easily as the sessions were recorded…We carried out more activities in online tutoring sessions. (*Student 11, University A*) The tutors prepared presentations and video tutorials in advance. The sessions were efficient. Online tutoring gave us flexibility, so I could attend all the sessions even if I was not feeling well…It enabled me to review the recorded videos if I did not understand something or if the tutor spoke too fast. (*Student 9, University A*)	*Lack of individual attention in online group tutoring* I had online tutoring in a tutorial center for three months. It was not a positive experience because everything there was like at school. There were more than 15 students, and each demanded attention. The online sessions weren't organized. Whenever a new student joined, the tutor repeated the material, which was a waste of time. (*Student 3, University A*)
It is safer Offline tutoring was unsafe due to the increasing number of positive cases of COVID-19 in Almaty at that time. Also, I was under 18 years old. Therefore, my parents encouraged me to register for online tutorial courses. (*Student 12, University A*) I attended online tutoring because it was safer. I also wanted to save the money previously spent on transportation. (*Student 4, University B*)	*Lack of commitment to study* In online tutoring, when I did not understand something, I could not discuss it with my peers or even get a clearer explanation from my tutor on some level. In offline sessions, I was more productive and motivated. (*Student 8, University B*) I preferred offline tutoring because the explanation was clearer. The tutor called us to the blackboard to complete tasks, and she checked our homework … With online tutoring, we sat at home and got tired. (*Student 6, University A*)
Tutors were more prepared for online teaching than schoolteachers Although everyone was skeptical about the quality of online tutoring, I found that my tutors were better prepared for online education than schoolteachers…some of my schoolteachers had difficulty using Microsoft Word and PowerPoint and mainly used WhatsApp to deliver lessons…My tutors at the tutorial center presented material properly by providing us with games, clear explanations and many examples of the UNT… online tutoring became lifesaver for students during the COVID-19 pandemic. (*Student 10, University B*)	*Unstable internet connections* Sometimes my internet is slow. Then the router needs to be restarted. While I reboot, I miss some parts of the tutorial session and could miss some information if the tutor forgot to record the session (*Student 5, University A*) The problem with online tutoring was that the power was sometimes turned off… At times, the internet signal was poor. (*Student 1, University B*)

relatively unhampered by bureaucratic traditions and rules, meant private tutors generally shifted to online work more rapidly than schools. When schools finally caught up with this trend, families became more accustomed to online activities. Zhang and Bray (2020, p. 330) point out that "the relative readiness and fierce battle (for consumers) of online tutoring companies brought tutoring out of the shadow" during the COVID-19 pandemic because schools were less capable of meeting the needs of students and their parents than PT companies.

Most interviewees had a positive attitude toward receiving PT, and nine found no drawbacks to PT or to the expansion of online tutoring during the COVID-19 pandemic. However, the other 13 interviewees commented on some negative aspects of online tutoring. For instance, the lack of individual attention in group online tutoring (with more than ten students) and unstable internet connections sometimes made them miss some concepts covered by their tutors if the online tutorial sessions were not recorded (see Table 7). Four interviewees reported that face-to-face tutoring was significantly more useful to them because it made them more committed to learning and sharing their thoughts with their peers and tutors (see Table 7).

Conclusion and implications

The mixed-methods study presented here is the first to explore in-depth a group of first-year undergraduate students' perceptions and reflections on their PT participation in Kazakhstan over the previous 12 months. The findings show that the scale of PT expanded during the COVID-19 pandemic, with 81% of the participants having experienced PT over the previous 12 months. The main objective of engaging in PT was to prepare for the university entrance examination and gain a state grant to attend one of the highly selective universities in Kazakhstan. In Kazakhstan, as in many countries, state tuition grants are very competitive, and only about a quarter of all students enrolling are awarded a full or partial grant (OECD, 2017). The number of grants in most countries changes annually. In 2018, Kazakhstan's government allocated 30,000 state grants (NTC, 2018). A 2015 survey of 1000 young people in 16 Kazakhstani cities reported that 42% did not pursue higher education because they could not afford the tuition fees, which, in public institutions, range from 1166 USD to 1673 USD and are roughly three times more expensive in private universities (Chankseliani et al., 2020).

There is evidence that the lack of parental follow-up, schoolteachers' limited preparation on how to teach online during the COVID-19 pandemic and insufficient support in regular schools to help students pass the UNT led many families to hire a private tutor for their children since this central examination affects progression to tertiary education. As Bray (2014, p. 20) pointed out, "investment in private tutoring may give a feeling that parents are doing what they can for their children at crucial stages in their children's lives." The study also found that 55% of the respondents spent 21,000–40,000 tenge (US$ 47–90) on PT sessions each month, which was more affordable than enrolling in some highly selective Kazakhstani universities, which charge high tuition fees. The participants, competing to obtain state tuition grants, believed that investing in PT would enable them to achieve their ideal objective of professional and academic achievement, namely, employment or further studies. None of the interviewees indicated that PT financially burdened them or their parents. Rather, they regarded PT as "a real salvation for students during the COVID-19 pandemic" (Student 10, Table 7).

Nevertheless, one of the major shortcomings associated with PT is that it gives participants an unfair advantage in competition. As Chankseliani et al., (2020, p. 1005) aptly point out, the entire system of the UNT in Kazakhstan "filters the economically more privileged into the HE system, favoring richer families who do better on the UNT as they are likely to attend better schools and can afford private tuition." To achieve equal opportunities of access to prestigious universities, students need to become familiar with high-stakes entrance examinations through adequate practice in formal settings (see Hajar & Abenova, 2021). Feldhoff (2017, p. 25) indicated that the Japanese government decided to make use of PT to ensure more equal out-of-school learning opportunities for all students by funding the Community Tutoring School for the Future project (*Chiiki Mirai Juku*) in 2015. This is a community-based learning project for secondary school students who need learning support to prepare them for higher education. Community collaboration brings together families, schools, and qualified tutors, such as university students and retired teachers. Moreover, policies that increase the number of students admitted to prestigious universities and develop the quality of public institutions need to be investigated.

This study also found that some participants received both face-to-face and online PT during the COVID-19 pandemic. As the policymakers in Kazakhstan have adopted a largely *laissez-faire* stance regarding the PT market, in-person provision of PT during the COVID-19 period was not banned, as it was in other countries. For instance, in the United Arab Emirates, tutors providing face-to-face PT were fined AED30,000 (US$8168), and host venues were also charged AED20,000 (US$5445) (Bray & Hajar, 2023). Policymakers in Kazakhstan and elsewhere need to enforce practical guidelines and policies to regulate PT markets in general, not just during periods of crisis, such as COVID-19, by introducing codes of practice. In China, tutorial centers are not allowed to cover the official school curriculum in advance to protect schools and take the pressure off students from disadvantaged backgrounds who cannot afford PT to compete with their classmates (Zhang & Bray, 2020). Elsewhere, Bray and Hajar (2023) indicate that licensed tutorial centers in Qatar have certain obligations such as displaying prices in a visible location at their headquarters, only employing tutors with higher qualifications in their field of specialization, and maintaining data on courses and other services. This study, therefore, is a call to researchers in the field of shadow education to carry out additional research on the nature and effectiveness of PT during and after the COVID-19 pandemic, which has led to the expansion of PT, especially online, which is likely to continue.

Appendix A

Selected interview questions

Nature of private tutoring:

1. Have you received private tutoring in the last 12 months? In what subjects?
2. Who suggested it?
3. Do you attend individual or small-group tutoring? Are your tutoring sessions face-to-face or online? Which one is more useful? Why?
4. Which online platforms were you using? Who helps/helped you with this?
5. Are online classes different to learning in class? Why and how?
6. How many hours per week did you attend private classes/lessons? How much was the cost?
7. What did you learn in private tutoring? Is it different to learning in class? Why and how?

Evaluation of private tutoring:

1. Why did you take private tutoring?
2. Was it useful? Why?
3. As learning became online due to the COVID-19 virus, do you think this made you and your peers attend private tutoring?
4. Do your parents know about your academic progress? What do they do? What sorts of support do they give to you?

5. What do you think about the future of the private tutoring market in Kazakhstan? Is it going to expand or decrease? Why do you think so?
6. What about the disadvantages of private tutoring?
7. What do you feel about the impact of tutoring on the wider society?

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Declarations

Conflict of interest No potential conflict of interest was reported by the authors.

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