

**19<sup>th</sup> PCSF 2019**  
**Professional Culture of the Specialist of the Future**

**DYNAMICS OF READINESS FOR LEARNING OF UNIVERSITY  
STUDENTS**

Nadezhda Nizhegorodtseva (a)\*, Tatyana Zhukova (b), Tatyana Ledovskaya (c)  
\*Corresponding author

(a) Yaroslavl State Pedagogical University, Respublikanskaya street, 108/1, Yaroslavl, Russia, nnvdoc@mail.ru

(b) Yaroslavl State Pedagogical University, Respublikanskaya street, 108/1, Yaroslavl, Russia,  
mishina\_tatiana@mail.ru

(c) Yaroslavl State Pedagogical University, Respublikanskaya street, 108/1, Yaroslavl, Russia,  
karmennnn@yandex.ru

***Abstract***

The authors consider readiness for learning as the basis of professional development, a component of professional culture, which determines the level of professional achievements of a specialist in modern society. Readiness for learning is studied in the paradigm of the system-genetic approach in psychology and is defined as an integral mental quality, the internal psychological basis of which is the structure of the individual qualities of a person that determine the success of training (qualities required for training). A conceptual model of the psychological structure of readiness for learning of students of pedagogical high school, consisting of five functional blocks qualities required for learning is worked out. The article presents the results of the research of the main indicators of the dynamics of students' readiness for vocational training at high school. The empirical study was conducted on students of pedagogical University of different courses, the total group – 80 people. It is established that in the process of professional training the indicators of quality required for learning development increase, their interrelations are improved, the psychological structure of readiness for training as a whole is optimized. The most significant development effect was noted in relation to quality required for learning: professional orientation, task acceptance, introduction skills, attention performance, arbitrary regulation of activity, empathy, verbal memory. The development of readiness for learning is an indicator of the development of professional culture of students in the process of studying at high school

© 2019 Published by Future Academy [www.FutureAcademy.org.UK](http://www.FutureAcademy.org.UK)

**Keywords:** Professional culture, readiness for learning, professional culture, readiness for learning.



## 1. Introduction

**1.1.** The results of empirical studies published earlier led to the conclusion about the interrelation and interdependence of the notions “readiness for learning” and “professional culture of a specialist” (Nizhegorodtseva, 2018). The professional culture of a specialist begins to form at the initial stage of vocational learning, in the process of mastering the fundamentals of professional activity and relevant knowledge and skills. A sufficient level of readiness for vocational learning ensures the success of mastering the profession and high professional achievements in the future. Readiness for training is considered as an indicator of the level of professional culture (Muzalev, 2014). The research of regularities and mechanisms of professional culture development and readiness for learning is of particular importance for pedagogical specialties (Likhacheva & Gabdulchakov, 2018).

**2.2.** In modern society, the continuity of education (Osborne & Thomas, 2003; Shuller & Watson, 2009) is defined as a prerequisite for well-being throughout life (United Nation, 2015), therefore, the readiness to learn must be considered as a key competence of modern man. Knowledge and skills acquired in the process of professional training is the basis of achievements in educational and professional activities, determine mental development (Shadrikov, 2012), metacognitive personality traits (Karpov, Karpov, Karabushchenko & Ivashchenko, 2017), the formation of cognitive control (Kostromina, Mkrtychian, Kurmakaeva, & Gnedykh, 2017).

**2.3.** Readiness for learning reflects the degree of mastery of students' learning activities and determines the level of academic and professional performance (Ledovskaya, 2016; Zhukova, 2016). Statistically, there is a significant correlation between the indicator of readiness for learning and indicators of academic (in the period of vocational training) and professional (in the period of work in the specialty) performance of a specialist (Nizhegorodtseva, 2018). The low level of readiness for learning is the reason for the decrease in academic progress, deformations of the specialist's personality and emotional burnout already at the stage of learning at the high school (Maslach, 1993). Difficulties of early stages of professionalization and adaptation to university education are caused by a complex of internal factors and reflect the degree of development and individual characteristics of motivational, communicative, cognitive and regulatory personal characteristics of students (Orlov, Pazukhina, Yakushin, & Ponomareva, 2018)

## 2. Problem Statement

**2.1.** In the context of the system-genetic approach in psychology, we define readiness for learning as an integral mental quality, the internal (psychological) basis of which is the structure of the individual qualities of a person. We call them qualities required for learning, because they determine the success of learning. Ananyev (1974) defined the student's age as the period of personality formation and development of the future specialist's intellect. In the process of vocational training readiness for learning changes in two directions. Firstly: qualities required for learning are being developed and improved. Secondly, their interrelations change and improve, as a result of which the psychological structure of readiness for learning is optimized.

Research of dynamics of indicators of quality required for learning development and psychological structure of readiness for learning as a whole is of scientific and practical interest.

**2.2.** Based on these statements, the research problem can be specified by a set of questions. What individual psychological qualities of students are qualities required for learning and can be included in the psychological structure of readiness for learning? What is the nature of the relationship of the components in the psychological structure of qualities required for students' learning? What is the value of individual quality required for learning in the framework? What structural and substantive changes occur in the psychological structure of the students' readiness for learning in the process of studying at the University?

### **3. Research Questions**

For empirical investigation and solving the identified problems the objectives of the study are defined.

**3.1.** To develop a conceptual model of readiness for learning and to identify the components that are part of the psychological structure of qualities required for learning high school students.

**3.2.** To determine the indicators of qualities required for learning of students of different courses of study in the process of empirical research.

**3.3.** To reveal interrelations of qualities required for learning and indicators of the organization of psychological structure of readiness for learning of students of different courses of training.

**3.4.** Identify groups of students participating in the study. The study involved undergraduate students of psychological and pedagogical direction of training, 1-4 courses of study. The total number of participants is 80 people.

**3.5.** Qualitative and quantitative analysis of the research results

### **4. Purpose of the Study**

The purpose of the study was to determine the components of the psychological structure of the readiness of students to learn at high school as a component of professional culture and its dynamics at different stages of vocational training at high school/

### **5. Research Methods**

**5.1.** Theoretical and phenomenological analysis of readiness for learning, the definition of the conceptual model and the component composition of the psychological structure of the readiness of students to study at high school.

**5.2.** Standardized methodology "Comprehensive diagnostics of students' readiness for learning at university (KDGs)" (Nizhegorodtseva & Zhukova, 2012) The methodology is based on theoretical ideas about the systemogenesis of professional and educational activities, the psychological structure of activities, its dynamics at different levels of education and professionalization (Shadrikov, 2013) The study procedure involves 14 subtests aimed at the diagnosis of qualities required for learning; the results of each subtest are evaluated on a 5-point standard scale. The integrated indicator of readiness for learning is determined on the basis of testing, it is the sum of the standard points on the 14 subtests' techniques.

- 5.3. Analysis of formal (academic progress) and informal (expert evaluation) indicators of learning and professional development.
- 5.4. Methods of statistical analysis of the results of empirical research: Kolmogorov-Smirnov test to assess the normality of the distribution of values in the sample; Kruskal-Wallis N test to assess the homogeneity of values in the sample; R – Spearman coefficient for correlation analysis.

## 6. Findings

6.1. The conceptual model of psychological structure of readiness for learning of students of pedagogical high school on the basis of representations about structure of activity (Shadrikov, 2013) is defined. The psychological structure of activity in the paradigm of the system-activity approach is defined as an integral unity of the mental qualities of the subject, ensuring the implementation of the activity in accordance with its purpose. The level of formation of the psychological structure of the activity determines the subject's readiness for the development and implementation of this activity. The psychological structure of activity includes the qualities of different levels of individuality: personal, subject, individual.

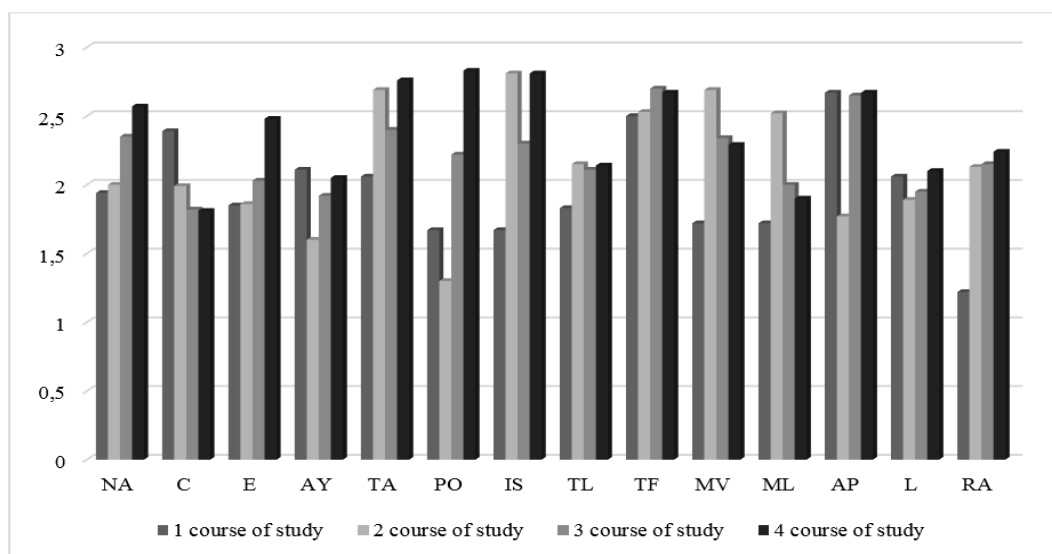
The conceptual model of readiness for learning includes five functional blocks qualities required for learning (Table 01).

On the basis of the correlation analysis it is established that all theoretically selected qualities required for learning are included in the structure of readiness for learning, they form significant relationships with each other.

**Table 01.** Conceptual model of psychological structure of students ' readiness for professional training

<b>I. Personality motivational block</b>	<b>II. Representation of the objectives of the activities</b>	<b>III. Presentation of the content and ways of performing activities</b>	<b>IV. Informational basis of activity</b>	<b>V. Management of educational activities</b>
- the need to achieve - communication - empathy - attitude to yourself	- task acceptance - professional orientation	- introductory skills	- logical thinking - thinking flexibility - verbal memory - logical memory - attention performance	- learnability - arbitrary regulation of activity

6.2. The analysis of indicators of development of qualities required for learning students of different courses is made. (Figure 01).



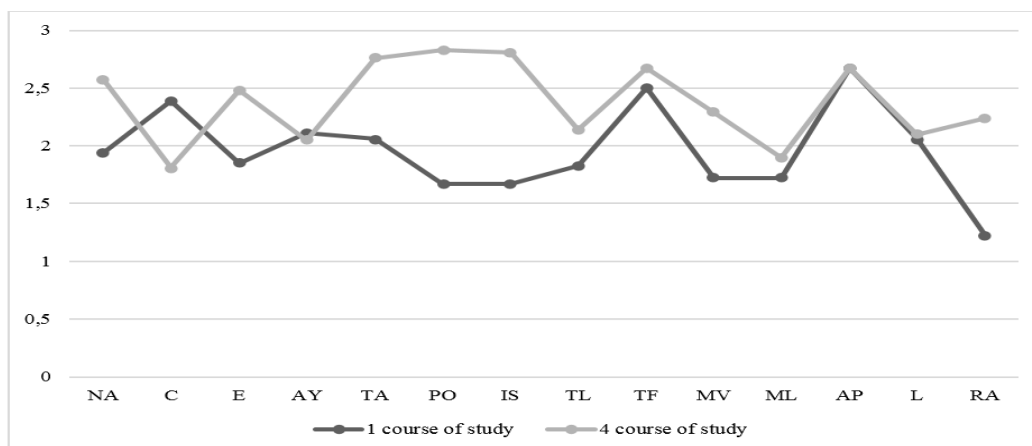
**Figure 01.** Dynamics of indicators of quality required for learning development of students of different courses. *Abbreviations of qualities required for learning:* NA - the need to achieve, C - communication, E - empathy, AY - attitude to yourself, TA - task acceptance, PO - professional orientation, IS - introductory skills, TL - logical thinking, TF - thinking flexibility, MV - verbal memory, ML - logical memory, AP - attention performance, L - learnability, RA - arbitrary regulation of activity.

It is established that qualities required for learning in the process of vocational training at high school develop unevenly. Three types of dynamics qualities required for learning are established.

1. A steady increase in the rate of development (the need to achieve, empathy, arbitrary regulation of activity).
2. A sustainable decline in development rate (communication).
3. Reduction and increase of the development index during the period of training (attitude to yourself, task acceptance, professional orientation, verbal memory, logical memory, attention performance).
4. The absence of significant changes in the development index (thinking flexibility, learnability).

The difference in the types of dynamics qualities required for learning is due to their specificity. Some qualities are stable personality traits; at student age, they reach the highest possible level of development and do not change under the influence of vocational training. Other qualities have internal dynamics and are sensitive to learning.

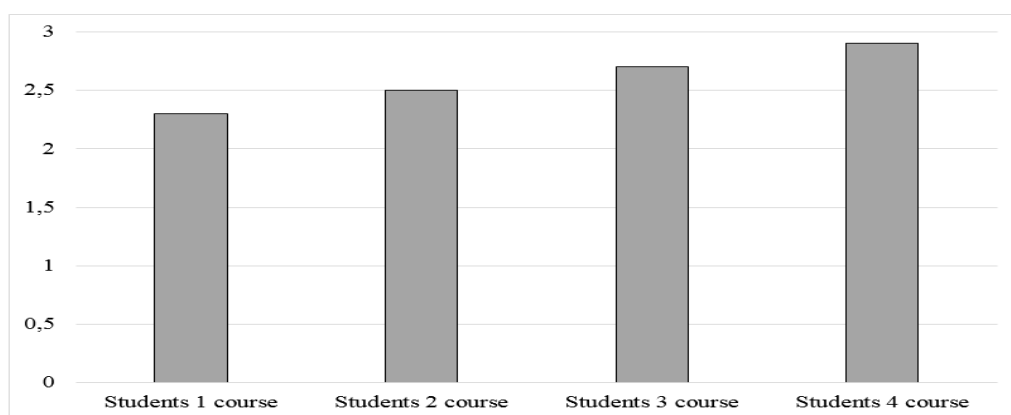
In general, the dynamics of development indicators qualities required for learning reflects the restructuring of the mental mechanisms for the implementation of activities in the process of vocational training. The positive dynamics of indicators from the first year of study to the fourth year is identified (Figure 02).



**Figure 02.** Dynamics of indicators of qualities required for learning students of the first and fourth years of study. *Abbreviations of qualities required for learning:* NA - the need to achieve, C - communication, E - empathy, AY - attitude to yourself, TA - task acceptance, PO - professional orientation, IS - introductory skills, TL - logical thinking, TF - thinking flexibility, MV - verbal memory, ML - logical memory, AP - attention performance, L - learnability, RA - arbitrary regulation of activity.

On the basis of statistical analysis, significant differences are identified in the development of such qualities required for learning students of the first and fourth courses of study as: empathy ( $P < 0,01$ ), task acceptance ( $P < 0,001$ ), professional orientation ( $P < 0,0001$ ), introductory skills ( $P < 0,0001$ ), logical thinking ( $P < 0,005$ ), attention performance ( $P < 0,0001$ ), verbal memory ( $P < 0,0001$ ), arbitrary regulation of activity ( $P < 0,006$ ). Significant differences in academic progress ( $P < 0,0001$ ) and readiness for learning ( $P < 0,015$ ) among students of the first and fourth courses of study are established.

The positive dynamics of the indicator of readiness for learning in the process of vocational training is revealed (Figure 03).



**Figure 03.** Dynamics of indicator of readiness for professional training of students of pedagogical high school. *Abbreviations of qualities required for learning:* NA - the need to achieve, C - communication, E - empathy, AY - attitude to yourself, TA - task acceptance, PO - professional orientation, IS - introductory skills, TL - logical thinking, TF - thinking flexibility, MV - verbal memory, ML - logical memory, AP - attention performance, L - learnability, RA - arbitrary regulation of activity.

**6.3.** On the basis of the correlation analysis the significant interrelations of qualities required for learning in the structure of readiness for learning of students and its characteristics important from the point of view of understanding of dynamics of readiness for learning of students in the process of vocational training are established (Table 02).

**Table 02.** Indicators of psychological structure of readiness for professional training of students of the first and fourth courses

№	Indicators of psychological structure of readiness for professional training	Year 1	Year 4
1	Number of structure components	14	13
2	Total number of correlations of qualities required for learning in structure	13	19
3	Number of significant correlations in the structure	9	10
4	Average weight of a structure component	2,8	3,6
5	Index of the structure coherence	9	24
6	Structure divergence index	11	2
7	Index of organization of the structure	- 2	22

Analysis of the results allows us to conclude about the positive dynamics of the structure of readiness for learning and its restructuring in the process of vocational training. The number of components of the structure at the beginning and at the end of undergraduate studies differs insignificantly, but the number of correlations increases significantly.

The weight of the component in the structure of readiness for learning of fourth-year students is significantly higher than that of first-year students. It allows making a conclusion about the active restructuring of the psychological bases of educational activity of students, the transition from the educational activities of the school type to educational and professional activities, about the beginning of the development of the actual professional activities. This conclusion is confirmed by structural indicators: the consistency and organization of the structure significantly increase by the fourth year of study, and the divergence indicator decreases

## 7. Conclusion

Readiness for training as a component of professional culture is developed and improved in the process of professional training. At the same time, the individual qualities of students necessary for the effective implementation of educational activities and the development of the teaching profession are actively developing. The most significant development effect was noted in relation to qualities required for learning: professional orientation, task acceptance, introductory skills, attention performance, arbitrary regulation of activity, empathy, verbal memory. At the same time the psychological structure of readiness for learning is actively developing, improving and optimizing, its consistency and organization is increasing. The development of readiness for learning is an indicator of the development of professional culture of students in the process of studying at high school.

## Acknowledgments

The authors express their gratitude to the administration of Yaroslavl State Pedagogical University for creating conditions for the study.

## References

- Ananyev, B. G. (1974). To psychophysiology of student age. In B.G. Ananyev, (Ed.), *Modern psychological and pedagogical problems of the higher school* (pp. 5-8). Leningrad: Leningrad Publishing House. Un-ta.
- Karpov, A. A., Karpov, A. V., Karabushchenko, N. B., & Ivashchenko, A. V. (2017). The interconnection of learning ability and the organization of metacognitive processes and traits of personality. *Psychology in Russia: State of the Art*, 10(1), 67-79.
- Kostromina, S. N., Mkrtychian, N. A., Kurmakaeva, D. M., & Gnedykh, D. S. (2017). The interrelationship between cognitive control and academic success of first-year students: An interdisciplinary study. *Psychology in Russia: State of the Art*, 10(4), 60-75.
- Ledovskaya, T. V. (2016) Psychological structure of educational activities of introverted students. *Yaroslavsky Pedagogical Bulletin*, 4, 161-167.
- Likhacheva, S., & Gabdulchakov, V. (2018). Professional culture, pedagogical skills of kindergarten teacher: indicators and procedures of diagnosis. *The European Proceedings of Social & Behavioural Sciences*, 51, 483-492. <https://doi.org/10.15405/epsbs.2018.12.02.52>.
- Maslach, C. (1993). *Professional burnout: Recent developments in the theory and research*. Washington, DC: Taylor & Francis.
- Muzalev, A. A. (2014). Professional culture and its role in the formation of the professional qualities of a specialist in the conditions of a vocational school. *Young Scientist*, 4, 1040-1045.
- Nizhegorodtseva, N. V. (2018) Readiness for learning as a component of the professional culture. *The European Proceedings of Social & Behavioural Sciences*, 51, 823-829 <https://doi.org/10.15405/epsbs.2018.12.02.89>
- Nizhegorodtseva, N. V., & Zhukova, T. V. (2012). *Comprehensive diagnostics of students' readiness for learning in a university (KDGs)*. Yaroslavl: Publishing House of YAGPU
- Orlov, A. A., Pazukhina, S. V., Yakushin, A. V., & Ponomareva, T. M. (2018). A study of first-year students' adaptation difficulties as the basis to promote their personal development in university education. *Psychology in Russia: State of the Art*, 11(1), 72-83
- Osborne, M. J., & Thomas, E. J. (2003). *Lifelong Learning in a Changing Continent: Continuing education in the Universities of Europe*. Leicester: NIACE.
- Shadrikov, V. D. (2012). Students' development in the learning process. *Psychology in Russia: State of the Art*, 5, 388-404.
- Shadrikov, V. D. (2013). *Psychology of human activity*. Moscow: Publishing House of the Institute of Psychology of the Russian Academy of Sciences.
- Shuller, T., & Watson, D. (2009). *Learning Through Life. Inquiry into the Future for Lifelong Learning*. Leicester: NIACE.
- United Nation. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development*. Retrieved from <https://sustainabledevelopment.un.org/post2015/transformingourworld>
- Zhukova, T. V. (2016). Dynamics of qualities required for learning of students of a pedagogical university. *Yaroslavsky Pedagogical Bulletin*, 6, 285-289.