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Psychological readiness of students for distance learning

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Abstract

The COVID-19 epidemic in 2020 showed that the global education system requires a certain transformation. To preserve the health of citizens, many states transferred educational institutions to a distance learning format. Such conditions can have a different psychological effect on students, therefore some of them may not be psychologically ready for them. The purpose of the research is to study the degree of students' psychological readiness for distance learning. The study recruited 107 undergraduate and graduate students of "Preschool education" profile. The research methods were selected to cover every aspect of a person's psychological readiness: motivation, self-regulation, emotionality and evaluation. The research of psychological readiness revealed the types of students' internal and external motivation, their features of self-regulation in the process of fulfilling intentions, purposefulness, planning, perseverance, emotional and evaluative attitude to educational activities and the chosen profile, the degree of satisfaction with studies, and how these indicators are related to each other. The survey also brought out such indicators as the need for distance learning, the possibility of deterioration in the quality of education due to ubiquitous distance learning, students' preferences for online education, the degree of their satisfaction with distance learning, and the level of their professional competencies development using distance learning. The data obtained can be used to create an individual educational route for students in case of distance learning, and to make certain recommendations for developers of distance courses. The psychological characteristics of students should be taken into account.

Keywords: psychological readiness, distance learning, online learning, pedagogical education.

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Introduction

Distance learning at present, in the time of the COVID-19 pandemic, has become widespread throughout the world and remains one of the major ways to implement educational programs in countries where the regime of strict restrictions takes place, or as an auxiliary element of blended learning in countries where sickness rate has stabilized (RBC, 2021). Many authors (Zakharova & Tanasenko, 2019; Leontyeva & Rebrina, 2018; Fomina, 2015; Strizhenko, 2016; García-Peñalvo et al., 2020; Moore et al., 2011) remark that online learning in its perspective helps students to independently choose the pace of learning and class time, create an individual learning trajectory, master the skill of self-study, the opportunity to get an education from the best universities in the world being in any country, get a new profession and improve professional qualifications, attract highly qualified scientists and specialists to the development of new educational technologies, a high level of independent student activity based on interactive interaction with electronic educational resources, a large number of various research tasks. character, the potential of collective creativity in the course of joint group forms of project work. However, it should be noted that distance learning has a number of disadvantages, such as dependence on a high-quality Internet connection; reduced level of social contacts both between students and between students and the teacher; difficult and sometimes impossible (for example, for medical students) implementation of students' practical training; lack of control over student's work during the lesson (Adverse consequences of school closures, 2020; Coronavirus reveals a need to bridge the digital divide, 2020).

Due to the fact that the global transition to distance learning format took place spontaneously, by force, many students turned out to be not ready for such life changes due to many factors, including psychological ones. At such a time, students need to provide enhanced psychological support from the university staff, use all available methods to maintain student motivation for learning activities.

Purpose and objectives of the study

This research covers the study of psychological readiness for distance learning in students of a pedagogical profile. Using qualitative, quantitative and statistical analyses, we tried to identify the relationship between such components of a person's psychological readiness as motivation, self-regulation, emotional attitude, value judgment and subjective attitude to online learning.

Literature review

Dyachenko and Kandybovich (1976) describe psychological readiness as one of the components of general readiness for action determined by psychological factors.

General (advance), temporary and situational types of readiness are specified. Ukhtomskiy (1978) singled out psychological readiness as a state of "operational rest" which mechanism ensures the transition from rest to urgent action. Narsesyan and Pushkin (1969) describe readiness as an emotional-volitional state of "vigilance" and which includes 3 components: an image of the action structure that is carried out after an emergency signal; the general state of the body which ensures the speed of actions performed based on life experience; psychological focus on the implementation of specific actions aimed to perform and eliminate emergency situations. Sanzhaeva (2016) considered psychological readiness as a stable characteristic of a person, desire to overcome difficulties based on knowledge, skills and abilities. She identified 5 components of readiness: constructive, gnostic, organizational, design and communicative. Levitov (1964) understood psychological readiness as an integral characteristic of activity within the period which reflects the uniqueness of mental processes depending on reflected phenomena and objects of reality, mental properties and state of the personality. The author writes: "Readiness can be considered as person's suitability or unsuitability to perform the work, as availability or lack of abilities necessary for this work" (p. 221). Nizhegorodtseva (2001) believes that the structure of activity-important qualities that activate, direct, control and implement this activity in specific executive actions makes the principle of psychological readiness for activity. The following components are identified in the structure: personal-motivational, regulatory, emotional, evaluative. Each block is considered as a personality characteristic that allows us to assess psychological readiness for activity on the whole. Chikova (2014) concluded in her study of psychological readiness in students for a professional activity that readiness depends on academic performance and education that implies a combination of personality traits and is specific at each level. Avdeeva & Manuylenko (2019) studied the formation of psychological readiness in students - future teachers and identified the following series of activities aimed at enhancing the level of readiness: a series of seminars on the problem of social and psychological readiness, social and psychological training; pedagogical modeling; practical training. Spiridonova and Karpushova (2021) investigated the psychological readiness of students for joint and autonomous activities in the process of online learning and came to the conclusion that students with the maximum level of autonomy-compatibility ratio showed the best results and motivation during training at distance courses. Semenova, Guseva and Possel (2019) researched the structure of psychological readiness to use distance learning technologies in teachers; they identified certain vulnerabilities in the structure of readiness (negative emotional reactions, incorrect semantic motives) and emphasized the need to develop technological readiness for successful psychological readiness of the teacher's personality.

Methodology

The study was conducted at the Institute of Psychology and Education of Kazan (Volga Region) Federal University.

107 full-time and part-time students in the bachelor's degree 44.03.01 Pedagogical education, as well as students of the master's program in the master's degree 44.04.01 "Pedagogical education: Management of preschool education" were recruited for the research. The participants were females aged 19 to 48 years old. The study was carried out in April, and the students were guaranteed the anonymity of their data.

Empirical methods:

•   "The Academic Motivation Scale" (AMS) is a questionnaire designed to measure the manifestation and type of motivation for learning activities (modified by Gordeeva, Sychev and Osin, 2014). The AMS allows us to evaluate both types of internal motivation: cognitive motivation, motivation for achievement and self-development, and intrinsic motivation: self-esteem, introjected (motivation to study prompted by a sense of duty and shame in front of oneself and other people), external (study in order to avoid problems in a future life). Also, the questionnaire identifies amotivation, i.e. lack of interest and desire for learning activities.

•   The questionnaire "Control over the action" (Kuhl, adapted by Shapkin, 1997) is elaborated to diagnose peculiarities of self-regulation processes of intention execution. It identifies two types of volitional activity in testees - direction towards a state (difficulties in prompting an action, repeated thoughts about unfinished business and failures) and direction towards action (negative emotions do not interfere with the fulfilment of intentions, regulation of action is carried out involuntarily and does not require constant conscious control).

•   The Time Structure Questionnaire (TSQ), developed by Feather and Bond and adapted by Mandrikova (2010), is aimed to assess such indicators as purposefulness, continuity (daily tactical planning of goals), persistence, fixation (fixation on a pre-developed action plan, schedule), self-organization and temporal focus on the present.

•   The methodology "My studies at university" by Voronina (2008) makes it possible to identify students' emotional and evaluative attitude to educational activities and the chosen major, as well as the predominance of internal and intrinsic motives for learning.

Using Google Forms students answered questions in a special form. The study tested assumptions that psychological readiness for distance education is due to a certain level of psychological characteristics, such as educational motivation, volitional focus on achieving goals and self-organization of one's life, emotional attitude to learning and major, and the real level of assessment of the current situation associated with remote training format. Pearson's correlation coefficient was used to identify the links between indicators.

Results

The following results were obtained in the research:

Table 1. Average values of the AMS scales.

1.	Cognitive motivation	15.8
2.	Achievement Motivation	14.6
3.	Self-development Motivation	15.4
4.	Motivation for self-esteem	15.4
5.	Introjected motivation	13.9
6.	External motivation	11.6
7.	Amotivation	8.4

The data obtained prove that leading types of motivation in tested students are cognitive motivation, motivation for self-development and self-esteem; as for achievement motivation and introjected motivation, they are somewhat less pronounced. External motivation is less pronounced, and amotivation shows the lowest score. Therefore, students are mostly characterized by internal motives associated with acquiring new knowledge, developing their own abilities and achieving their goals in studies. Also, intrinsic motives are very relevant, namely, the desire to gain knowledge for the sake of increasing self-esteem and the need to prove to others their aspirations in getting qualifications, so as not to feel a sense of shame. However, some students, due to indicators, are not completely satisfied with their studies, they consider getting education as a forced necessity, or they have no desire to study for some individual reasons.
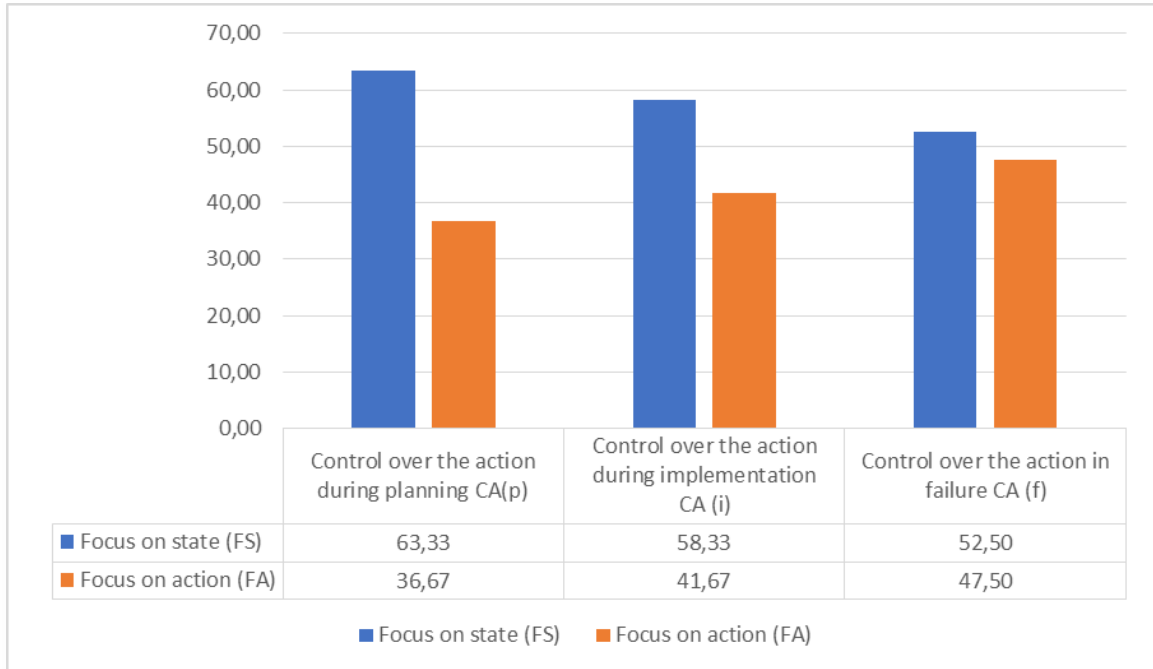
Fig. 1. Percentage of students focused on state/action according to the questionnaire "Control over Action"

Analyzed data evidence that the majority of students, when implementing their intentions, are focused on the state, i.e. they are more susceptible to the influence of negative experience and third-party competing desires. The greatest difference is seen on the "Control over Action during Planning" scale. This may indicate that the majority of students are not always able to maintain control over planning and initiation of intentions, and tend to be distracted by external desires or negative experiences. On the "Control over Action during Implementation" scale, the difference was 5% less. This may specify that most students are not always able to maintain control over the implementation of their intention and may be distracted by other desires or negative experiences. The smallest gap was found in the "Control over Action in Failure" scale. Accordingly, part of the students, despite difficulties surrounding them, can initiate the process of intention implementation, while other students will be distracted by difficulties.

Table 2. Average values on scales of the self-organization activity questionnaire

Scales	Average value
Continuity	17.4
Purposefulness	33.0

Persistence	20.6
Fixation	22.0
Self-organization	9.6
Focus on present	8.9
Total indicator	111.5

The data obtained allow us to state that students are moderately inclined to develop clear plans and systematically follow them to achieve their goals; they are very purposeful and understand their goals when they achieve them. On average, the surveyed students appear to be organized, they can use sufficient willpower to achieve what they want, but they can also switch to other activities. They are also responsible and industrious and strive to fulfil their obligations. When organizing their activities, they tend to rely on internal forces without addressing external means that help manage the time. Besides, respondents tend to appreciate their past and possible future more than the present. In general, students are able to combine a structured approach to manage the time of their lives with spontaneity and flexibility, they are able to appreciate all the components of psychological time and gain valuable experience for themselves from the versatility of their lives.
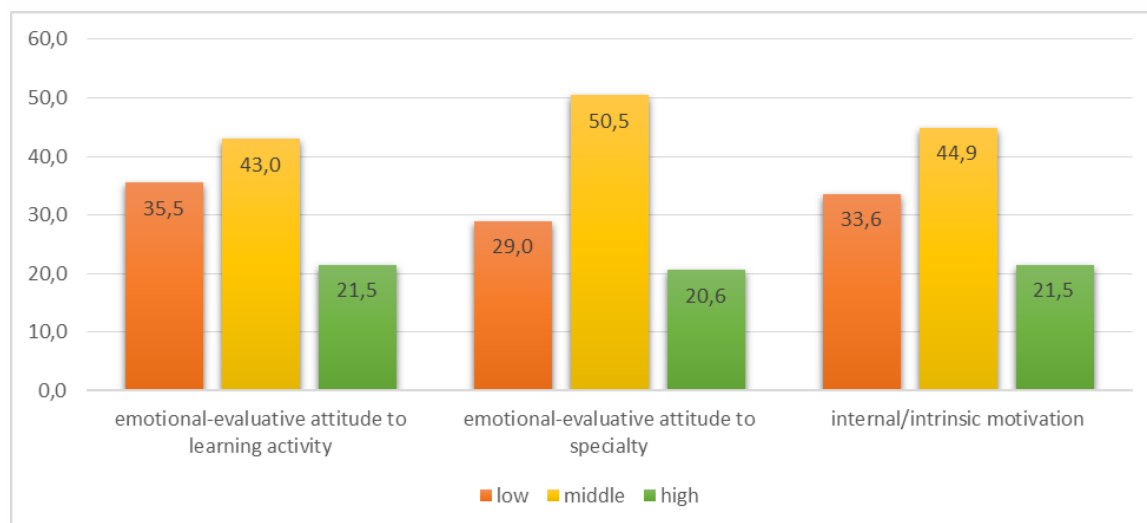

Fig. 2. The percentage of students on the scales of the methodology "My studies at university"

The analysis of the methodology "My studies at university" specifies that almost a third of interviewed students consider studies as meaningless, classes as uninteresting, they are sure that their chosen future profession most likely will not bring them satisfaction and a sense of self-realization. These students are also characterized by intrinsic motivation concerning educational activities, i.e. they probably study to be appreciated by their dearest and nearest or for the sake of advantages that the university degree might provide. Intrinsically motivated students are, as a rule, alienated from the cognitive process and they are passive in the classroom. On the contrary, about a fifth of the respondents demonstrate a high interest in learning accompanied by positive emotions, joy from discoveries and self-realization. They believe that the chosen major is promising and want to achieve in it. Moreover, such students have high internal motivation; educational activity is of a significant personal nature for them, they enjoy the realization of their inner potential. The majority of students, in general, experience positive emotions from the educational process, rationally assess their future profession, though classes and major may not always correspond to their level of expectations, causing negative emotions. The ratio of internal and intrinsic motivation is approximately at the same level in them.

The correlation analysis of indicators between the questionnaires revealed a lot of bilateral links, for example, links at $p \leq 0.05$ level between the scale of "cognitive motivation" and the scales "purposefulness" and "persistence"; between the scale "implementation" from the questionnaire "Control over action" and the scales "emotional-evaluative attitude to learning activity" and "internal/intrinsic motivation" from the methodology "My studies at university". It can be assumed that a high level of cognitive motivation in learning depends on the level of purposefulness, persistence in achieving learning outcomes, the ability to keep an urgent task in focus, as well as to have a positive emotional attitude to learning activities. "The Achievement Motivation" scale (AMS) has a two-way relationship at the level of $p \leq 0.05$ with "Purposefulness", "Perseverance", and "Focus on Present" scales (TSQ), as well as "The Implementation" scale from the questionnaire "Control over Action". It implies that the desire to achieve high results depends on the level of purposefulness and perseverance in educational activities, the ability to value your psychological past and future along with what is happening to you at the moment, and not be distracted from the task by others. The scale "self-development motivation" (AMS) has links at the level of $p \leq 0.05$ with the scales "purposefulness" and "persistence" from the TSQ methodology; this may evidence that the development of one's potential in educational activity depends, to one degree or another, on correct goal setting and proper willful effort applied.

A significant negative correlation at the level of $p \leq 0.05$ was identified for the scale "amotivation" with the scales "purposefulness", "persistence" from the TSQ methodology, and the scales "emotional-evaluative attitude to learning activity" and "internal/intrinsic motivation" of the methodology "My studies at university." The links look logical, because if there is no desire to learn in general, then it will not be necessary to achieve any results, it will not be necessary to make efforts, and the attitude towards learning activity will be negative.

Correlation analysis revealed that the scale "control over action during implementation" has a lot of significant links. At the level of $p \leq 0.05$, the link with the scales "cognitive motivation" and "achievement motivation" from the AMS methodology, "persistence" and "continuity" was confirmed. Therefore, in order to successfully stay in the process of implementing the intention within the required time, to keep the current intention in focus, the student should have a well-formed motivation to study educational material, a desire to achieve certain results in the educational process, plan activities and be persistent. The link with all three scales from the methodology "My studies at university" was confirmed at $p \leq 0.01$ level. It testifies to the fact that the implementation of certain educational tasks depends on satisfaction or dissatisfaction with the learning process at the university.

Discussions

The study of problems that tested students have at the transition to distance learning determines the leading types of motivation: cognitive motivation, motivation for self-development and self-esteem; achievement motivation and introjected motivation are somewhat less manifested; external motivation is less pronounced, and amotivation has the lowest indicator, i.e. internal motives associated with acquiring new knowledge, development of their own abilities and achievement of their goals in studies are more common for students. Intrinsic motives are also relevant for students: the desire to gain knowledge to enhance self-esteem and to prove their aspirations in getting education so as not to experience a sense of shame. A small number of students are not completely satisfied with their studies, they consider gaining education as a forced necessity, or they have no desire to study due to some individual reasons.

The majority of students are focused on state because they are more susceptible to negative experiences and external competing desires. Most students are not always able to maintain control over planning and initiation of intention and tend to be distracted by external desires or negative experiences. Also, a large part of students are not always able to maintain control over the implementation of intention and may be distracted by other desires or negative experiences.

Nevertheless, some students, despite the difficulties surrounding them, can initiate the process of implementing the intention, while the other part of students will be distracted by difficulties from studying in a distance mode.

Students tend to develop clear plans and systematically follow them to achieve their goals, they are very purposeful and understand their goals when they achieve them. The respondents are quite organized, they can use sufficient willpower to realize what they want, but they can also switch to other activities. They are also responsible and industrious, striving to fulfil their obligations. When organizing their activities, they tend to rely on internal forces without addressing external means that help manage the time. Besides, respondents tend to appreciate their past and possible future more than the present. Students are able to combine a structured approach to organize the time of their lives with spontaneity and flexibility, they know how to appreciate all the components of psychological time and gain valuable experience for themselves from the diversity of their lives.

Correlation analysis of indicators revealed a lot of bilateral links between the questionnaires. For example, a high level of cognitive motivation in learning depends on the level of purposefulness, persistence in achieving learning outcomes, the ability to keep an urgent task in focus and have a positive emotional attitude to learning activities. The desire to achieve high results depends on the level of purposefulness, perseverance in educational activities, the ability to value your psychological past and future along with what is happening at the moment, and not be distracted from the task by others. The development of one's potential in educational activity depends, to one degree or another, on correct goal setting and proper willful effort applied. The implementation of certain educational tasks depends to some extent on the satisfaction or dissatisfaction with the learning process at the university.

Students studying online are eager to attend classes even if they experience a slight malaise, compared to offline learning, and they are much less likely to miss classes.

Conclusion

Thus, we can say that psychological readiness in students-future teachers for distance learning depends on many factors such as motivation (motivation for learning activities, as well as academic performance, affect the readiness for distance learning, the desire to study remotely), self-regulation (the ability to quickly adapt to a new learning environment and switch to distance learning), emotional attitudes (positive or negative perceptions of distance learning affect psychological readiness for online learning) and assessment of online learning in terms of expectations and consequences at the end of the course. It can be argued that the success of both traditional and distance learning depends on the psychological readiness of the individual.

And this readiness needs to be trained to form certain skills (psychological, technological). However, due to the fact that the transition to distance learning occurred spontaneously, some of the students were not adequately prepared for this. Therefore, today it is necessary to form situational readiness, skills for obtaining distance education in traditional conditions so that students do not have negative reactions and attitudes to distance learning in the future and feel that they receive a quality education.

Acknowledgements

References

Adverse consequences of school closures (2020). Retrieved from: https://en.unesco.org/covid19/educationresponse/consequences

Avdeeva, I.N., & Manuylenko, V.V. (2019). Formation of Psychological Readiness of Pedagogical Specialties' Students for Professional Activity. *Gumanitarno-pedagogicheskoe obrazovanie*, *5*(4), 134-139. Retrieved from: https://www.elibrary.ru/download/elibrary_43063107_47430093.pdf

Chikova, O. M. (2014). Psychological readiness for educational activities of bachelor students at the university of pedagogical orientation. *The theory and practice of social development*, 18, 202-204. Retrieved from: https://cyberleninka.ru/article/n/psihologicheskaya-gotovnost-k-uchebnoy-deyatelnosti-studentov-bakalavrov-vuza-pedagogicheskoy-napravlennosti

Coronavirus reveals need to bridge the digital divide (2020). Retrieved from: https://unctad.org/news/coronavirus-reveals-need-bridge-digital-divide

Dyachenko, M.I., & Kandybovich, L.A. (1976). *Psychological readiness of a person for activity*. Minsk.

Fomina, A.S. (2015). The educational designing with application of cloud technologies of data retention at google disk (drive) in a higher school. *Theory and practice of social development*, 11, 281-289. Retrieved from: https://cyberleninka.ru/article/n/uchebnoe-proektirovanie-s-primeneniem-google-disk-drive-v-vysshem-uchebnom-zavedenii

García-Peñalvo F.J., Corell A., Abella-García V., & Grande M. (2020). Online assessment in higher education in the time of COVID-19. *Education in the Knowledge Society*, 21, 1-26. https://doi.org/10.14201/eks.23013

Gordeeva, T.O., Sychev, O.A., & Osin, E.N. (2014). "Academic Motivation scale" questionnaire. *Psychological journal*, *35*(4), 98-110. https://publications.hse.ru/mirror/pubs/share/folder/y93jdtmioo/direct/122549995

Mandrikova, E.Yu. (2010). Development of a self-organization activity questionnaire (OSD). *Psychological diagnostics*, 2, 59-83.

Moore, J.L., Dickson-Deane, C., & Galyen, K. (2011). E-Learning, online learning, and distance learning environments: are they the same. *Internet and Higher Education*, *14*(2), 129-135. https://doi.org/10.1016/j.iheduc.2010.10.001

Levitov, N. D. (1964). *On the mental states of a person*. Moscow: Education.

Leontyeva, I.A., & Rebrina, F.G. (2018). Application of distance electronic resources in the educational process of higher education. *Bulletin of Chelyabinsk State Pedagogical University*, 3, 114-124. Retrieved from: https://cyberleninka.ru/article/n/primenenie-distantsionnyh-elektronnyh-uchebnyh-kursov-v-obrazovatelnom-protsesse-vysshey-shkoly.

Nersesyan, L.S., & Pushkin, V.S. (1969). Psychological culture of operator's readiness to emergency action. *Questions of psychology*, 5, 24-31.

Nizhegorodtseva, N.V. (2001). *Psychological readiness of children to study at school*. Abstract dis. doctor of psychological sciences. Moscow state ped. univ. Moscow.

RBC (2021). Students of Russian universities returned to off-line studies. Retrieved from: https://www.rbc.ru/society/08/02/2021/601e1e4b9a794746d03bd324 (in Russ.)

Sanzhaeva, R.D. (2016). Readiness and its psychological mechanisms. *Bulletin of Buryat State University. Education. Personality. Society*, 2, 3-12. Retrieved from: https://cyberleninka.ru/article/n/gotovnost-i-ee-psihologicheskie-mehanizmy

Semenova, G.V., Guseva, Yu.E., & Possel, Yu.A. (2019). The structure of teachers' psychological readiness to use distance learning technologies. *Scientific support of advanced training*, *2*(39), 71-79. https://cyberleninka.ru/article/n/struktura-psihologicheskoy-gotovnosti-k-ispolzovaniyu-distantsionnyh-obrazovatelnyh-tehnologiy-u-pedagogov

Shapkin, S.A. (1997). *Experimental study of volitional processes*: a textbook for universities in the specialty "Psychology". Moscow: Smysl: Institute of Psychology of the Russian Academy of Sciences.

Spiridonova, S.B., & Karpushova, O.A. (2021). Psychological readiness of students for autonomous and joint activities in the process of online learning. *Humanities*, *1*(53), 145-151. https://cyberleninka.ru/article/n/psihologicheskaya-gotovnost-studentov-k-avtonomnoy-i-sovmestnoy-deyatelnosti-v-protsesse-onlayn-obucheniya

Strizhenko, A.A. (2016). Online education: theory and practice. *Economics Profession Business*, 1, 75-78. http://journal.asu.ru/ec/article/view/1337

Ukhtomsky, A.A. (1976). *Selected Works.* Leningrad: Science.

Voronina, O.A. (2008). The diagnostic of students' attitude to educational activity. *Herald of Vyatka State University*, *3*(3), 159-163. https://cyberleninka.ru/article/n/diagnostika-otnosheniya-studentov-k-uchebnoy-deyatelnosti

Zakharova, Yu., & Tanasenko, K. (2019). MOOCs in higher education: advantages and disadvantages for teachers. *Educational issues. Pedagogy*, 3, 176-202. https://doi.org/10.17323/1814-9545-2019-3-176-202