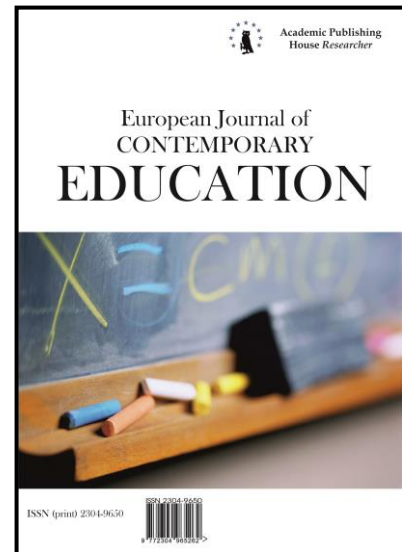




Copyright © 2020 by Academic Publishing
House Researcher s.r.o.
All rights reserved.
Published in the Slovak Republic
European Journal of Contemporary Education
E-ISSN 2305-6746
2020, 9(1): 89-101
DOI: 10.13187/ejced.2020.1.89
www.ejournal1.com

WARNING! Article copyright. Copying, reproduction, distribution, republication (in whole or in part), or otherwise commercial use of the violation of the author(s) rights will be pursued on the basis of international legislation. Using the hyperlinks to the article is not considered a violation of copyright.



A High Score for the Unified State Examination for an Applicant – A “Quality” Graduate for the Educational System in the Future?

Roman S. Nagovitsyn^{a, *}, Aleksander Yu. Osipov^{b, c, d}, Mikhail D. Kudryavtsev^{b, d, e, f},
Valentina S. Bliznevskaya^b

^a Glazov State Pedagogical Institute, Russian Federation

^b Siberian Federal University, Russian Federation

^c Krasnoyarsk State Medical University named after professor V.F. Voyno-Yasenetsky, Russian Federation

^d Siberian Law Institute of the Ministry of Internal Affairs of the Russian Federation, Russian Federation

^e Reshetnev Siberian State University of Science and Technology, Russian Federation

^f Krasnoyarsk State Pedagogical University of V.P. Astafyev, Russian Federation

Abstract

Today, the formation of the personnel potential of the pedagogical educational system is characterized in terms of “double negative selection” when not the best school graduates go to the pedagogical institute and not the best graduates of the institute go to the educational system. The presented contradiction has determined the goal of the study: to develop a model of the individual trajectory of student training to improve the quality of the graduate of the pedagogical profile based on the development of its substantial and level characteristics and a correlation analysis between the quality of the entrant and the graduate of the pedagogical institute. The experiment was conducted among (n = 328) full-time students who completed their studies at the Pedagogical Institute in 2017–2019. Based on the development of monitoring the quality of formation of a student – a future teacher, it has been proved that a high score of the Unified State Examination by an applicant is not always an indicator of the high quality of a graduate for the educational system in the future. On the basis of the author’s model, the study has substantiated the position that the concept of selection of pedagogical institutes and the quality of professional training of a future teacher should reflect the tendency to move from standardization to individualization of the process at all levels of “enrollee-student-beginner teacher”. In practical

* Corresponding author

E-mail addresses: gto18@mail.ru (R.S. Nagovitsyn), ale44132272@ya.ru (A.Yu. Osipov),
kumid@yandex.ru (M.D. Kudryavtsev), bliznevskaya@mail.ru (V.S. Bliznevskaya)

terms, the introduction of the author's model will individualize vocational training and reduce the lack of "quality" teaching staff in the system of general and additional education.

Keywords: quality of education, student, pedagogical institute, Unified state exam, model.

1. Introduction

Today, there is an ambiguous situation in Russian society in relation to the educational system: periods of satisfaction are replaced by stages of various criticisms (Klyachko, 2019; Margolis, 2015). In society, questions are being actively raised regarding the implementation of the innovative content of education, the search for innovative approaches to improving the quality of training of future teachers and the professional skills of young specialists (Ilyina, Loginova, 2019; Nagovitsyn et al., 2018; Ryabova, 2004). Of particular relevance are active discussions on the issue of increasing social prestige and the status of the teaching profession (Borisenkov, 2015; Khusnutdinova, 2017; Nagovitsyn et al., 2019; Volchegorskaya et al., 2018). Quite often, one can hear the opinion not only in Russia but also abroad (Melki et al., 2018; Wadii et al., 2018; Yankovych et al., 2019) that the level of teaching staff does not meet the goals and standards of modern higher and secondary education (Barber, Murched, 2008; Bowe and Gore, 2017).

Among the determining and key factors on which the development of teacher education depends on the level of its qualitative characteristics (Evans, 2014; Ledovskaya et al., 2019; Ojeda, 2019). However, at present, there are significant differences in understanding and interpretation in the concept of "quality of training or education of teachers" and its substantial characteristics (Gore et al., 2015; Hanushek, Rivkin, 2010; Lenskaya, 2008).

Modern interpretations of the quality of education have different definitions (Ilyina, Loginova, 2019; Savchenko et al., 2018; Saquicuya et al., 2019). From the social and psychological-pedagogical category that determines the level and result of the education process to increase the level of special competence (Panina et al., 2019) and the mental, moral and physical development that students achieve at a certain stage (Hanushek, Rivkin, 2010; Osipov et al., 2016; Perevoshchikova et al., 2019). Before the integral property, which determines the ability of the pedagogical system to meet the existing and potential needs of the individual and society for the training of highly qualified teachers (Gore et al., 2015; Lenskaya, 2008; Valles et al., 2015). As shown by the Law on the Education of the Russian Federation: the quality of teacher education is a comprehensive characteristic of educational activities and student training, expressing the degree of their compliance with federal state educational standards and the requirements and needs of the individual or legal entity in whose interests educational activities are carried out (Perevoshchikova et al., 2019). A detailed sociological analysis of opinions on this issue from various points of view indicates a fundamental difference and looks at the analogy of the quality of teacher education with market or economic categories of the service sector (Barakhsanova et al., 2017; Darling-Hammond, 2000; Saquicuya et al., 2019).

The approaches to the process of monitoring the quality of teacher education are ambiguous in the modern scientific world (Darling-Hammond, 2000; Emelyanova et al., 2019; Miranda et al., 2018). Assessment of the quality of professional training of teachers can be the academic success of students, the results of final qualification exams, individual achievements of students during training, etc. (Harris, Sass, 2011; Leguey et al., 2018; Perevoshchikova et al., 2019). In this area, there is a significant amount of scientific work revealing the various facets of this process (Desimone, 2009; Nagovitsyn et al., 2019; Saquicuya et al., 2019). Scientists are invited to consider the phenomenon of assessing the quality of education of a teacher from three main points of view: the individual, state authorities and society (Donovan, Cannon, 2018; Ojeda, 2019; Ryabova, 2004).

A significant part of researchers associates this definition with the content of the concept of "quality" of a young specialist in the field of secondary and additional education, which is determined by measurable and unmeasured characteristics (Emelyanova et al., 2019; Evans, 2014; Tzivinikou, 2015). Among the measured characteristics most often include the level of professional training, the implementation of continuing education, as well as the academic performance of trained students, and the share of the unmeasured – individual creative and communicative competence (Klyachko, 2019; Panina et al., 2019).

In the direction of quality monitoring, there are studies focused on the theoretical and practical justification of the system of independent assessment of the results of vocational training

in an educational institution (Gore et al, 2017; Perevoshchikova et al., 2019). Unified information systems for monitoring and control are proposed through increasing the effectiveness of the implementation of social and professional accreditation of various educational programs of higher education of a pedagogical profile (Barakhsanova et al., 2017; Pavlenko et al., 2019). Based on the interests of employers, through the development of original diagnostic and assessment procedures, models are proposed for assessing the quality management of certification of educational processes in higher education (Saquicuya et al., 2019; Valles et al., 2015).

Initially, not only approaches to the quality of training of a graduate of a pedagogical profile are offered, but also to the quality of an applicant who enters a higher pedagogical school (Gore et al., 2017; Nagovitsyn et al., 2019; Panina et al., 2019). So, the very first indicator of a higher education institution of any profile, including the pedagogical direction, in Monitoring the performance of educational institutions of higher education, is the average score of the Unified State Examination (USE) of students. Namely, students accepted according to the results of the USE for full-time study in bachelor and specialist training programs at the expense of the corresponding budgets of the budget system of the Russian Federation.

Today, the formation of the personnel potential of the pedagogical system of general and additional education is characterized in terms of “double negative selection” (Gore et al., 2016). This selection takes place at the stage of admission to institutes and universities of a pedagogical profile, where not the best graduates of schools and professional colleges go (Ginerva et al., 2016; Ryabova, 2004). And at the stage of transition from a higher educational institution to the labor market, not the best graduates of pedagogical universities go to the educational system (Goldhaber, 2015; Valles et al., 2015).

The identified urgent problem and the contradictions presented above have determined **the aim of the study**: to develop a model of the individual trajectory of student training to improve the quality of the graduate of the pedagogical profile based on the development of its substantial and level characteristics and a correlation analysis between the quality of the entrant and the graduate of the pedagogical institute.

2. Materials and Methods

The experimental study was conducted among (n = 328) respondents: full-time students of the Glazov State Pedagogical Institute, who studied at the bachelor's degree in "Pedagogical education (4 years of study)" and "Pedagogical education (bachelor with a term of study of 5 years). All students participating in the experiment completed their studies at the institute in 2017–2019. at the faculty of teacher and art education. Students were trained according to two standards: the Federal State Educational Standard of Higher Professional Education, approved in 2010–2011 and the Federal State Educational Standard of Higher Education, approved in 2016. By the following training profiles: “Preschool education”, “Primary education”, “Music”, “Physical education”, “Preschool education and Further education”, “Primary education and Biology”, “Primary education and Russian language”, “Primary education and Mathematics”, “Primary Education and Native Language”. Depending on the results of the USE and individual conditions upon admission to the pedagogical institute, the study participants were divided into the following experimental groups (EG) (n = 7):

- EG1 (n = 37) – received by the main competition and having an average of 70 to 80 USE points;
- EG2 (n = 79) – according to the main competition and on average from 60 to 70 USE points;
- EG3 (n = 25) – according to the main competition and on average from 50 to 60 USE points;
- EG4 (n = 22) – in the target direction and an average of 70 to 80 USE points;
- EG5 (n = 63) – in the target direction and on average from 60 to 70 USE points;
- EG6 (n = 68) – in the target direction and an average of 50 to 60 USE points;
- EG7 (n = 34) – according to a special quota (orphans).

According to focus groups, respondents were differentiated regardless of the training profile and the year of graduation. The experimental sample did not include students who entered the institute without taking into account the results of the USE (graduates of secondary vocational education).

Statistical analysis: Processing the results of the study was carried out using the statistical program SPSS Statistics 20. The significance of differences in the results was determined using Chi-square (X^2) at $p < 0.01$ и $p < 0.05$. Mathematical and statistical processing was carried out between the indicators of all experimental groups for each indicator proposed in the study. The choice of this criterion for mathematical and statistical processing is determined by the following characteristics: it allows you to compare distributions regardless of whether they are normally distributed or not, and also regardless of the different number of respondents in focus groups. Application of the criterion is possible when the results of focus groups according to the state of the indicator being studied are distributed into more than two categories, in our case (high, average, low).

The experimental work was carried out from 2013 to 2019 on the basis of the analysis of scientific literature and federal standards of higher education, the collection of official information, the study of archival documents, sociological and comparative methods, modeling, analysis and the formulation of relevant conclusions.

At the first stage of the study, the analysis of scientific and methodological literature allowed us to identify the main areas of training for future teachers for all levels of general education: preschool education, primary general education, basic general education, general secondary education. Monitoring of federal standards of higher education of various generations has identified key aspects of professional training of a bachelor of teacher education: the formation of a complex of general cultural, general professional and professional competencies, academic performance of students in educational, industrial and undergraduate practice, the results of state final certification in the form of protection of Graduation Qualification work.

An analytical study of various approaches to the implementation of the educational process of future teachers in the system of "entrant-student-beginner teacher" pointed to the main directions in the development of indicators on the effectiveness of the quality of student training at the institute. Namely, the portfolio of individual achievements (educational, scientific, cultural, creative, social and sports activities of the student during the training), the complete or expel of student contingent during the training, and ultimately the effectiveness of the employment of graduates in the system of general and additional education.

Based on the detailed development of a system of indicators of the quality of student professional training at a pedagogical institute, each of them was differentiated by levels: high, average and low:

Table 1. Criteria-level system for monitoring the quality of professional development of a student – a future teacher

Indicators	High	Average	Low
Common cultural competency block	Creative activity: the ability to independently make decisions, solve problems / tasks of a theoretical or applied nature based on the studied methods, techniques, technologies	Productive activity: the ability to collect, systematize, analyze and correctly use information from independently found theoretical sources and illustrate theoretical positions with them or substantiate the practice of application	Reproductive activity: presentation of theoretical and practical material within the objectives of the course
Common professional competency block			
Professional competency block			
Educational and industrial and undergraduate practices	is at least 4.7 (inclusive) and there is a set of letters of appreciation from the practice	is at least 3.8, but not more than 4.7 and at least one thank-you note from practice	no more than 3.8 (inclusive)

Portfolio of individual achievements	Increased social scholarship in one of the areas (scientific, educational, social, cultural and creative, sports):		
	for at least three semesters during training	for no more than two semesters during the training	absence for all time of training
Graduation Qualification work	“Excellent” rating: the study has novelty and practical significance, it is mandatory for practical use	“Good” rating: the study has practical value, can be recommended for practical use	“Satisfactory” rating: the study has no novelty and practical significance, it is not recommended for practical use
Institute complete or expel	Institute complete or expel concern at:		
	with successful completion of the final certification on the same profile to which he entered	with successful completion of the final certification in another profile to which he entered	with a statement or academic failure
Employment after Institute	Formal employment by training profile	Formal employment in another training profile	Not officially employment or not employed at all

The criteria-level system proposed in the study for monitoring the quality of professional development of a student – a future teacher, made it possible to implement monitoring of the educational process in detail and propose adjustments to professional training based on an individually differentiated approach.

At the second stage of the study, using the system of indicators developed at the first stage (n = 8) based on a detailed study of the archival documents of the faculty, we analyzed the path of formation of each student – a future teacher (n = 328) from all focus groups (n = 7). Based on the systematization and classification of the studied graduate data in percentage terms for each focus group, a visual representation was implemented for each indicator in Figures 1-8:

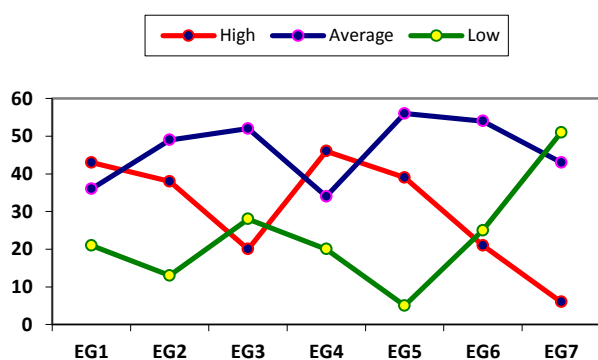


Fig. 1. Results for the block of common cultural competencies

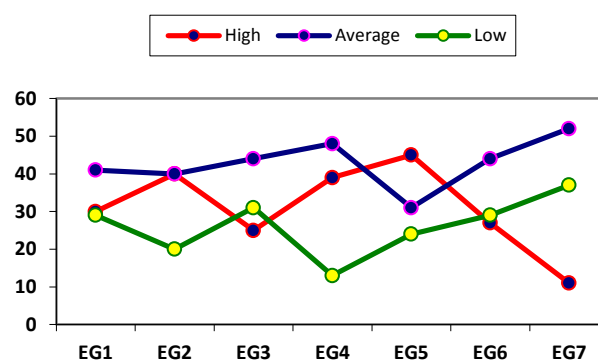


Fig. 2. Results for the block of common professional competencies

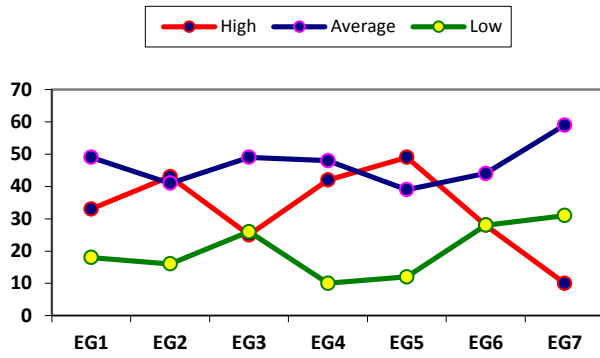


Fig. 3. Results for the block of professional competencies

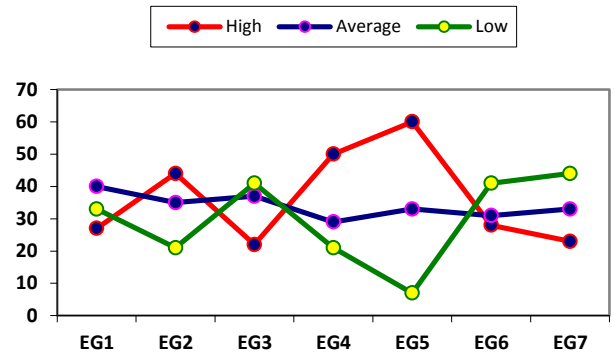


Fig. 4. Results for all types of practices

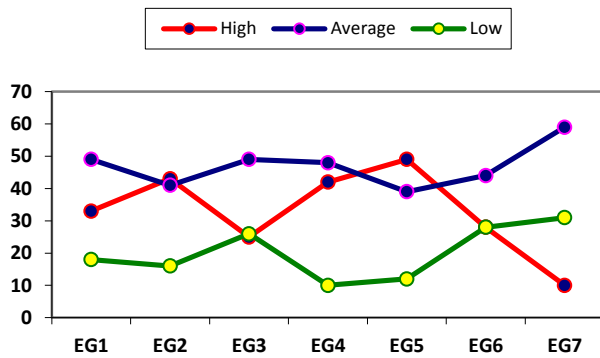


Fig. 5. Portfolio results of individual achievements

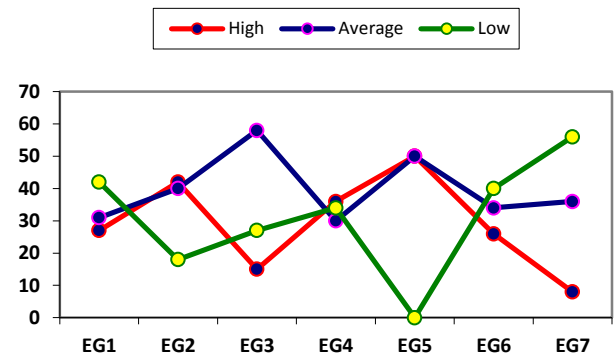


Fig. 6. Results of Graduation Qualification work

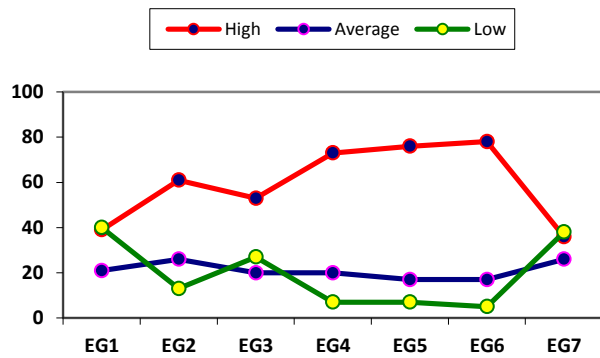


Fig. 7. Results of Institute complete or expel

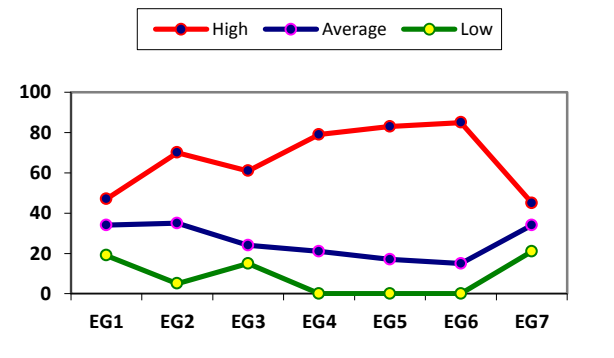


Fig. 8. Results of employment after institute (who graduated from the Institute)

To identify the reliability of the systematized data of graduates by focus groups, further mathematical and statistical data processing was implemented at $p < 0.05$ and $p < 0.01$. As a result, a horizontal ranking of all focus groups for each indicator from high to low performance was revealed. Summary results are presented in [Table 2](#):

Table 2. Comparative results of focus groups based on mathematical-statistical data analysis

Indicators	Results from High to Low*	Comparison**
Common cultural competency block	EG4-EG1-EG5-EG2-EG6-EG3-EG7	EG1/EG2/EG4/EG5 ($p > 0.05$), EG3/EG6 ($p > 0.05$), EG2/EG6 ($p < 0.05$), EG1-6/EG7*** ($p < 0.01$ and $p < 0.05$)
Common professional competency block	EG5-EG2-EG4-EG1-EG6-EG3-EG7	EG2/EG4/EG5 ($p > 0.05$), EG5/EG1 ($p < 0.05$), EG1/EG3/EG6 ($p > 0.05$), EG1-6/EG7 ($p < 0.01$ and $p < 0.05$)
Portfolio of individual achievements	EG5-EG2-EG4-EG6-EG1-EG3-EG7	EG2/EG1 ($p < 0.01$), EG5/EG4 ($p < 0.05$), EG1/EG4 ($p < 0.05$), EG2/EG4 ($p < 0.05$), EG3/EG6 ($p < 0.05$), EG1/EG6 ($p > 0.05$), EG1-6/EG7 ($p < 0.01$ and $p < 0.05$)
Professional competency block	EG5-EG4-EG2-EG6-EG1-EG7-EG3	EG2/EG1 ($p < 0.05$), EG5/EG4 ($p < 0.05$), EG2/EG4 ($p > 0.05$), EG1/EG3/EG6/EG7 ($p > 0.05$), EG2/EG6 ($p < 0.05$)
Graduation Qualification work	EG6-EG5-EG4-EG2-EG3-EG1-EG7	EG3/EG1 ($p < 0.05$), EG2/EG1 ($p < 0.01$), EG4/EG2 ($p < 0.05$), EG4/EG5/EG6 ($p > 0.05$), EG2/EG3 ($p < 0.05$), EG1/EG7 ($p > 0.05$)

* Results from High to Low by the number of high-level students by the corresponding indicator;

** in comparison, for $p < 0.01$ and $p < 0.05$, the first is EG, which has a higher result;

*** EG1-6/EG7 – mathematical-statistical comparison of each individually EG1, EG2, EG3, EG4, EG5, EG6 in comparison with EG7

3. Findings

The implemented comparative statistical analysis for each indicator made it possible to determine the positive and negative aspects of the professional training of students – future teachers. EG7 students, orphans who entered the pedagogical institute under a special quota, turned out to be the lowest category of students in terms of effectiveness. For all indicators, the significance of differences between the EG7 group and other focus groups was recorded at $p < 0.05$ and $p < 0.01$, except for academic performance in all types of practices ($p > 0.05$) and in addition to the indicator for deductions with the EG1 group ($p > 0.05$).

EG1 students, who entered the pedagogical institute in the main competition and who had the highest average USE (70-80 points), turned out to be low on the indicators "Institute complete or expel" and "Employment after Institute". These data prove the need to adjust vocational training with these students and to implement an individually-differentiated approach before their employment in the education system.

Of particular note are students of EG5 and EG6, who entered the target area and have lower scores when they are admitted, compared to groups EG1 and EG4. Students with 60-70 USE points in their arsenal were ahead of all groups in the indicators "Professional competency block", "Portfolio of individual achievements", "Educational and industrial and undergraduate practices". In turn, students studying in target areas, having in their arsenal upon admission only 50-60 USE scores, showed the highest rates for the most key indicators of the quality of professional training, "Institute complete or expel" and "Employment after Institute".

The results of focus group students who entered with higher USE scores in comparison with lesser USE scores in the criteria-level monitoring system proves the opposite dynamics in the success of their studies at the institute. On the basis of mathematical and statistical processing, the effectiveness of the educational process in a pedagogical institute is not sufficient with a contingent of students who have a higher USE result upon admission. In turn, monitoring of focus group students who entered the main competition in comparison with students with targeted areas proves the positive effect of concluding a target contract with applicants. On the basis of mathematical and statistical processing, a high level of quality of the formation of future teachers

among students with targeted areas is reliably manifested compared with the contingent of students who entered the main competition.

The classification of focus groups by horizontal ranking of all focus groups for each indicator determined the vector of additional educational work with students to improve the quality of teacher training for general and additional education. The identification of focus groups that have lower statistical indicators on average for the group determined the main directions for adjusting vocational training for future recruits and training students at the pedagogical institute. As a result, a model of an individual trajectory of professional training to improve the quality of a graduate of a pedagogical profile (Fig. 9):

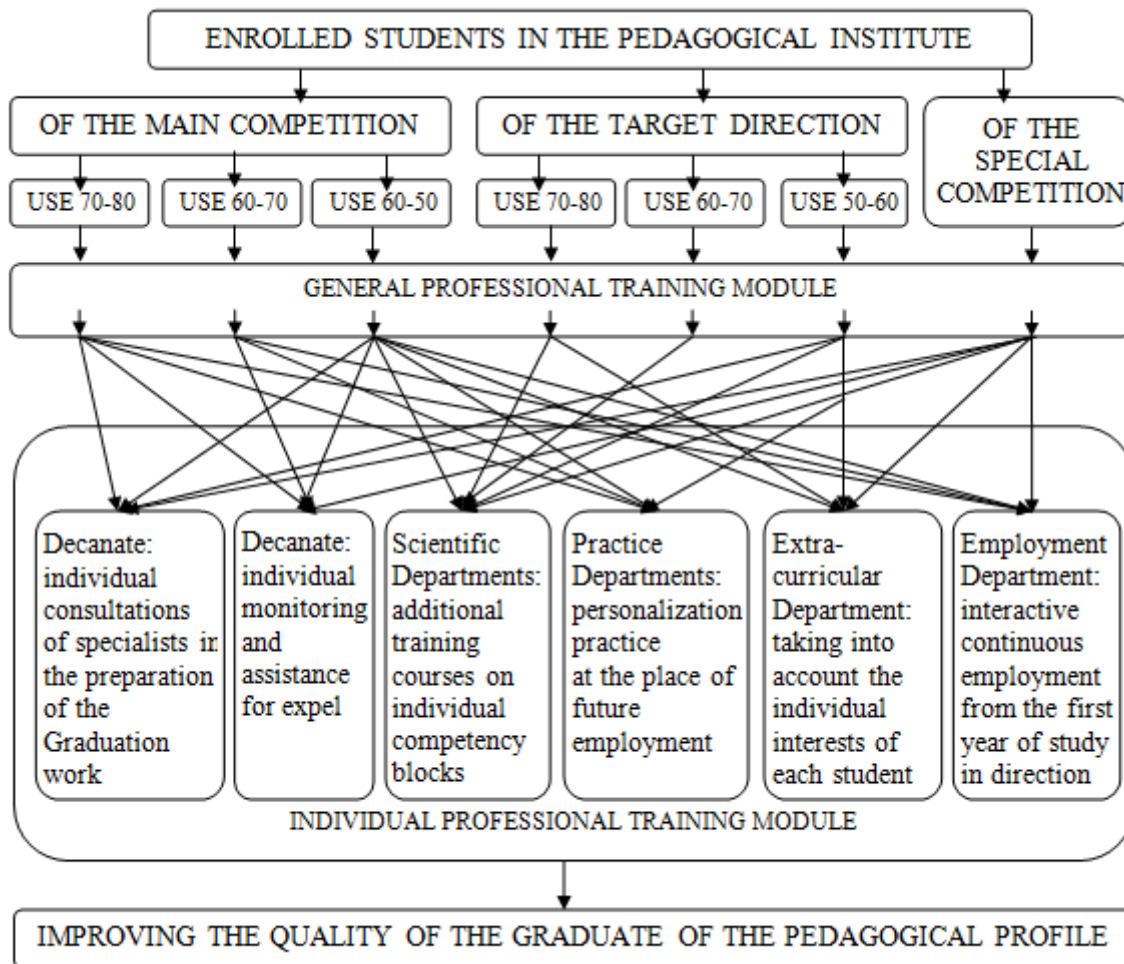


Fig. 9. Model of an individual trajectory of professional training to improve the quality of a graduate of a pedagogical profile

4. Discussion

The results of the research work supplement the data of studies conducted to improve the prestige of teaching through improving the quality of teacher education (Evans, 2014; Khusnutdinova, 2017). The studies focus on economic and social directions to increase the level of professional development of a teacher in the student period, and then in the process of professional activity as a novice teacher (Bowe, Gore, 2017; Ilyina, Loginova, 2019; Margolis, 2015). Nevertheless, in this context, many scientists prove that the formation of a “quality” teacher should start at school at the senior level (Gore et al., 2016; Klyachko, 2019). Since it is already at this stage that young people should form an internal motivation for the implementation of future professional activities (Evans, 2014; Ledovskaya et al., 2019; Ginerva et al., 2016; Nagovitsyn et al., 2019). At this stage, a systematic, individualized professional selection of schoolchildren for future professional pedagogical activities is required (Goldhaber, 2015; Gore et al., 2017). However, as

part of our study, we have limited ourselves only to the “graduate” stage of the pedagogical institute (Nagovitsyn et al., 2019). And on the basis of long-term data obtained on the implementation of teacher training for the system of general and additional education, we have individualized the process of formation of a teacher through the development of an author’s model. The model of the individual trajectory of vocational training to improve the quality of the graduate of a pedagogical profile is of particular practical relevance and is based on the results of systematizing and classifying the content and level characteristics of students by target focus groups.

Certain aspects of the model developed in the study update scientific guidelines for improving the quality of the formation of the future teacher in the system of not only general, but also additional education (Desimone, 2009; Pavlenko et al., 2019; Tzivinikou, 2015). The contradictions revealed in the study in the system of formation of students of various blocks of competencies from general cultural to professional and the organization of student practice in various areas of the education system, according to the authors (Donovan, Cannon, 2018; Leguey et al., 2018; Perevoshchikova et al., 2019), prove the need for further adjustment of the educational process.

The modernization of the educational and educational paradigm pays increasing attention to the individualization of the personality of students in the pedagogical profile, as a fundamental social value (Desimone, 2009; Ryabova, 2004). This process involves the implementation of higher pedagogical education in such a way as to ensure an individual trajectory of the personal and professional formation of each student – a future teacher (Harris, Sass, 2011; Valles et al., 2015). This individually-differentiated strategy for the personal movement from the applicant to the professional development of the young teacher generates many educational and educational routes for students to value pedagogical self-determination, revealing the individual personality facets of the educational space (Ilyina, Loginova, 2019, Yankovych et al., 2019). The criteria-level system proposed in this study for monitoring the quality of professional development of a student – a future teacher, includes a systematic analysis of the main components of the quality of higher education in the pedagogical profile.

To solve the problem raised in the study, it is necessary to systematize and individualize the monitoring system of educational activities in the higher pedagogical school (Ojeda, 2019; Panina et al., 2019). The experimentally identified indicators most fully reflect the professional training of a bachelor of teacher education (Panina et al., 2019; Perevoshchikova et al., 2019). Indicators for the formation of a complex of general cultural, general professional and professional competencies, academic performance of students in educational, industrial and undergraduate practice (Darling-Hammond, 2000; Melki et al., 2018), the results of the state final certification in the form of defense of final qualification work, allow us to comprehensively analyze educational activities of students. Analysis of the portfolio of individual achievements of students in the scientific, cultural, creative, social and sports areas shows the level of extracurricular activity of students. In turn, it is the indicators of expulsion (Gorbunova, 2018; Kochergina, Prakhov, 2016) and student employment that show the effectiveness of the pedagogical institute in providing “quality” personnel to its main “customer”: general and additional education systems (Pavlenko et al., 2019).

The results of the study reveal the depth to a holistic and systematic understanding of the modernization of the educational process of the pedagogical institute in the aspect of professional orientation of students. Statistically recorded data on the significance of differences between the focus group data, which, when entering the institute, have higher USE scores in comparison with students who have lower USE scores, show the formation of inappropriate professional motivation among students of the first group. The found motivational and value orientations of these focus groups on the implementation of pedagogical activities pose a certain risk of a further increase in the number of underemployed graduates in pedagogical profile. Which, ultimately, may be one of the key conditions for lowering the quality indicators of professional training and, in general, the inefficiency of the training system for future teachers.

Thus, only with the synergistic and systemic interaction of all departments of the university on the basis of individualization of vocational training (deans, departments, educational and social work departments, the department of pedagogical practice and the institute’s employment department), the effectiveness of the implementation of the Federal projects “Teacher of the Future” and “Success of Every Child” is possible.

Limitations. The present study has been limited to the sample of Glazov State Pedagogical Institute students who entered the institute in 2013–2015 and who graduated or expelled from the

institute in 2016–2019 at the faculty of teacher and art education. In this regard, the number of study participants in each EG was heterogeneous in size. However, the number of participants in each group was converted to a percentage. This allowed to increase the reliability of the comparative results of the study. The resulting sample does not provide an opportunity to cover the entire target audience, as the study was conducted only at the Glazov State Pedagogical Institute. In accordance with this, the results can be defined as preliminary, and for further more detailed analysis it is necessary to carry out a comparative analysis of pedagogical institutes of Russia. A larger, same sample size will provide more diverse information on the subject.

5. Conclusion

The study presents the author's vision of a systematic activity to improve the quality of a graduate of a pedagogical profile. The results of the study prove the lower level of success of students who entered with higher exam scores compared to students with lower exam scores. In turn, a comparative study of students who entered the pedagogical institute in the main competition with students in the target direction proves the high level of quality of the formation of future teachers among students with target areas, compared with the first group.

The study has developed an original criterion-level system for monitoring the quality of professional development of a student – a future teacher. The system of indicators of the quality of professional training of the future teacher developed in the study has made it possible to systematically monitor the educational process of future teachers in the system of "entrant-student-beginner teacher." The author's development has pointed to the main directions of adjusting the professional training of students based on the individualization of the educational process with a different contingent of students entering the pedagogical institute. As a result, an original model of an individual trajectory of vocational training has been developed to improve the quality of a graduate of a pedagogical profile.

A fundamentally new result has been obtained in the work in the strategy for planning the increase of student employment indicators in the educational system of the region and the country as a whole through the implementation of the author's model. The introduction of the author's model will allow to solve the problem of "double negative selection" when not the best school graduates go to the pedagogical institute and not the best graduates of the pedagogical profile go to the educational system. The study has identified new scientific data on the processes of systemic modernization of the educational process and the laws that exist in the pedagogical science under study on this issue. What ultimately, may be one of the key conditions for improving the quality indicators of professional training and the overall effectiveness of the training system for future teachers. The model developed in the study and the technological aspects of its implementation in the region will open a new direction for the development of research in pedagogical science and will help to increase the professional growth indicators of teachers within the framework of the introduction of the Federal Projects "Teacher of the Future" and "Success of Every Child".

Thus, the study has proved that the high score for the Unified State Examination for an applicant is not always an indicator of the high quality of the graduate for the system of general and additional education in the future. The considerations we propose, of course, require further development and testing at several institutes and universities of a pedagogical profile. Nevertheless, the author's study was carried out with a specific purpose: to justify the position that the concept of selection for pedagogical institutes and the quality of professional training of a future teacher should reflect the tendency to switch from standardization to individualization of the process at all levels: "entrant-student-beginner teacher". In a practical aspect, the further implementation of an integrated authoring development in all its model areas in the region will be significantly more effective in educational activities. Namely, without increasing budget funding and material social investments, it is statistically significant to reduce the shortage of "quality" teaching staff in the organizations of educational, additional, pre-school, physical education, sports, creative areas of the region and lower the number of young teachers leaving the profession during the first 3-5 years.

References

- Barakhsanova et al., 2017** – Barakhsanova, E.V., Nikolaeva, A.D., Vlasova, E.Z., Golikov, A.I., Panina, S.V., Prokopyev, M.S. (2017). International integration movement in quality management of Russian education. *Revista Espacios*. 38(55): 26.
- Barber, Murched, 2008** – Barber, M., Murched, M. (2008). Kak dobit'sya stabil'no vysokogo kachestva obucheniya v shkolakh. Uroki analiza luchshikh sistem shkol'nogo obrazovaniya mira (per. s angl.) [Consistently high performance: Lessons from the world's top performing school systems McKinsey&Company. 2007. Translated from English]. *Voprosy obrazovaniya*. 3: 7-60. [in Russian]
- Borisenkov, 2015** – Borisenkov, V.P. (2015). Kachestvo obrazovaniya i problemy podgotovki pedagogicheskikh kadrov [Education quality and issues of pedagogical staff training]. *The Education and science journal*. 3(122): 4-18. DOI: 10.17853/1994-5639-2015-3-4-28 [in Russian]
- Bowe, Gore, 2017** – Bowe, J.M., Gore, J.M. (2017). Reassembling teacher professional development: The case for Quality Teaching Rounds. *Teachers and Teaching: Theory and Practice*, 23(3): 352-366. DOI: 10.1080/13540602.2016.1206522
- Darling-Hammond, 2000** – Darling-Hammond, L. (2000). Teacher quality and student achievement. *Education Policy Analysis Archives*, 8(1). DOI: 10.14507/epaa.v8n1.2000
- Desimone, 2009** – Desimone, L.M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*. 38(3): 181-199.
- Donovan, Cannon, 2018** – Donovan, M.K., Cannon, S.O. (2018). The university supervisor, edTPA, and the new making of the teacher. *Education Policy Analysis Archives*. 26(28). DOI: 10.14507/epaa.26.2849
- Emelyanova et al., 2019** – Emelyanova, I.N., Teplyakova, O.A., Efimova, G.Z. (2019). Praktika ispol'zovaniya sovremennykh metodov otsenki na raznykh stupenyakh obrazovaniya [Modern Evaluation Methods at Various Levels of Education]. *The Education and science journal*. 21(6): 9-28. DOI: 10.17853/1994-5639-2019-6-9-28 [in Russian]
- Evans, 2014** – Evans, L. (2014). Leadership for professional development and learning: Enhancing our understanding of how teacher develop. *Cambridge Journal of Education*. 44(2): 179-198. DOI: 10.1080/0305764X.2013.860083
- Ginerva et al., 2016** – Ginerva, M.C., Sgaramella, T.M., Ferrari, L., Nota, L., Santilli, S., Soresi, S. (2016). Visions about future: a new scale assessing optimism, pessimism, and hope in adolescents. *International Journal for Educational and Vocational Guidance*. 17(2): 187-210. DOI: 10.1007/s10775-016-9324-z
- Goldhaber, 2015** – Goldhaber, D. (2015). Exploring the potential of value-added performance measures to affect the quality of the teacher workforce. *Educational Researcher*. 44(2): 87-95. DOI: 10.3102/0013189X15574905
- Gorbunova, 2018** – Gorbunova, E. (2018). Vybytiya studentov iz vuzov: issledovaniya v Rossii i SShA [Elaboration of Research on Student Withdrawal from Universities in Russia and the United States]. *Voprosy obrazovaniya*. 1: 110-131. DOI: 10.17323/1814-9545-2018-1-110-131 [in Russian]
- Gore et al., 2015** – Gore, J.M., Smith, M., Bowe, J., Ellis, H., Lloyd, A., Lubans, D. (2015). Quality Teaching Rounds as a professional development intervention for enhancing the quality of teaching: Rationale and study protocol for a cluster randomised controlled trial. *International Journal of Educational Research*. 74: 82-95. DOI: 10.1016/j.ijer.2015.08.002
- Gore et al., 2016** – Gore, J., Barron, R.J., Holmes, K., Smith, M. (2016). Who says we are not attracting the best and brightest? Teacher selection and the aspirations of Australian school students. *The Australian Educational Researcher*. 43: 527-549. DOI: 10.1007/s13384-016-0221-8
- Gore et al., 2017** – Gore, J., Lloyd, A., Smith, M., Bowe, J., Ellis, H., Lubans, D. (2017). Effects of professional development on the quality of teaching: Results from a randomised controlled trial of Quality Teaching Rounds. *Teaching and Teacher Education*. 68: 99-113. DOI: 10.1016/j.tate.2017.08.007
- Hanushek, Rivkin, 2010** – Hanushek, E.A., Rivkin, S.G. (2010). Generalizations about using value-added measures of teacher quality. *American Economic Review*. 100: 267-271.
- Harris, Sass, 2011** – Harris, D.N., Sass, T.R. (2011). Teacher training, teacher quality and student achievement. *Journal of Public Economics*. 95: 798-812.

Ilyina, Loginova, 2019 – Ilyina, N., Loginova, N. (2019). Issledovanie stanovleniya psikhologo-pedagogicheskoy kompetentnosti molodykh pedagogov [Exploring the Development of Psychological and Pedagogical Competence in Young Teachers]. *Voprosy obrazovaniya*. 4: 202-230. DOI: 10.17323/1814-9545-2019-4-202-230 [in Russian]

Khusnutdinova, 2017 – Khusnutdinova, M.R. (2017). Sotsial'nyy status professii uchitelya: samoopredeleniye rossiyskikh pedagogov [The social status of the teacher's profession: Russian self-determination of teachers]. *Psikhologicheskaya nauka i obrazovaniye*. 4(22): 38-48. DOI: 10.17759/pse 2017220406 [in Russian]

Klyachko et al., 2019 – Klyachko, T., Semionova, E., Tokareva, G. (2019). Uspeshnost' i neuspeshnost' shkol'nikov: ozhidaniya roditeley, otsenka uchiteley [Success and Failure of School Students: Parental Expectations and Teachers' Perceptions]. *Voprosy obrazovaniya*. 4: 71-92. DOI: 10.17323/1814-9545-2019-4-71-92 [in Russian]

Kochergina, Prakhov, 2016 – Kochergina, E., Prakhov, I. (2016). Vzaimosvyaz' mezhdou otnosheniyem k risku, uspevaemost'yu studentov i veroyatnost'yu otchisleniya iz vuza [Relationships between Risk Attitude, Academic Performance, and the Likelihood of Drop-outs]. *Voprosy obrazovaniya*. 4: 206-228. DOI: 10.17323/1814-9545-2016-4-206-228 [in Russian]

Ledovskaya et al., 2019 – Ledovskaya, T.V., Solynin, N.E., Khodyrev, A.M. (2019). Stanovleniye sistemy tsennostey studentov pedagogicheskogo vuza v period polucheniya vysshego professional'nogo obrazovaniya [Development of initial teacher education students' sets of values during pursuing undergraduate degrees]. *Science for Education Today*. 9(5): 7-23. DOI: 10.15293/2658-6762.1905.01 [in Russian]

Leguey et al., 2018 – Leguey, St.G., Leguey, S.G., Matosas, L.L. (2018). What drives students' satisfaction with instruction? *Revista Espacios*. 39(17): 13.

Lenskaya, 2008 – Lenskaya, E.A. (2008). Kachestvo obrazovaniya i kachestvo podgotovki uchitelya [Enhancing quality of education through training qualified teachers]. *Voprosy obrazovaniya*. 4: 81-96. [in Russian]

Margolis, 2015 – Margolis, A.A. (2015). Modeli pedagogicheskogo obrazovaniya v ramkakh prakticheskikh bakalavrskikh i magisterskikh programm po pedagogike [Models of teachers education in the framework of practical bachelor's programs and master's programs in Pedagogy]. *Psychological Science and Education*. 20(5): 45-64. [in Russian]

Melki et al., 2018 – Melki, H., Bouzid, M., Fathloun, M. (2018). The most appropriate mentoring practice by a cooperating teacher during practical teaching internship. *Physical education of students*. 22(6): 320-326. DOI: 10.15561/20755279.2018.0607

Miranda et al., 2018 – Miranda, N.A., Bueno, H.P., Bressan, G.P., Sobral, R.M., Estevam, R.R. (2018). Quality Indicators in Education: the educators' opinion. *Revista Espacios*. 39(25): 6.

Nagovitsyn et al., 2018 – Nagovitsyn, R.S., Bartosh, D.K., Ratsimor, A.Y., Maksimov, Y.G. (2018). Formation of social tolerance among future teachers. *European Journal of Contemporary Education*. 7(4): 754-763. DOI: 10.13187/ejced.2018.4.754

Nagovitsyn et al., 2019 – Nagovitsyn, R.S., Bartosh, D.K., Ratsimor, A.Y., Neverova, N.V. (2019). Modernization of regional continuing pedagogical education in the «School-College-Institute». *European Journal of Contemporary Education*. 8(1): 144-156. DOI: 10.13187/ejced.2019.1.144

Nagovitsyn et al., 2019 – Nagovitsyn, R.S., Tutolmin, A.V., Maksimov, Y.G., Dimova, I.A., Karoyan, A.A., Skryabina, D.Y., Volkov, S.A. (2019). Motivation for physical activity of people of different ages. *Gazzetta Medica Italiana – Archivio per le Scienze Mediche*. 178(10): 799-806. DOI: 10.23736/So393-3660.18.03965-7

Nagovitsyn et al., 2019 – Nagovitsyn, R.S., Zamolotskikh, E.G., Potashova, I.I., Rybakova, L.V. (2019). Model of the system of raising the social status of the teacher in the region on the basis of a pedagogical university. *European Journal of Contemporary Education*. 8(2): 315-327. DOI: 10.13187/ejced.2019.2.315

Ojeda, 2019 – Ojeda, D.D. (2019). Curriculum innovation: a path for globalized teacher training. *Revista Espacios*. 40(39): 24.

Osipov et al., 2016 – Osipov, A., Starova, O., Malakhova, A., Vonog, V., Zhavner, T., Salyamova, P., Struchkov, V., Kudryavtsev, M. (2016). Modernization process of physical education of students in the framework of implementation of the state strategy for the development

of physical culture, sport and tourism in the Russian federation. *Journal of Physical Education and Sport*. 16(4): 1236-1241. DOI: 10.7752/jpes.2016.04196

Panina et al., 2019 – Panina, S.V., Arhipova, S.N., Vasileva, A.N., Nogovitsyna, N.M., Sivtseva, K.N. (2019). Directions for improving the quality of master's program for future teachers: North-east of Russia. *Revista Espacios*. 40(33): 29.

Pavlenko et al., 2019 – Pavlenko, K., Polivanova, K., Bochaver, A., Sivak, E. (2019) Dopolnitel'noe obrazovanie shkol'nikov: funktsii, roditel'skie strategii, ozhidaemye rezul'taty [Extracurricular Activities of School Students: Functions, Parental Strategies, and Expected Outcomes]. *Voprosy obrazovaniya*. 2: 241-261. DOI: 10.17323/1814-9545-2019-2-241-261 [in Russian]

Perevoshchikova et al., 2019 – Perevoshchikova, E.N., Samoilova, G.S., Lapin, N.I., Elizarova, E.Y., Panova, I.V. (2019). The methodology for developing professional competencies of bachelors in the program «Pedagogical Education». *Revista Espacios*. 40(33): 26.

Ryabova, 2004 – Ryabova, M.E. (2004). Kachestvo podgotovki pedagogicheskikh kadrov v regione [Quality of teacher training in a region]. *Integration of Education*. 1(34): 59-65. [in Russian]

Saquicuya et al., 2019 – Saquicuya, J.A., Urgilez, C.F., López, M.E. (2019). Teachers' conceptions about a school of quality. *Revista Espacios*. 40(39): 7.

Savchenko et al., 2018 – Savchenko, L.A., Savchenko, K.Y., Marchenko, A.A., Pyl'nik, R.A. (2018). Innovative technologies of pedagogical diagnostics as a means of improving the quality of future specialists' education. *Revista Espacios*. 39(49): 20.

Tzivnikou, 2015 – Tzivnikou, S. (2015). The impact of an in-service training program on the self-efficacy of special and general education teachers. *Problems of Education in the 21st Century*. 64: 95-107.

Valles et al., 2015 – Valles, M., Viramontes, E., Campos, A. (2015). Retos de la formación permanente de maestros. *Revista Ra Ximhai*. 11(4): 201-212. DOI: redalyc.org/articulo.oa?id=46142596014

Volchegorskaya et al., 2018 – Volchegorskaya, E.Y., Zhukova, M.V., Frolova, E.V., Shishkina, K.I., Sterligova, E.A. (2018). Quality of life as a predictor of the formation of internet addiction of students of pedagogical universities. *Revista Espacios*. 39 (52): 23.

Wadii et al., 2018 – Wadii, Z., Naila, B., Nizar, S. (2018). Repercussions of behavior of Cooperative Teacher's on health and attractiveness of Tunisian Student Teachers. *Physical education of students*. 22(2): 104-111. DOI: 10.15561/20755279.2018.0208

Yankovych et al., 2019 – Yankovych, O., Chaika, V., Yashchuk, I., Binytska, K., Kokieli, A., Pysarchuk, O. Ratushniak, N. (2019). Training of future specialists in primary education in universities of Ukraine and Poland for the formation of a class team. *Revista Espacios*. 40(44): 22.