Distance Education and the COVID-19 Pandemic:
Psychological and Motivational Aspects

Zhuldyz Abdimusa, A. Kuatbekov Peoples Friendship University, Kazakhstan*

Nailya Ismailova, Yelabuga Institute, Kazan Federal University, Russia

Elena Shchedrina, Russian State Agricultural University, Moscow Agricultural Academy Named After K. A. Timiryazev, Russia

Svetlana Kulanina, Kazan Federal University, Russia

ABSTRACT

The sudden change in the educational process paradigm with the transition to predominantly distance learning was due to quarantine restrictions as a result of the COVID-19 pandemic. Therefore, the purpose of the research was to study the psychological motivational aspects of the transition to predominantly distance learning. The study involved 226 graduate students and 223 undergraduate students. The research revealed that without direct contact and the implementation of real practical tasks during distance learning, students lose interest in the subject under study. The conclusion is made about the uncertainty of life values among undergraduate students, which reflects their psychological immaturity, and the presence of intrapersonal contradictions may be associated with a dependent position and a struggle of motives.

KEYWORDS

COVID-19, Distance Learning, Emotional State, Graduate, Motivation, Psychodiagnostics, Undergraduate, Values

INTRODUCTION

The development of digital technologies could not but affect the education sector, providing new opportunities for distance learning, using 3D images as visual aids, making educational literature more accessible through online libraries. However, the introduction of distance education took place gradually and unevenly, and training in specialties requiring direct communication with people (for example, in medicine) continued to be carried out in the traditional way, in university classrooms and organizations (internship). The sudden change in the educational process paradigm with the transition to predominantly distance learning was due to quarantine restrictions as a result of the COVID-19 pandemic. Despite the skepticism of conservative educators, students, and the public, curricula have been hastily adapted for use in an online format, and special distance learning programs have been introduced in all faculties and specialties. It turned out that there are many positive aspects in online learning, such as accessibility, psychological comfort, and convenient time management, but serious problems have also emerged, such as monitoring student attendance and the assessment process. In

*Corresponding Author

addition, during classes in a classroom, students communicate with each other, form common interests, and create a learning environment in which complex topics are discussed and mutual assistance is provided. In the online format, student groups are also created, however, communication in them takes on a different character, it is more superficial and concise - there is not so much the formation of groups according to new rules, but the individualization of the learning process. On the one hand, this contributes to a more purposeful interaction between a student and a teacher. On the other hand, it is more difficult for students to form professional communication skills and compare performance in a group, which can indirectly affect students' motivation to learn and complicate career guidance work, especially in the freshman year. Therefore, the study of the transition to distance learning due to the COVID-19 pandemic is an urgent topic that can be studied from different perspectives and, in the future, may lead to the emergence of new, innovative models of the educational process. Thus, ***the research purpose*** is to study the psychological motivational aspects of the transition to predominantly distance learning. ***Research objectives***: 1) to analyze the scientific literature on distance learning in relation to the COVID-19 pandemic, 2) to determine the level of motivation of students during distance learning, 3) to study the impact of distance learning on students' motivation to study. ***The research hypothesis*** is the assumption that the motivational aspect influences the effectiveness of students' distance learning.

LITERATURE REVIEW

Currently, the priority concept of education is lifelong learning. In addition, there are increased requirements for the quality of learning, which should be aimed at the development of emotional intelligence, critical thinking, creativity, and metacognitive skills. Accordingly, an important task in the context of lifelong learning is to ensure the quality of e-learning programs (Mystakidis et al., 2019). Lifelong learning involves lifelong learning, which is especially popular in the age of digitalization using modern technologies (Cendon, 2018). Modern education actively uses social media and online educational platforms that require students and teachers to develop professional competencies, including technical ones that enable the effective use of modern technologies in the educational process (Kind & Evans, 2015). COVID-19 has led to a transformation of the way of life of humankind on a global scale and an increase in the role of artificial intelligence in all spheres of activity (Ciotti et al., 2020), including in the educational process, suddenly shifting classes at universities around the world from campuses to the virtual space (Day et al., 2021). Activation of distance learning occurs during the pandemic, when there was a need to move to a distance format with the help of modern innovative technologies (Daniel, 2020). On the whole, the new distance learning experience has been very satisfactory and has contributed to the technological improvement of the educational process. The advantages of distance learning are the activation of digital technologies, increasing student motivation to learn through the use of new methodological approaches and interactive technologies that allow students to visualize theoretical material, use media resources, video and audio recordings, etc. (Sadeghi, 2019). At the same time, the transition to distance learning is seen as a stressful factor, as the problems of inequality related to the lack of suitable equipment, quality programs, or affordable Internet have intensified (Day et al., 2021). A separate issue is the lack of field research and access to laboratories, which makes it difficult for students to develop practical experience and can lead to a reduction in training in a number of specialties (Day, et al., 2021). The provision and use of online and e-learning systems are seen as major challenges for many universities during the COVID-19 pandemic (Almaiah et al., 2020). The positive experience of using computer support for education has already been accumulated before the pandemic and is actively used and applied now (Zhiyenbayeva et al., 2021). The perception of control, confidentiality, as well as the influence of environmental and psychological factors in the online exam process remains limited, which requires further research to improve educational online technologies (Kharbat & Abu Daabes, 2021). A significant pedagogical aspect of motivation and self-knowledge of students and future teachers, in particular, lies in the

specific mechanisms of interaction with students online for the development of their personal qualities (Akhmetova et al., 2016). Interactive technologies provide an opportunity to work in a group and thus develop skills of creativity, critical thinking and communication (Pifarré, 2019). Disabled students might encounter technological and psychological difficulties of transition to online learning due to universities' unpreparedness. The inclusiveness of modern education was not thought out promptly for distance learning; therefore, one of the leading directions for further research is the creation of an inclusive online space to overcome inequalities among students (Amponsah, 2021).

Distance education, due to its accessibility through overcoming geographical boundaries and distances, is considered a reliable means of achieving the goals of sustainable development policy and lifelong learning for all population categories (Adarkwah, 2020). However, not all countries have equally well-developed information technology sectors. The COVID-19 pandemic, forcing many countries and educational sectors to switch to online learning, has revealed the existence of obstacles to the introduction of distance learning, primarily in rural areas. Low income, problems with the Internet and electricity, the lack of information and communication technologies (ICTs), and the reluctance of both teachers and students to use them are cited as critical factors affecting online learning and reducing its effectiveness (Adarkwah, 2020). Information and communication technologies involve the use of modern technologies, including interactive, which affect the formation and improvement of not only technical competence in working with innovative technologies, but also skills of creativity, critical and strategic thinking, reflective dialogue, which can be implemented in distance learning through the use of Zoom or Skype programs, online educational platforms, Google Classroom, etc. (Danchikov et al., 2021). Motivational and emotional aspects are considered the fundamental ones influencing the integration of ICTs into education, which requires the development of appropriate strategies aimed at removing barriers associated with online learning (Adarkwah, 2020; Tapalova & Myrzalieva, 2017). The expansion of methodological approaches in teaching, based on the use of interactive technologies, helps to increase the motivation of students to learn, as intensified practice-oriented and personality-oriented learning approaches (Hobson & Puruhito, 2018).

The impact of COVID-19 on the education sector has triggered a shift towards online learning in the global education space, creating many challenges for educators and students around the world, along with a lack of distance learning experience, administrative barriers, resulting in poor academic performance (Ma et al., 2021).

One aspect of online learning is the emphasis on students' independent work, but it should be noted that intrinsic motivation affects their ability to complete learning tasks. A direct relationship was found between motivation to achieve goals and a number of personal factors of students (Tapalova, 2018). However, distance learning caused difficulties with the implementation of individual work of students, because the study of theoretical material independently and the implementation of practical tasks without classroom learning did not cause much motivation or satisfaction among students (Appolloni et al., 2021). There is a link between motivation to learn and overall satisfaction with the course, which should be taken into account to improve the effectiveness of online learning (Bailey et al., 2021). There is a positive correlation between the involvement of students, their motivation and the level of mastering professional skills (Rajabalee & Santally, 2021). However, despite the increased use of distance education as a result of the COVID-19 pandemic, the lack of student engagement in e-learning is of concern (Pakinee & Puritat, 2021). The applied concept of e-learning gamification, taking into account different types of students' personalities, is considered as one of the ways to increase student involvement in the educational process. This approach does not have a direct impact on academic performance, but it helps to increase students' interest in mastering the course (Pakinee & Puritat, 2021). Also during the distance learning period, courses in different subjects and for different levels of training were intensified, which can be used by teachers during teaching as an auxiliary element of the learning process (Kostopoulos et al., 2019).

The global trend of the widespread use of cyberspace (e-services) is combined with the expansion of various e-learning forms, but this process is not uniform in different countries, since

traditions and ethnocultural features affect the perception of innovations, the specifics, and speed of their implementation (Tomczyk et al., 2021). A look at the practice of using ICTs in the world's leading universities through the prism of the theory of human resources allows asserting both the presence of certain successes of distance education and the presence of obstacles to the introduction of electronic educational technologies, the elimination of which requires appropriate initiatives in the field of educational policy (Wang et al., 2020). It is becoming clear that online learning is different from the crisis of distance learning in the early days of the COVID-19 pandemic - it becomes more sustainable and learning activities become more hybrid. Examining the educational crisis due to the COVID-19 pandemic will turn the challenges humanity faces into new online learning opportunities (Adedoyin & Soykan, 2020).

Thus, the predominant use of online learning makes student engagement critically important, necessitating a comprehensive study of the motives and obstacles to student engagement. Besides, security and privacy concerns should be considered as factors that can have a limiting effect on student participation. Students' intent to participate in the online classroom in real time is directly influenced by perceived usefulness and peer behavior, which must be taken into account when developing online class plans in order to stimulate student participation and active learning (Kim, 2021).

MATERIALS AND METHODS

Study Design and Sample

The study was designed in several stages. At the first stage, the topic, object, subject, goal, and objectives of the study were determined. The second stage is an analytical review of scientific literature on the topic of distance learning in the context of the COVID-19 pandemic. The third stage is the selection of valid research methods and the formation of a relevant sample. The fourth stage is an empirical study, statistical processing, and analysis of the results. The fifth stage is to discuss the research results, formulate conclusions and recommendations, and determine the prospects for further research.

The study involved two groups of respondents, formed by randomization and comparable in terms of age and gender: 226 graduate students and 223 undergraduate students. There were 127 students from Kazan Federal University (Yelabuga, the Russian Federation), 129 students from Russian State Agrarian University – Moscow Timiryazev Agricultural Academy (Moscow, the Russian Federation), 95 students of A. Kuatbekov Peoples Friendship University (Shymkent, Kazakhstan), and 98 students of the Abai Kazakh National Pedagogical University (Almaty, Kazakhstan). A survey was conducted to study students' readiness for independent work and the impact of distance learning on the level of their academic performance and emotional intelligence. There was also a psychodiagnostic study of motivation and values using a bank of tests, which included the methods described below.

The Methodology "Motivation of Professional Activity" by Zamfir in Rean's Modification

The technique can be used to analyze the motivation of professional activity, including the motivation of professional-pedagogical activity. The concept of internal and external motivation is the basis of this methodology, which is aimed in the study at diagnosing the motivation of vocational training. The internal type of motivation should be considered when the activity itself matters to an individual. External motivation of professional activity presupposes a desire to meet needs external to the activity itself (motives of social prestige, wages, etc.). At the same time, external motives are differentiated into external positive and external negative. External positive motives are more effective and desirable. With the help of this technique, the motivational complex of a personality is determined, which is the ratio of three types of motivation: external (EM), internal positive (IPM), and internal negative (INM). The best and optimal are the following motivational complexes: EM>IPM>INM and EM=IPM>INM.

The worst motivational complex is INM>IPM>EM. When interpreting the results, the type and manifestation degree of motivational complexes are taken into account (Wang et al., 2020).

The Methodology for Studying Attitudes towards Academic Subjects by Kazantseva (2011), Adapted for University Students

This technique makes it possible to identify the preferred educational subjects, the reasons for the preferred attitude towards them, as well as the prevailing motives (ideological, social, practice-oriented, personal, etc.) that underlie both a positive or negative attitude towards certain subjects and towards learning in general (Wang et al., 2020).

- **Bass Orientation Inventory:** With the help of which the following directions are revealed:
  - **Self-orientation (S):** Orientation towards direct reward and satisfaction, aggressiveness in achieving status, imperiousness, a tendency to compete, irritability, anxiety, introversion.
  - **Interaction-orientation (I):** The desire under any condition to maintain relationships with people, focus on joint activities, but often to the detriment of performing specific tasks or providing sincere help to people; focus on social approval, dependence on a group, the need for affection and emotional relationships with people.
  - **Task-orientation (T):** Interest in solving business problems, doing the job as best as possible, focusing on business cooperation, the ability to defend one's own opinion in the interests of the business, which is useful for achieving a common goal (Wang et al., 2020).
- **Morphological test of life values by Sopov and Karpushina:** A methodology aimed at determining the motivational and value structure of a person. The test consists of 112 statements, graded on a 5-point scale. The list of life values includes the following:
  - **Self-development:** Knowledge of one's individual features, constant development of one's abilities and other personal characteristics.
  - **Spiritual fulfillment:** Moral and ethical principles, the prevalence of spiritual needs over material ones.
  - **Creativity:** Focus on realizing one's creative potential, striving to change the surrounding reality.
  - **Social contacts:** The establishment of favorable relations in various spheres of social interaction, the expansion of one's interpersonal ties, the implementation of one's social role.
  - **Own prestige:** Gaining recognition in society by following certain social requirements.
  - **High financial position:** The factors of material well-being as the main raison d'être.
  - **Achievement:** Setting and solving certain life tasks as the main life factors.
  - **Preservation of one's individuality:** The prevalence of one's own opinions, views, and convictions over generally accepted ones; protecting one's originality and independence.

Terminal values are implemented in different ways, in different spheres of life: in professional life, education, family life, social activity, hobbies, and physical activity. The design of this test also includes a social approval scale, according to which the higher the result, the more the respondent's behavior (at the verbal level) corresponds to the approved pattern (Wang et al., 2020).

- **Willpower test:** Aimed at determining volitional efforts in achieving goals, a sense of responsibility, and balanced actions.
- **Achievement motivation inventory:** Reflects persistence in achieving one's goals as a core property of a person.
- **Success questionnaire:** Intended for a differentiated assessment of oppositely directed motivational tendencies: striving for success and fear of failure, the combination of which creates a certain type of personality and determines human behavior in difficult situations.

- **Approval motivation scale:** Reflects the quality of relationships with significant other people, the desire to earn their approval.
- **Statistical processing of research results:** Was carried out using an online calculator medstatistic.ru.
- **Ethical issues:** Were solved by complying with the requirements of bioethics and ensuring anonymity.
- **Research limitations:** Were associated with sample size and student survey in only five universities. Despite the fact that the randomization procedure makes it possible to extrapolate the obtained research results to the majority of students from other universities, it is possible that in some cases the results may turn out to be different due to the influence of such factors as ethnocultural characteristics, professional specifics, and technological inequality. Therefore, the study should be assessed as a pilot one, which provides a rough idea of some aspects of distance education in a pandemic and requires further in-depth study.

RESULTS AND DISCUSSION

The psychological discourse of motivation was studied in terms of the impact of distance learning on student motivation, which resulted in a conclusion about the effectiveness of distance format (Logan et al., 2017). The problem of distance learning during the pandemic is the need to determine the readiness of students and teachers to move to a distance learning format, based on the results conclude a low level of readiness to work with modern technologies, online platforms, programs for online classes, ignorance of the principles of information etc. (Toquero, 2020).

Comparison of the studied groups according to their readiness for independent work in the conditions of online learning showed that 167 (84.3%) graduate students not only actively complete assignments, but also show the initiative of independent research activities. On the other hand, undergraduate students, in 136 (74.5%) cases perceive independent work as an unnecessary load, perform tasks formally, incompletely (28.5%), or do not complete them at all (21.2%), do not read additional literature (36.8%). If a group of students is small (up to 8 people), its size is comparable to the optimal psychotherapeutic group, the development of which can be successfully managed even in a remote format. In a small group, a teacher has more opportunities to control learning and attendance. In large academic groups (15, 20, or more students), it is difficult to control students' attention during distance classes, especially in cases of bad network quality. A teacher is not always sure that all students actively participate in a class and fully perceive the lecture material. Without direct contact and the implementation of real practical tasks, students lose interest in the subject under study, they do not see the possibility of applying the knowledge gained in their subsequent professional activity, the model of which, under conditions of uncertainty associated with a pandemic, loses its integrity and concreteness. Graduate students often have a clear plan of employment (66.2%) or already work in the field that they are qualified for (21.2%). At the same time, undergraduate students are doubtful about pursuing graduate studies (63.2%); they are also not sure whether their future job will match their qualifications (30.1%). The blurred perspective, in turn, contributes to a decrease in motivation to learn. Below are the results of a comparative study of motivation and values of undergraduate and graduate students studying remotely. The leading motives of professional activity, identified by the method of Zamfir in Rean's modification (Table 1), among the undergraduate students were the need to achieve social prestige, money earnings, and the desire to avoid possible troubles. Among the graduates, the issue of money earnings was also relevant, however, in general, more mature motives prevailed, including the possibility of the most complete self-fulfillment and satisfaction from the very process of work.

As can be concluded from this table, there are significant differences in undergraduate and graduate students' motivation. Among undergraduates, the motivation was much more negative and more often there were high indicators of negative external motivation (33.2%). The motivation of graduate students was more optimal, with high rates of internal and external positive motivation

Table 1. Undergraduate (A) and graduate (B) students' motivation to study remotely

Students' motivation	A		B		Student's t-test	p
	n	**%**	**n**	**%**		
EM>IPM>INM	47	21.2	93	41.4	142.84	<0.05
EM=IPM>INM	102	45.6	111	49.0	24.04	<0.05
INM>IPM>EM	74	33.2	22	9.6	166.88	<0.05
Total	223	100	226	100		

(90.4%). That is, graduate students' attitude to the educational process was more conscious, coupled with positive emotions. At the same time, undergraduate students revealed avoidance and reproval, combined with low interest in their chosen profession, which determined the suboptimality of their motivational complex. Scientific literature focuses on student satisfaction with the e-learning process and identifies factors that affect its quality (Mystakidis et al., 2019). The quality of distance learning is influenced by a system of factors, especially the organization of the educational process, means of visualization of theoretical material, online platforms or programs used for online classes, mobile applications, tasks to be performed and their level of complexity for students (Amir et al., 2020).

To identify the reasons for the relatively low interest of undergraduates in the compulsory curriculum subjects, the study used Kazantseva's methodology, adapted for university students (Table 2). If graduate students have personal, practical, ideological, and social motives for studying subjects, then undergraduate students, as the present research has shown, are guided mainly by practical and personal motives. At the same time, among undergraduates, there is a rather significant percentage of negative attitudes towards both individual subjects (11.6%) and towards learning in general (6.8%), while among graduates a negative attitude towards learning was revealed only in 5 students (2.0%) and towards individual subjects - in 16 (7.0%). That is, undergraduate students, in comparison with graduates, have immature motives for studying.

Among the reasons for undergraduates' negative attitude to certain subjects were: poor relationship with a teacher (31.6%), uninteresting explanation and lack of praise from a teacher (42.5% and 18.1%, respectively), a lack of pleasure in studying a subject (64.8%), and difficulty in mastering it (80.3%). Graduates explain the positive motivation to study subjects by their relevance for future work (82.3%), the need for self-development (75.3%), and improving general knowledge (58.1%). Undergraduates have an insufficient understanding of the necessary professional skills; they are reluctant to read educational literature and lack the ability to learn. It is difficult for them to study online since their

Table 2. Attitude to academic subjects of undergraduate (A) and graduate (B) students studying remotely

Prevailing motives	A		B		Student's t-test	p
	n	**%**	**n**	**%**		
Negative attitude towards certain subjects	26	11.6	16	7	53.74	<0.05
Negative attitude towards learning in general	15	6.8	5	2	55.15	<0.05
Ideological motives	13	5.8	34	15.2	59.40	<0.05
Social motives	24	11	54	23.8	76.37	<0.05
Practical motives	85	38	66	29.3	82.73	<0.05
Personal motives	60	26.8	51	22.7	52.33	<0.05
Total	223	100	226	100		

attention is not stable enough, and they do not have enough patience to work through the educational material on their own. Undergraduates, among the reasons for pursuing higher education, list their parents' influence or imitating their peers, as well as finding themselves. At the same time, graduate studies, in most cases, are an independent, conscious choice, the desire to achieve a higher professional level and focus on further development in the chosen specialty. Graduates are more attracted by research activities; they independently find and study with interest special academic literature, show creativity. However, it should be noted that these students' transition to distance learning took place only in the last year, and they received their bachelor's degree in a classroom. The current freshmen and sophomores have begun their studies immediately in new conditions when there has been a sudden transition to predominantly distance education forms, which require more independence from students. Many students turned out to be insufficiently prepared psychologically for new education forms; it was difficult for them to perceive online explanations of a teacher. Besides, classes in a classroom contributed to a better memorization of educational material, while in online learning, information is always freely available in Internet sources. The electronic exam does not solve this problem since it is more focused on photographic memory than on understanding the essence of educational material and the relationship between theory and practice. If one considers the formation of independent professional thinking as one of the leading tasks of university education, then online education in undergraduate courses creates additional difficulties in this matter. Despite the fact that this training is essentially more individualized and interactive, the lack of direct contact with a teacher and with fellow students creates communication problems for freshmen, reducing the effectiveness of communication in terms of its professional orientation. Sources of scientific literature note the lack of student involvement in the e-learning system (Pakinee & Puritat, 2021) and emphasize the need to make online learning more fun (Day et al., 2021). It is emphasized that distance learning must be active, constructive, deliberate, authentic, and collaborative (Mystakidis et al., 2019). Accordingly, further research should be aimed at a deeper study of the psychological aspects of online learning to develop specific recommendations to improve its effectiveness and make appropriate changes in curricula and programs.

The following methodology (Table 3) allowed identifying the peculiarities of the personal orientation of graduate and undergraduate students. The majority of undergraduates (60.1%) are focused on communication - maintaining relationships with people under any conditions, focusing on social approval and joint activities, dependence on a group, the need for affection, and emotional relationships with people. On the contrary, graduates show a great practical focus - interest in solving business problems, cooperation, the ability to defend their own opinion in the interests of the cause, and focus on achieving goals (56.5%).

It is quite difficult to build joint group educational activities in an online format, especially since the verification of individual assignments, for example, in the MOODLE system, is quite confidential, which makes it difficult to discuss correct and incorrect answers and work together on mistakes. Undergraduates, with the deprivation of live communication in classrooms, tend to compensate for it by communication in social networks to a much greater extent than in online training groups. Graduates,

Table 3. Bass Orientation Inventory results for undergraduates (A) and graduates (B) studying remotely

Personality orientation	A		B		Student's t-test	p
	n	%	n	%		
Self-orientation	22	9.8	12	5.6	29.70	<0.05
Interaction-orientation	134	60.1	86	37.9	156.98	<0.05
Task-orientation	67	30.1	128	56.5	186.68	<0.05
Total	223	100	226	100		

on the other hand, are more motivated to create professional online contacts; they already possess the skill of differentiated perception of Internet information and finding professionally significant content. Sources of scientific literature inform about the psychological problems of adaptation to online learning among students (Kharbat & Abu Daabes, 2021). Therefore, this problem requires a deeper study to develop better approaches to conducting online classes that can interest students, attract and retain their attention, and ensure effective communication with a teacher and fellow students. It is necessary to take into account the stressfulness of the transition to online learning, as discussed in a number of scientific publications (Day et al., 2021). However, with all the advantages and traditional adherence to classroom studies, the objective reality is that the future of the educational process is still in online learning, which at this stage is still forming, along with the most optimal and effective teaching methods.

Speaking about the problem of motivating students to study online, one should note not only the motivational complex of a personality but also its value structure (Table 4). The researchers (Bailey et al., 2021) argue that intrinsic value is associated with intrinsic motivation and influences students' decisions to start, continue, and return to learning tasks in the process of distance learning. Despite the high motivation of students, distance learning has caused such practical difficulties as group work, postponement of tasks, lack of face-to-face communication, on the basis of which researchers conclude about the benefits of a blended learning format that combines classroom learning and distance learning (Vanslambrouck et al., 2018).

In 73.7% of graduates, spiritual and moral values, such as self-development, spiritual fulfillment, creativity, and social contacts, were predominant, which is a reflection of the moral and practical orientation of these respondents. Among undergraduates, there was also a significant percentage of those who noted the formulation and solution of certain life tasks and the realization of their creative potential and social role as the main factors in life (30.1%). However, many undergraduates (38.9%) showed the absence of goal-setting; in a fairly significant number of cases (21.2%), intrapersonal conflict was found. Among graduate students, uncertainty was revealed only in 14 (6.1%) students, and intrapersonal conflict - only in 9 (4.0%) cases. Thus, the prevalence of uncertainty in life values among undergraduates reflects their psychological immaturity, while intrapersonal conflict may be associated with a dependent position and a struggle of motives. That is, the educational process should be aimed not only at acquiring knowledge but also at the personality formation of a future specialist, without which the development of such key skills as critical thinking and creativity is impossible.

Table 5 shows the results of determining volitional efforts in achieving goals, a sense of responsibility, and balanced actions among undergraduate and graduate students.

Most graduates (55.1%) and undergraduates (52.3%) demonstrated a fairly strong character and willpower. However, if among graduate students a significant number of respondents (26.3%) had a very strong will, and 39 (17.1%) had a weak will, then the opposite situation was observed among undergraduates: weak willpower was revealed in 83 (37.3%) cases, while very strong - only in 15

Table 4. Life values of undergraduate (A) and graduate (B) students studying remotely, using the morphological test by Sopov and Karpushina

Personality orientation	A		B		Student's t-test	p
	n	%	n	%		
undefined	87	38.9	14	6.1	231.93	<0.05
contradictory, intra-conflict	47	21.2	9	4.0	121.62	<0.05
humanistic (moral and practical)	67	30.1	166	73.7	308.30	<0.05
pragmatic (selfish and prestigious)	22	9.8	37	16.2	45.25	<0.05
Total	223	100	226	100		

Table 5. Willpower of undergraduate (A) and graduate (B) students studying remotely

Willpower	A		B		Student's t-test	p
	n	%	n	%		
weak	83	37.3	39	17.1	142.84	<0.05
strong enough	117	52.3	124	55.1	19.80	<0.05
very strong	15	6.8	60	26.3	137.89	<0.05
ideal level	8	3.6	3	1.5	14.85	<0.05
Total	223	100	226	100		

(6.8%) cases. That is, the behavior of graduate students, in comparison with undergraduates, is more responsible, their actions are mostly realistic and balanced. In both groups of respondents, some students were also identified who showed very high scores on this test, which raised doubts about the adequacy of their self-esteem. At the same time, there were 2 times more undergraduates among them than graduates (3.6% and 1.5%, respectively).

The results of studying students' perseverance in achieving their goals are presented in Table 6.

According to this scale, reflecting achievement motivation as a core personality trait that affects the whole life of a person, most graduates (54.5%) and undergraduates (49.2%) showed average values. The main difference between the studied groups was that the majority of graduates (39.9%) showed a high level of achievement motivation, while undergraduates (33.2%) showed a low level of achievement motivation. The results obtained using this methodology suggest that the need for achievement and persistence in achieving their goals are those personal qualities that motivate students to pursue graduate studies, constantly improve their qualifications, and acquire new knowledge in line with the lifelong learning concept. It can be predicted that those students who are found to have a low level of achievement motivation will limit their higher education to the bachelor's level and are less likely to go to graduate school. It is also possible that most of these students will not work in the field they are qualified for; after graduation, they may choose the area of professional activity that does not require constant intellectual development and independent critical thinking.

Table 7 presents the results of studying the influence of personality types on human behavior in difficult situations based on the relationship between the need for success and the fear of failure.

According to this methodology, graduates to a greater extent (62.6%) have a positive motivation for success, which reflects a focus on achieving constructive results of the educational process, dedication, a fairly high level of responsibility, activity, and initiative. On the other hand, among undergraduates, respondents with undefined motivation prevailed (43.0%), who had both a tendency to motivation for success and a tendency to motivation to avoid failure. At the same time, a fairly significant part of undergraduates (37.3%) demonstrated fear of failure, which is based on avoidance

Table 6. Achievement motivation inventory of undergraduate (A) and graduate (B) students in distance learning

Achievement motivation level	A		B		Student's t-test	p
	n	%	n	%		
low	74	33.2	13	5.6	195.16	<0.05
average	110	49.2	123	54.5	37.48	<0.05
high	39	17.6	90	39.9	157.68	<0.05
Total	223	100	226	100		

Table 7. Assessing undergraduates' (A) and graduates' (B) need for success, using success questionnaire

Dominant motivation	A		B		Student's t-test	p
	n	%	n	%		
Striving for success	44	19.7	141	62.6	303.35	<0.05
Striving to avoid failure	83	37.3	66	29.3	56.57	<0.05
Uncertain motivation	96	43.0	19	8.1	246.78	<0.05
Total	223	100	226	100		

and negative expectations. In such cases, there is an activity associated with the need to avoid negative assessments, censure, and hypothetical failure. The leading motivation is to find ways to avoid possible failure, instead of finding ways to achieve success. The focus on failure is accompanied by low self-confidence and often increased situational anxiety, which manifests itself in the avoidance of responsible tasks, although it can be combined with a responsible attitude to business. Thus, the results obtained using this method indirectly reflect the insufficient maturity of many undergraduates, which leads to incorrect behavior models and life strategies and impedes academic performance and professional skills formation. With distance learning, it is quite difficult to reorient such students since they tend to limit communication with a teacher and show low involvement in the educational process. According to scientific literature, students experience problems related to lack of support from teachers and technical difficulties in different groups (Rajabalee & Santally, 2021). Accordingly, the aspect of motivation requires increased attention and should be taken into account when developing plans and programs for online classes. Special training sessions are to be aimed at increasing the level of student motivation to learn. It is necessary to take into account students' need for approval, identified using approval motivation scale (Table 8).

The high need for approval among undergraduates (58.0%) indicates that they have a desire to earn the approval of significant people around them, especially their parents, which is the main motive for getting an education and at the same time hinders the achievement of success.

A similar study, which aimed to determine the levels of motivation of students to distance learning, was conducted in the United States (Aguilera-Hermida, 2020). As a result, it was determined to increase the motivation of students from 0.62 to 0.81 to study using modern technologies of distance format, in particular from an online educational platform (Canvas, Blackboard, etc.); communication tools (Zoom, Teams, Google); social media (TikTok, Linkedin, Twitter, Facebook, etc.). Based on the comparison of the results obtained with those obtained in our experiment, we can conclude about the high efficiency of distance learning during the pandemic and the impact of such training on student motivation.

Besides, approval motivation level affects the quality of a student's relationship with other participants in the educational process and the formation of independent professional thinking. The

Table 8. Approval motivation scale (undergraduates (A) and graduates (B) studying remotely)

Approval motivation level	A		B		Student's t-test	p
	n	%	n	%		
High	129	58.0	47	20.7	263.75	<0.05
Average	74	33.2	142	63.1	211.42	<0.05
Low	20	8.8	37	16.2	52.33	<0.05
Total	223	100	226	100		

answers according to this method correlate with the indicators of the success questionnaire - striving to avoid failure.

CONCLUSION

Online learning contributes to a more purposeful interaction between a student and a teacher, but at the same time creates professional communication issues and can indirectly influence students' motivation to study and complicate career guidance work, especially in a freshman year. Online learning has both positive aspects (accessibility, psychological comfort, and convenient time management) and serious problems, such as monitoring student attendance and the assessment process.

The study revealed significant differences in the motivational complex of graduates and undergraduates. Graduates' attitude to the educational process was more conscious, coupled with positive emotions. Undergraduates revealed avoidance and reproval, combined with a low interest in their chosen profession, which determined the suboptimality of their motivational complex.

The study has found that graduates have personal, practical, ideological, and social motives to study academic subjects, while undergraduates are guided mainly by practical and personal motives. Besides, among undergraduates, in comparison with graduates, there is an immaturity of motives to study. Among the graduates as a whole, more mature motives prevailed (90.4%); they strive for self-fulfillment and job satisfaction. In addition, in 73.7% of them, spiritual and moral values prevailed, such as self-development, spiritual fulfillment, creativity, and social contacts, which is a reflection of their moral and practical orientation. Undergraduates, in comparison with graduates, have immature motives (33.2% versus 9.6%) for studying. It is difficult for them to study online as they have an insufficient understanding of the necessary professional skills and future work; they are reluctant to read educational literature and lack the ability to learn; their attention is not stable enough; and they do not have enough patience to work on educational material on their own.

Often, undergraduates among the reasons for pursuing higher education list their parents' influence or imitating their peers, as well as finding themselves, while admission to a master's program is an independent, conscious choice associated with the desire to achieve a higher professional level.

Online learning for undergraduates is essentially more individualized and interactive, however, the lack of direct contact with a teacher and with fellow students creates communication problems for freshmen, reducing the effectiveness of communication in terms of its professional orientation. Therefore, further research should be aimed at a deeper study of psychological aspects of online learning to develop specific recommendations to improve its effectiveness and make appropriate changes in curricula and programs.

Undergraduates, with the deprivation of live communication in classrooms, tend to compensate for it by communicating in social networks, while graduates are more motivated to create professional online contacts. The prevalence of uncertainty in life values in 38.9% of undergraduates reflects their psychological immaturity, and the presence of intrapersonal conflict may be associated with a dependent position and a struggle of motives. Therefore, the educational process should be aimed not only at acquiring knowledge but also at the personality formation of a future specialist, without which it is impossible to develop such key skills as critical thinking and creativity.

The desire for professional achievements and persistence in achieving their goals are those personal qualities that motivate students to continue their studies, constantly improve their qualifications, and acquire new knowledge in accordance with the lifelong learning concept. A low achievement motivation level in undergraduates makes it possible to predict that it is less likely that they will continue their studies (in a graduate school) or work in the field that they are qualified for. After graduation, they might choose the field of professional activity that does not require constant intellectual development and independent critical thinking.

Positive motivation for success reflects a focus on achieving constructive educational results, dedication, a fairly high level of responsibility, activity, and initiative. Motivation to avoid failure

indirectly reflects students' immaturity, which leads to wrong behavior models and life strategies and impedes academic performance and professional skills formation. With distance learning, such students tend to limit communication with a teacher and show low involvement in the educational process. Therefore, the aspect of motivation in distance learning requires increased attention and should be taken into account when developing curricula and programs. Of importance are training sessions that aim at increasing students' motivation to study.

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Zhuldyz Abdimusa is a Master and PhD doctoral of the Department of Pedagogy and Psychology at A. Kuatbekov Peoples Friendship University in Shymkent, Kazakhstan.

Nailya Ismailova is a Senior Lecturer of the Department of Psychology at Yelabuga Institute of Kazan Federal University in Elabuga, Russian Federation.

Elena Shchedrina has a Ph.D. degree. Also she is an Associate professor Department of Information Technologies in the AIC at Russian State Agrarian University – Moscow Timiryazev Agricultural Academy in Moscow, Russian Federation.

Svetlana Kulanina is a senior lecturer of the Department of Biology and Chemistry Yelabuga Institute of Kazan Federal University in Elabuga, Russian Federation.