



Psychological challenges of distance learning in higher education in Ukraine during the COVID-19 pandemic: innovative potential, dilemmas on the way

Desafíos psicológicos del aprendizaje a distancia en la educación superior en Ucrania durante la pandemia de COVID-19: potencial innovador, dilemas en el camino

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Resumen

Ante la pandemia mundial de COVID-19 y la introducción de la educación a distancia se han actualizado los problemas psicológicos, el propósito del artículo es analizar los desafíos psicológicos de la educación a distancia, para determinar el potencial innovador de las formas de superarlos. Se utilizaron métodos de investigación pedagógica teórica (análisis, síntesis, inducción y deducción), método de modelado, método predictivo para escribir el artículo. El trabajo se basa en los principios de concreción, sistematicidad, objetividad y científicidad. Los resultados analizan la efectividad de los medios de superación de la sobrecarga psicológica de estudiantes y docentes debido a que estos fenómenos tienen raíces comunes. La atención principal se presta a las formas creativas de superar los miedos y las inseguridades. También se investigó el concepto de ingenio psicológico. Se justifica el uso del método de higiene digital como parte del enfrentamiento a los desafíos psicológicos. Además, se destacan las causas económicas de las situaciones estresantes en los estudiantes. Las conclusiones resumieron que los medios efectivos para enfrentar los desafíos psicológicos son el tratamiento de los estudiantes de

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la autoorganización y la autoayuda, aumentando el nivel de autoestima real, la autorreflexión sobre las metas de la vida y la comprensión de las necesidades de ayuda psicológica.

Palabras clave: Desafíos psicológicos, educación a distancia, salud mental, dieta digital, inventiva psicológica.

Abstract

In the face the COVID-19 global pandemic and the introduction of distance education have actualized psychological problems, the purpose of the article is to analyze the psychological challenges of distance learning, to determine the innovative potential of ways to overcome them. Theoretical pedagogical research methods (analysis, synthesis, induction, and deduction), modeling method, predictive method was used to write the article. The work is based on the principles of concretization, systematicity, objectivity, and scientificity. The results analyze the effectiveness of means of overcoming the psychological overload of students and teachers because these phenomena have common roots. The main attention is paid to creative ways to overcome fears and insecurities. The concept of psychological resourcefulness was also investigated. The use of digital hygiene method as a part of the confrontation with psychological challenges is justified. The economic causes of stressful situations in students are also highlighted. The conclusions summarized that the effective means for confronting psychological challenges are students' treatment of self-organization and self-help, increasing the level of real self-esteem, self-reflection over life goals, and understanding the needs of psychological help.

Keywords: Psychological challenges, distance education, mental health, digital diet, psychological resourcefulness.

Introduction

The challenges of today's information society point to the need for change in the functioning of many fields, particularly higher education. The COVID-19 pandemic has demonstrated that distance learning under quarantined constraints can be a worthy alternative to the traditional system of conducting classes and organizing the educational process. At the same time, the global consequences of such a rapid transition to the use of digital technologies have not been definitively identified. Sometimes the introduction of distance learning in university education in a fairly short time has led to a certain distortion in the understanding of this process, the basic principles, and goals, etc. Such trends have provoked the presence of certain negative consequences related to the methods of using information resources for master's and bachelor's degree training. The coverage of adverse moments in getting an education allows us to note the contradictions and difficult problems that accompany online learning. Especially relevant are the psychological risks of distance education, the impact of which on the consciousness of students is

still underestimated in the professional literature. The paper aims to analyze the psychological challenges of distance learning on the pandemic COVID-19 on the example of Ukrainian universities, to determine the innovative potential of ways to overcome these problems, to solve dilemmas on the way of future distance education.

Typically, most of the current technological innovations lead to an increase in the efficiency of knowledge assimilation but ignore practically oriented forms of learning and lead to the detachment from personal contacts between teachers and students. For this reason, a more thorough study of the opportunities and threats of distance education for the time of quarantine restrictions will theoretically demonstrate ways of its improvement, taking into account the direction of education on the formation of psychological stability of future specialists, the formation of the most favorable grounds for mastering practical skills and abilities.

Therefore, the purpose of the study is to analyze the psychological challenges of distance learning, to determine the innovative potential of ways to overcome them. The realization of the goals implies the formation of the research plan. At the first stage a thorough review of the literature is made, the little-studied problems are outlined. The second stage outlined the role of digital competence on the mental health of teachers and students on the basis of empirical analysis, the third stage investigated the effectiveness of means to overcome mental overload, characterized the problem of psychological resourcefulness and the importance of a digital diet in modern informatized society. At the last stage - elaboration of the obtained results, outlining the prospects for further research.

Studies by European and American psychologists emphasize the impact of the Covid-19 pandemic and the introduced digital learning on the psychological component of students and educators. In particular, Pai and Vella (2022) described the main effects of social isolation and loneliness on physical and mental health within the spread of COVID-19. Prokopenko (2021) explored the major technological challenges of implementing distance education. Note that many of the above factors affect psychological instability. Vindegaard and Benros (2020) outlined the impact of the COVID-19 pandemic on mental health development in their empirical study. However, the problem of characterizing the main psychological challenges and how to overcome them in a digital society remains understudied. Whereas previous research has focused on the empirical study of the psychological adjustment of either students or faculty. This work is based on data related to digital competence, psychological challenges of both teachers and students.

Consequently, this study comprehensively highlights the problem of psychological challenges of distance education.

Methodology

Design

The article refers to fundamental work (involves the introduction of new theoretical knowledge and interpretation of previous research). The paper uses theoretical pedagogical research methods: analysis, synthesis, induction, and deduction. However, considerable attention is devoted to the empirical study of the peculiarities of the psychological problems of teachers and students.

The study was conducted in several stages. The first stage was a thorough literature review, outlining understudied problems. The second stage included coverage of the received data and the formation of basic provisions regarding digital literacy and its impact on the psychological health of students and teachers. The third stage included the description of the main psychological problems during the implementation of the digital initiative, highlighting the importance of the digital diet in the educational environment.

Participants

There were 220 participants in this study (120 students and 100 faculty members), who were divided according to the following factors: gender, age, and level of education (only for students). It was determined that all participants had higher education (75% undergraduate, 25% graduate) (See Table 1-2). Note that the authors were not limited to a single geographic location during the organization of this study.

Table 1

Diagnostic data of respondents (students) of the empirical study

Age of participants in the empirical study				
Under 17 years	17-18 years	19-20 years	21-22 years	Over 22 years
None	11%	44%	20%	25%
Education level of respondents				
Basic	Incomplete basic	Bachelor	Incomplete higher education	Master
None	None	45%	22,5%	32, 5%
Gender of experiment participants				
	Men		Women	
	59%		41%	

Authors' development

Table 2

Diagnostic data of respondents (teachers) of the empirical study

Age of participants in the empirical study				
Under 25 years	25-30 years	30-35years	35-50 years	Over 50 years
None	13%	25%	27%	35%
Gender of experiment participants				
	Men		Women	
	51%		49%	

Authors' development

Note that the respondents already had some experience in mastering digital tools and skills of working with information and digital sources in the educational industry. This fact contributes to the fact that, in general, mastering distance platforms did not cause psychological problems for the respondents. Consequently, the authors of the article paid attention to other problems found in the course of this study.

Instruments

The main tool for the study was an anonymous sociological survey using Google Survey platform. A list of open and closed questions uploaded to the system was developed in advance.

Anonymity allowed respondents to freely express their opinions, which, in turn, allowed us to consider such answers unbiased and honest.

In addition to the Google survey, we created a Telegram-bot to work with the same questions, and everyone was invited to work with it. Note that students predominantly responded using this platform. Teachers preferred the Google survey. The survey process conducted during the first semester of 2021/2022 academic year. Accordingly, it lasted until June 2022.

The results were processed in Excel. In order to determine the reliability of the author's questionnaire, Cronbach's alpha was used (0,8).

Data collection

The material was collected and analyzed over a period of time (from June to September 2022, before the start of the new academic year), which was designed to conduct a survey and mastication of the information obtained through the Telegram-bot resource.

Analysis of data

Through the use of the principles of analysis in the main subject of the study selected individual aspects (coverage of the problem of the effectiveness of means to overcome mental overload for students and teachers, the study of the phenomenon of psychological resourcefulness, the characteristics of the digital diet as a method of countering the psychological challenges). Based on synthesis these parts are combined and formed their own conclusions and recommendations. As a result of the use of comparative analysis, it was possible to determine the similarity of problems in the psychological state of students and teachers. The work used the principles of concretization, systematicity, objectivity, and scientificity.

In order to determine the digital competence of teachers and students, special methods were used to identify digital literacy. For example, the methodology of O. Papakitsa's methodology titled "Responsibility for Information Use" (Papakitsa 2012). Based on its application, the state of respondents' responsibility for information activities was investigated. On

the basis of this, the psychological attitude towards the digital space was also characterized among the respondents.

Of separate importance was the use of the Personal change-readiness survey developed by Canadian scientists. It is organized due to the fact that the seven indicators measured by it include a scale of “tolerance for ambiguity”. This methodology is particularly effective when considering stressful psychological situations that arise in connection with changes, because few people are able to seamlessly transition to new paradigms. Understanding the peculiarities of resisting psychological problems arising from this background will help students and teachers to protect themselves from stress in various learning situations due to total digitalization. Based on the method of modeling the main ways of overcoming psychological problems of students and teachers are reflected. In particular, based on this method a schematic model of the main effective ways of overcoming psychological difficulties was made.

Ethical criteria

The study was conducted in an atmosphere of trust, adherence to the rules of academic virtue, freedom of expression, and objective recounting. In addition, the article is based on the principles of scholarship, comprehensiveness, systematicity, and objectivity. Prior to the implementation of the study, informed consent was obtained from the participants in the survey. The survey was also based on the principles formed by the EU ethics committee.

Results

The Effectiveness of Means to Overcome Psychological Overload of Teachers and Students: A Creative Approach

The results of contemporary research confirm the fact that there are negative trends in the impact of the pandemic on higher education and, consequently, on all subjects of this industry (Kharytonov et al., 2021). Specialists have outlined some complications for students and educators that contribute to the emergence of psychological problems (Vindegaard & Benros, 2020). For students: lack of external control over the implementation of certain learning tasks, the vast majority of students observe a low or average level of self-organization and planning of learning activities and recreation, limitations of social contacts and communication (47%). For educators: the need for expedient transformation of plans and curricula in accordance with

distance learning principles, low level of skills in using information and communication technologies, the need to combine professional activities with personal life, changes in life rhythms (Bakhmat et al., 2022).

In the COVID-19 pandemic, mastering the use of digital resources, platforms, and cloud technologies has become an important challenge for educators, which generally builds digital competence (even compared to students). After all, modern students spend more time using modern distance platforms and resources. According to the results of Papakitsa (2012) found a below average level of digital literacy among teachers (students - strictly average). Consequently, according to this methodology, it is found that the participants of the experiment have mostly an average level. (See Table 3-4).

Table 3

The results of the study of digital competence in students (by the method of O. Papakitsa)

Digital competence in students			
Level	Number of students	%	Total number of respondents
High	35	34%	120
Average	55	52%	120
Low	30	14%	120

Authors' development

Table 4

Results of the study of digital competence in teachers (by the method of O. Papakitsa)

Digital competence in teachers			
Level	Number of students	%	Total number of respondents
High	21	21%	100
Average	34	34%	100
Low	45	45%	100

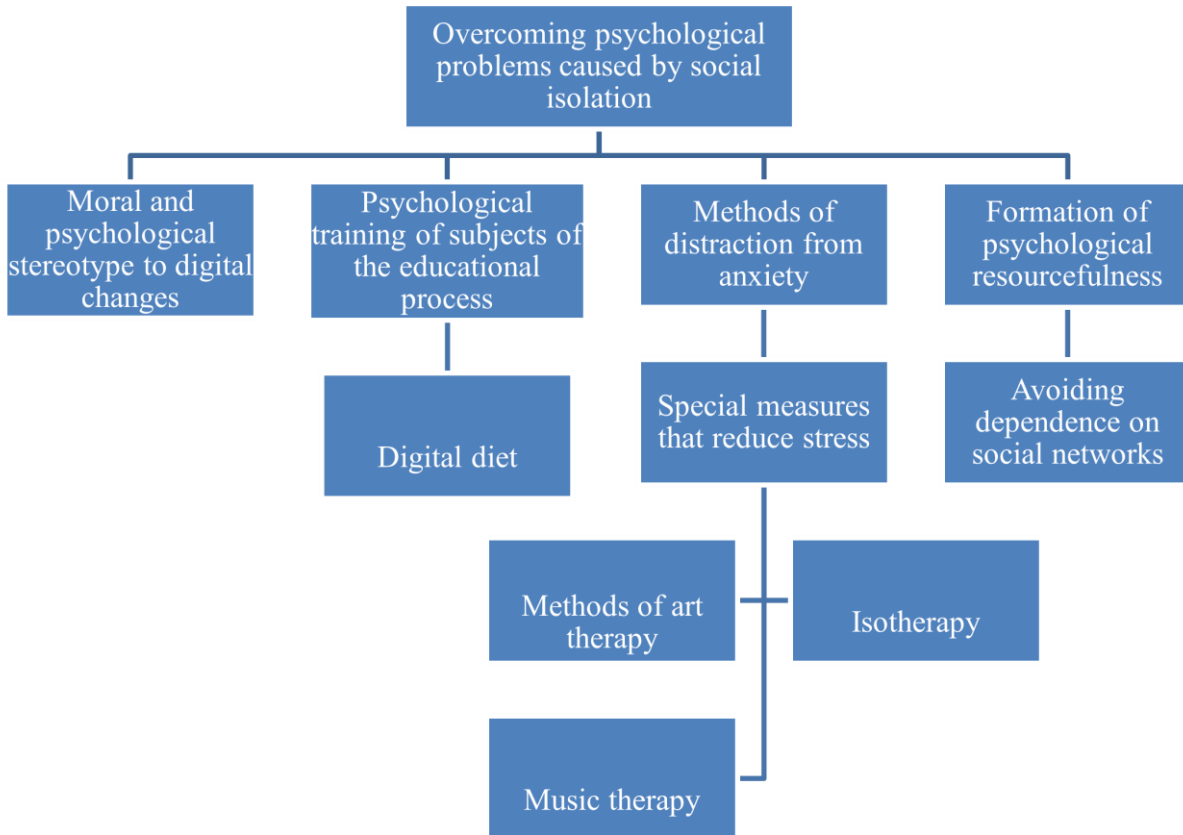
Authors' development

In addition, excessive tension in the society, changed work tasks, the phenomenon of unpreparedness of teaching staff and students to the new digital reality, 24/7 communication, lack of digital communication culture skills are stress factors faced by students and educators (51% of respondents noted this fact). At the same time, the spread of the coronavirus forced many teachers to work overtime, which, in turn, affected the disruption of normal work routines (Tsankov & Damyanov, 2019). Many experts have pointed out that the prolonged use of computer technology in the teaching system affects many of the health standards for time spent online (Prokopenko, 2021).

In order to overcome the stress caused by social isolation, first of all, it is necessary to form a stable moral and psychological stereotype for digital changes in a person. The motivational core of the moral-psychic stereotype forms corresponding moral-psychic potential. The latter helps a person to resist stress in difficult variable situations (Pai & Vella, 2022). Another area of stress prevention is appropriate moral and mental training, which can be implemented through the proper use of a digital diet (Vindegaard & Benros, 2020). This will build resilience to extreme occurrences, which will further help prevent stress.

Separate effective methods of coping with stress are separate ways of distracting from an anxious state. They are used with the assistance of a system of developed measures with the usual content, which are aimed at stress relief, mental “unloading”, relaxation, and just rest (Pai & Vella, 2022). To this end, we recommend watching light, casual movies, satirical magazines, reading books, etc. after training. An important place in this context belongs to music, which has a reflexive effect on the human organism. It, too, must be relaxed and pleasant to listen to (See Figure 1).

Figure 1
Scheme of overcoming psychological problems caused by social isolation



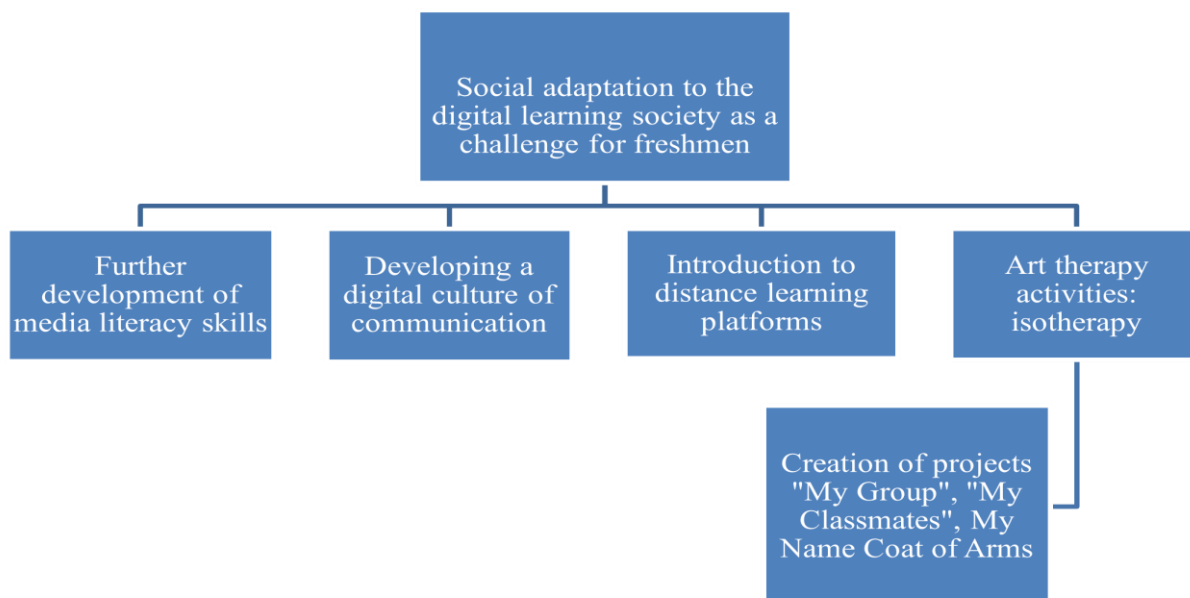
Authors' development

For first-year students, adapting to the digital environment of higher education institutions has become a separate challenge. Young people's entry into the system of higher education requires them to form new ways of behavior, especially in the digital society (Klochko, 2020). This adaptation process can take a long period of time, causing the individual to become overstressed on a psychological level (Murphy & Costa, 2019). For this reason, we recommend that first-year students first be detailed about the specifics of using certain distance platforms, familiarize them with the world's leading learning resources, and identify the importance of media literacy in today's society.

Separate in this system is the use of methods of art therapy, which involves the use of a variety of creative activities to solve certain psychological problems. The concept of “art” in this

case includes any creative human activity: dance, music, painting, film, sculpture, architecture, etc. Therapy is based on both the creation and perception of works of art (Tsymbala, 2017). Consequently, the process of adapting first-year students to digital learning should utilize the mechanisms of physiological and aesthetic perception. Isotherapy is used for the psychological correction of students with learning difficulties and social adaptation. Visual art allows the student to feel and understand himself, to express freely his thoughts and feelings, dreams and hopes; to be himself, as well as to free himself from negative experiences. It is not only a reflection in the minds of students of the surrounding and social reality but also an expression of an attitude toward it (See Figure 2).

Figure 2
Model of social adaptation of freshmen in the digital learning space



Authors' development

For the purpose of social adaptation, it is possible to offer students to draw “My Name Coat of Arms”, on which it is necessary to highlight what demonstrates the content of their own

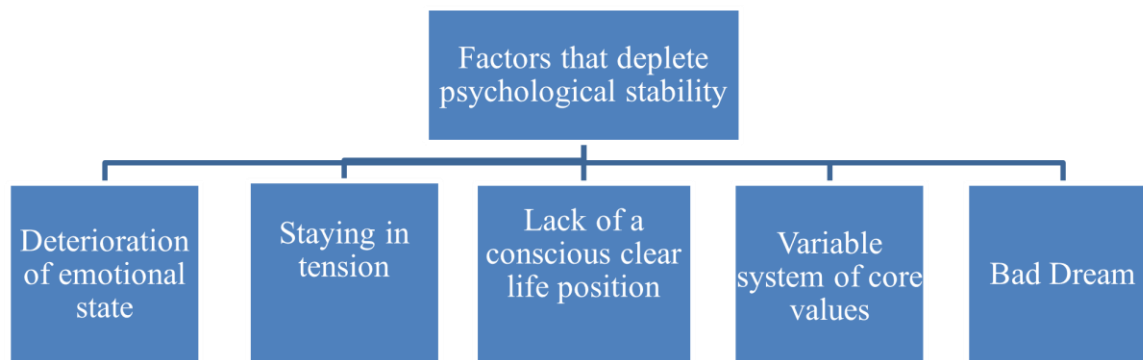
life principles, positions, etc. (Tsymbala, 2017). Students are then required to present their work. At this stage, other students may ask questions or clarifications. The implementation of this task affects the formation of self-reflection, as well as contributes to the “distance” familiarity of the group participants. At the same time, the process of drawing develops sensory-motor coordination as it requires coordinated participation of many mental functions. To improve interpersonal relations, it is possible to offer students to create a project on the theme “My group” or “My classmates” (students should present as better some of their classmates, tell their interests, why they chose this particular profession, etc.) (Tsymbala, 2017). Later digitally, students will present their findings.

The problem of psychological resourcefulness

Quarantine restrictions and distance learning have made higher education applicants more susceptible to expressions of sadness, fear, anxiety, negative emotions, bad moods, and sleep disturbances (Vindegaard & Benros, 2020). In particular, in the spring of 2020, a large-scale sociological study in Ukraine (with 220 participants) found that more than 80% of those surveyed were concerned about the disruption of their daily routine and indicated an inability to fulfill all of their daily needs since before the quarantine. Among the most painful losses, deprivation with respect to former social communication and activity, inability to engage in their habitual activities in a mundane manner, and a sense of loss of freedom of action and behavior were recorded. In such circumstances, the issue of determining personal resourcefulness became an urgent problem.

Therefore, under quarantine restrictions, the study of psychological resourcefulness will require special attention. Deterioration of the emotional situation, being in permanent tension, lack of awareness of a clear life position, a variable system of system values are factors that certainly deplete the psychological stability of students, because to confront these challenges it is necessary to use a much greater number of internal resources (See Figure 3).

Figure 3
The system of the main factors that deplete the psychological stability of the person



Authors' development

First of all, we are talking about the fact that a person's resilience in many situations depends on the real level of knowledge, self-esteem, understanding of the specifics of one's skills and abilities. Psychological resourcefulness is a person's ability to actualize his or her own resources in order to self-development, self-disclosure, support relationships with others, and provide them with the necessary support. A sufficient level of psychological resourcefulness allows you to reveal personal authenticity, which is manifested in the possibilities of self-development, the ability to show the necessary competence in the necessary life and professional situations, autonomously make and implement their decisions, independently overcome difficult life circumstances, the ability to support others. be a creative person and achieve success, etc.

It has been demonstrated that students who are less exposed to the negative influences of loneliness are generally more aware of their own level of resource capacity (when comparing their capacity to others) (Akdeniz et al., 2020). Most higher education applicants indeed have a higher sense of loneliness, low levels of overall resource capacity, and mediocre measures of ability to recover their own resources (Pinto et al., 2021). Researchers have found that lonelier students, as a result of quarantined restrictions and online learning, still do not have critical problems with psychological resourcefulness, but still have little awareness of possible ways to restore their own potential (Murphy & Costa, 2019).

As the realities of higher education in Ukraine have shown, students generally imagine their own advantages, are able to realistically assess disadvantages, and know methods of coping with stressful situations, but for uncertain reasons, they hardly take action to confront them. One of the reasons for such strange behavior lies in the excessive infantilization of modern students. This problem has been partially analyzed by researchers, social psychologists, and media psychologists (Kharytonov et al., 2021). One of the challenges of our time has been the increase in time spent on social networks and on entertainment on the Internet. This has a significant impact on the level of psychological development, particularly socialization.

Typically, higher education applicants who are confident in their pursuit of self-actualization are highly motivated to succeed, have some social capital built up, and can command respect and affection among friends and close associates (Zhu, 2021). However, those who have knowledge of ways to improve themselves, focusing on their own individual needs, fall into a certain dependence on the opinion of others, get more trust in digital “opinion leaders” (Pai & Vella, 2022). Relative to those around them, they have a significantly more infantile component to their character. Such students lack certain conditions, evaluations, opinions of people, events, etc., without which they will feel their loneliness.

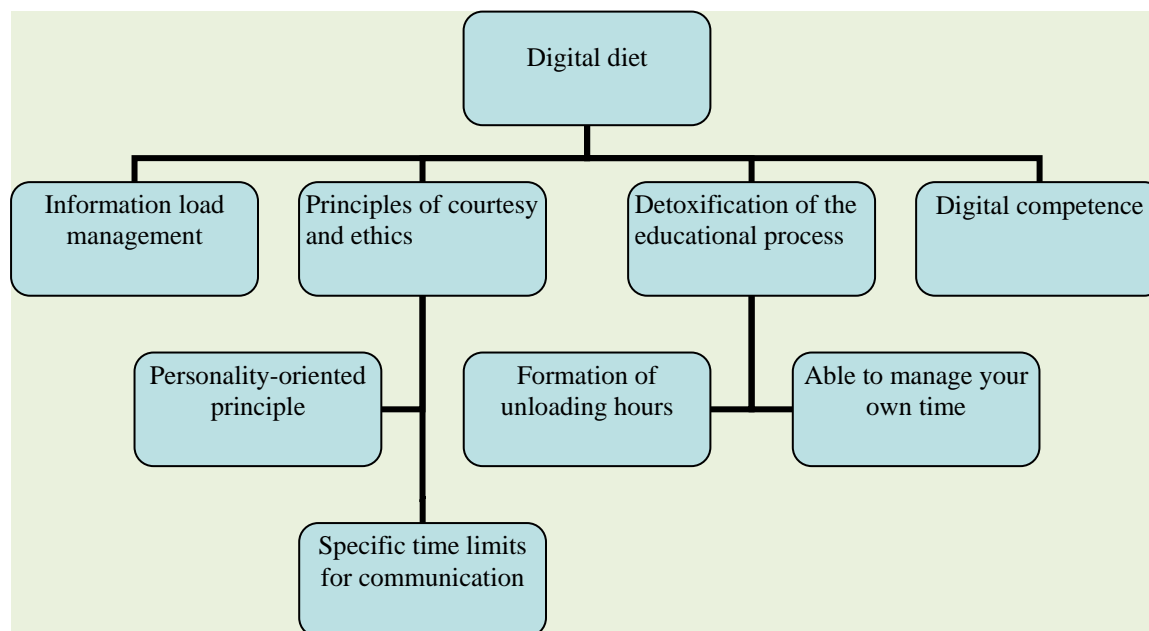
Digital diet as a method of counteracting the psychological challenges of distance learning

In the realities of a digital society, students with limited access to digital tools and the Internet find themselves in social isolation (Nourzaie et al., 2018). This condition is a prerequisite for social inequality, affecting the emergence of emotional and psychological problems. Some experts explain it in such a way that most students compare professional, social success with the opportunities of the Internet (Prokofieva, 2021). Consequently, anxiety, stress, in some cases, and fear as the results of forced social isolation affect the mental health of each person and the consciousness of society as a whole (Pai & Vella, 2022).

For this reason, many contemporary researchers (psychologists and physicians alike) identify the effectiveness of a digital diet as a means of providing emotional and psychological stability, which in turn affects overall physical health and well-being (Vindegaard & Benros, 2020). The concept of a digital diet refers to the appropriateness and selectivity of information use, the use of computer technology within reasonable and comfortable limits.

One of the main aspects of the digital diet in distance learning is the management of the information load, which should take place in accordance with a person-centered trajectory. In addition, instructional materials should be chosen optimally with respect to the characteristics of the learning topic and the time required to process it in a distance format (Prokofieva, 2021). At the same time, the use of modern, innovative methods of presenting information is important for the effective processing of new topics. Other principles of the digital diet are politeness and ethics: specific time limits for communication (correspondence, calls, communication in messengers, social networks, etc.) between students and instructors should be established. In this system, it is important to respect the principle of detoxification. It is about forming a discharge day or hour for both students and teachers (Prokofieva, 2021). Consequently, we believe that the effectiveness of learning during the COVID-19 pandemic can be achieved not only through the improvement of digital competence. Critical perception of digital changes helps to consolidate an objective picture of events, forms adequate behavior within the social distance (See Figure 4).

Figure 4
Schematic model of the basic principles of the digital diet



Authors' development

For this reason, the main factors in the formation of a positive psychological atmosphere are the use of a digital diet, the establishment of a special work-life balance, and successful time

management (Prokofieva, 2021). Acquiring digital competence skills in this process is important to ensure psychological safety and improve a person's mental health in general.

Discussion

Researchers have noted significant changes in student life, particularly an increased mental health burden for this group of youth (Kharytonov et al., 2021). The deterioration of the psychological situation among higher education applicants occurred at a time when free movement bans, campus closures, and social distance measures began to take effect. All of these measures caused tangible disruptions in daily life, changing lifestyles and work patterns, educational attainment, and student-faculty interactions.

According to Pai and Vella (2022), a significant percentage of students experience negative consequences due to increased stress levels, fears, anxiety, and symptoms of depression due to a sense of uncertainty during their education, technological difficulties with online courses, distance from home in a crisis, social isolation, decreased income, and caution about future employment. Prokofieva's (2021) observation that such trends have been observed in universities around the world is fair. One must agree with Vindegaard and Benros' (2020) assessment that the introduction of quarantine restrictions caused by the COVID-19 pandemic was a challenge to students' psychological health because they found themselves in an unfamiliar learning environment with unclear future prospects, which is also relevant to the Ukrainian reality. At the same time, Kharytonov et al (2021) confirms the result that the lack of external control over the implementation of certain learning tasks, limitation of social contacts and communication negatively affects the psychological state of students.

Also, according to Schumacher and Ifenthaler (2021), self-regulation plays an important role in the concept of digital adjustment of students. We agree with Tytova and Mereniuk (2022) that digital literacy is crucial in a distance learning environment. Consequently, we believe that the higher the level of digital literacy, the easier it is for teachers and students to adapt to the educational changes, which affects the solution of many psychological problems that arise during the organization of learning activities. What has escaped the attention of researchers is the fact that even before the quarantine restrictions and the COVID-19 pandemic sociological surveys showed an increase in fear, anxiety, depression among students around the world, problems with proper self-esteem, difficulties with psychosomatic, etc.

The traumatic effects of the loss of economic stability on the psychology and stability of students are still underestimated. In today's societal realities, students do not receive a stipend, depend on their parents, and partially work part-time in their free time to support themselves. The latter category was under double stress, losing opportunities to earn money and being left without a means of subsistence, tuition payment, and the ability to rent housing. The quarantine led to limited options for active student recreation, personal communication with friends, fellow students, etc. The introduction of distance education has resulted in higher education applicants being forced to stay at home in front of a computer during the day (Blumenthal, 2020). Live communication has been replaced by the use of social networks or messengers, which can cause a deepening dependence on the digital environment, the development of a sense of loneliness, and a fear of getting rid of friends (Latipov et al., 2019).

The management of higher education institutions, given the growing problems, should pay more attention to the organization of the educational process, monitor the life activities of students, understand the psychological effects of the COVID-19 pandemic and other adverse factors on the mental state of students. The negative impact is extremely important, critical and must be ensured by guarantees concerning urgent measures for the prevention and solution of problems with the mental health of higher education applicants. Specialists should receive the appropriate training in order to respond to the demands of the time and provide effective support. This is especially true in relation to economic problems, which against the background of other difficulties in the use of distance education have been partly overlooked by researchers.

In the case of limitations and future studies: Note that a significant limitation for this study was that the experimental part was conducted under wartime conditions, when the psychological state of the respondents was under stress. Obviously, the results of the study will need to be tested in peacetime as well.

Conclusions

The results of this study support the view that most participants in the experiment had average (or below-average) digital literacy. Obviously, this is what contributed to many of the mental problems arising from the organizational moments of e-learning implementation. We believe that improving digital competence (especially in teachers) will avoid many stressors. Effective means to confront psychological challenges is the appeal of applicants for higher

education to the organization of self-help, increase or real self-esteem, self-reflection, and awareness of the need for psychological help.

Given the relevance of the issue of fear formation and other psychological disorders among students during distance learning, the unclear timing of the COVID-19 pandemic, the continued use of the online education model in universities prompts the following consideration of the above issues in further scientific research. Relevant for further consideration will be to determine the relationship of increased digital competence and mental health, its effectiveness on the organization of the learning process.

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