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DOI: 10.34671/SCH.SVB.2021.0501.0003 STUDY OF THE MOTIVATIVE COMPONENT OF TECHNOLOGICAL COMPETENCE OF THE TEACHER OF PROFESSIONAL TRAINING

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(443099, Russia, Samara, M. Gorky st., 65/67, e-mail: v11e11g12a12@yandex.ru) Abstract. The growth in demand for blue-collar professions justified the need to improve the quality of personnel training. The state, focusing on the demand of society in the training of competitive specialists capable of carrying out professional activities in the new conditions, has subjected the system of professional education to significant changes. Institutions of secondary vocational education strive to meet the world educational standards of WorldSkills. First of all, the need for competent teachers of vocational training who owns educational technologies at a high level for the implementation of the training of workers, employees and mid-level specialists is actualized. In the formation of the technological competence of students of higher educational institutions, the motivational component is of particular importance. The article is aimed at analyzing the experience of the formation of the motivational component of the technological competence of vocational training bachelors. The technological competence of teachers of vocational training is a necessary element for the implementation of future professional activities and presupposes the bachelor's possession of innovative educational technologies, the ability to realize their capabilities in specific conditions. The study, aimed at studying the motivational component of technological competence, uses a methodology for diagnosing educational motivation of students. The results allow us to record the growth of professional and educational and cognitive motivation.

Keywords: technological competence, professional competence, higher education institution, bachelor of vocational training, higher vocational education, student, educational technologies, motivational component, motivation, secondary vocational education.

ИССЛЕДОВАНИЕ МОТИВАЦИОННОГО КОМПОНЕНТА ТЕХНОЛОГИЧЕСКОЙ КОМПЕТЕНТНОСТИ ПЕДАГОГА ПРОФЕССИОНАЛЬНОГО ОБУЧЕНИЯ

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Аннотация. Рост спроса на рабочие профессии обосновал потребность в повышении качества подготовки кадров. Государство, ориентируясь на запрос общества в подготовке конкурентоспособных специалистов, способных к осуществлению профессиональной деятельности в новых условиях, подвергло систему профессионального образования значительным изменениям. Учреждения среднего профессионального образования стремятся соответствовать мировым образовательным стандартам WorldSkills. Прежде всего, актуализируется необходимость в компетентных педагогах профессионального обучения, владеющих образовательными технологиями на высоком уровне для реализации ими подготовки рабочих, служащих и специалистов среднего звена. В формировании технологической компетентности студентов высших учебных заведений особую значимость имеет мотивационный компонент. Статья нацелена на анализ опыта формирования мотивационного компонента технологической компетентности бакалавров профессионального обучения. Технологическая компетентность педагогов профессионального обучения является необходимым элементом для осуществления будущей профессиональной деятельности и предполагает владение бакалавром инновационными образовательными технологиями, способностью реализовывать их возможности в конкретных условиях. В исследовании, направленном на изучение мотивационного компонента технологической компетентности, задействуется методика диагностики учебной мотивации студентов. Результаты позволяют зафиксировать рост профессиональной и учебно-познавательной мотивации.

Ключевые слова: технологическая компетентность, профессиональная компетентность, высшее учебное заведение, бакалавр профессионального обучения, высшее профессиональное образование, студент, образовательные технологии, мотивационный компонент, мотивация, среднее профессиональное образование.

INTRODUCTION

General formulation of the problem and its connection with important scientific and practical problems. Techno-logical competence of a teacher of vocational training is 18

part of professional competence, the formation of which is one of the most important processes implemented by higher educational institutions. The use of innovative educational technologies by a teacher of vocational training is an integral part of his professional activity. In the formation of technological competence, motivation is a tool that encourages the implementation of professional activities, ensuring a steady desire of the student to use educational technologies and improve the process of their application.

Analysis of recent studies and publications, which considered aspects of this problem and on which the author justifies; highlighting previously unresolved parts of a common problem. The competency-based approach, which is the basis of students' education, actualizes the practiceoriented orientation and orientation to the formation of professional and personal qualities. The formation of professional and technological teachers of vocational training's competence is directly related to each other. Technological competence is considered by the authors from two sides, first from the point of view of the technological skills of the teacher, contributing to the achievement of a guaranteed result, and secondly as the ability to realize the possibilities of educational technologies. Parshina notes among the teacher's technological skills:

- implementation of goal setting;

- selection and structuring of the content of educational materials;

- design projects;

- organization of interaction of subjects of the educational process;

- implementation of the selection and implementation of educational technologies;

- implementation of control and evaluation activities [1].

It should be noted that the idea of technological competence as a way to guarantee the achievement of results implies the implementation of educational technologies, among other things.

N. A. Parshina focuses on the motivational component of technological competence, speaking of it as a tool that allows the student to realize the value and form an understanding of technological competence in teaching activities, to form a motivational readiness for the implementation of educational technologies. «The author presents the component as determining since the quality of the future professional activity of teachers of vocational training depends on motivation as a set of factors and processes that encourage them to master professional competencies» [2]. In the content of the motivational component, a significant place is occupied by the ability to self-realization and self-development in the implementation of educational technologies. Motivation acts as an attitude to the use of technologies in professional and pedagogical activities.

The process of forming technological competence includes:

- the motives that determine the mastery of information about the implementation of educational technologies in professional activities, the recognition of the achievements of a particular student by classmates;

cognitive motives.

Motivational readiness allows future teachers of professional training to achieve high results in the implementation of professional activities. As a result of the development of the motivational component of technological competence, the student strives to enrich his creative potential, to the effectiveness of educational and professional activities. The authors distinguish several indicators of the formation of the motivational component of technological competence.

To study the motivational component, the author suggests using the methodology of studying the motivation of studying at the University of T. I. Ilyina, which includes 50 positions with which students should agree or refute. Statements assume both free and closed responses. The degree of agreement or disagreement reflects the presence of a particular motive in the students.

Future teachers of professional training with technological competence show a conscious understanding of the importance of educational technologies, strive for their use

and creative application in specific educational situations. Table 1 - Table 1 shows some of the indicators highlighted by many authors.

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N₂	Index		
1	The presence of positive motivation and the manifestation of an student's active work position in the process of carrying out pro- fessional activities and realizing the possibilities of educational technologies in the specific situations		
2	A holistic view of the future professional and pedagogical activ- ity, awareness of the essence and the role of educational technol- ogies in achievement of guaranteed results of professional and pedagogical activity		
3	The students' desire to self-actualize in the preparation process, to increase the level of use of educational technologies in the learning process, to creative select the appropriate technology for a specific situation		

* based on the analysis of scientific literature

formation of technological competence is The considered in the works of A.V. Koklevsky, who means that technological competence is the ability to successfully carry out professional activities on a technological basis, considers it as an integrative personal quality and as a level of technological culture [3].

In the work of A.V. Koklevsky, the motivational component is presented as a tool for the development of value orientations – complex socio-psychological phenomena that determines the orientation, activity of the individual, and his attitude to the chosen field of activity. Value orientations show the degree of expression of motives. The successful formation of competence is carried out when students accept and realize their responsibility and readiness for creativity. According to O. I. Suslova, the motivational component includes:

- personal motives;

- cognitive motives;

professional motives.

Personal motives include the student's intentions, inclinations, and aspirations for self-development, selfeducation, and self-improvement. Cognitive motives reflect the mastery of new ways of activity, interest in different areas of knowledge, participation in the research process. Professional motives reflect professional interests and attitudes to the tasks of the chosen field of activity [4]. The author also determines that the formation of the motivational component of technological competence includes:

- awareness of the goals of professional training, its essence and role for the formation of a professional and personal position;

- conducting diagnostics of personal and professional development of students throughout the training period;

- organization of practice-oriented training that allows you to create conditions close to professional for the

reconstruction of the system of professional relations; - development of students' professional interests and their self-realization in specific practical conditions [5].

M.V. Samoilova [6], I.M. Sinagatullin and G.F. Akhmetzyanova [7] consider the preparation of a professional competent bachelor. The article highlights the motivational component of competence. The motivational component is considered by L.V. Munavirova [8]. The author speaks of motivation as a core characteristic of a personality.

The relevance of the study is substantiated. The active development of the system of secondary vocational The education by the new international standards necessitates the training of competent teachers of vocational training, who own educational technologies [9]. The relevance of the study is due to:

- the need to improve the competitiveness of modern teachers of vocational training;

the need to train qualified workers, employees, and middle-level specialists;

- increasing the requirements for the quality of vocational education [10].

The technological competence of a teacher of vocational

training includes several components: motivational, cognitive, activity [11]. The article focuses on the motivational component [12]. The motivational component of technological competence reveals the desire of students to improve their skills in the implementation of educational technologies, thus being responsible for the competitiveness of the bachelor in the labor market, reveals the desire of the future teacher of vocational training to creatively apply educational technologies in specific situations [13].

METHODOLOGY

Formation of the goals of the article. The purpose of the article is to analyze the experience of forming the motivational component of the technological competence of vocational training bachelors.

Statement of the task. To achieve this goal, you must:

- determine the role of motivation in the preparation of vocational bachelors;

- to define the essence of technological competence;

- to reveal the motivational component of technological competence;

to determine the functional purpose of the motivational component in the training of future teachers of vocational training.

Methods, techniques and technologies used. To conduct a study of the formation of the motivational component of technological competence, the methodology for diagnosing educational motivation of students A.A. Rean, V.A. Yakunin, modified by N.Ts. Badmaeva, which helps to identify the level of motivation of future teachers of vocational training. The technique allows you to determine the motives of students [14]. Several scales stand out: communicative motives; avoidance of failure; prestige; professional motives; motives of creative self-realization; educational and cognitive; social.

To diagnose learning motivation, students were provided with a list of statements with which they need to agree or refute them. The table reflects a fragment of the questionnaire with the statements that are provided to the student.

Table 2 - Fragment of the questionnaire for diagnostics of educational motivation of students

Statement	Answer (in points)
I study because I like my chosen profession	1 - 5
I study to ensure the success of my future profes- sional career	1 - 5
I want to be a specialist	1 - 5
For me to be able to answer significant questions that relate to the field of my future professional activity	1 - 5
I want to fully realize my inclinations, abilities and inclinations for my chosen professional activity	1 - 5
To keep up with friends	1 - 5
To carry out professional activities and work with people, you must have deep all-round knowledge	1 - 5
I want to become one of the best students	1 - 5
I want our study group to achieve great success and become the best at the university	1 - 5
To meet and communicate with interesting people	1 - 5

* A.A. Rean, V.A. Yakunin, modified by N.Ts. Badmaeva The test was assessed according to a five-point system. 1 point - the minimum significance of the motive, 5 - the maximum significance. To process the results, the average indicator is calculated for each scale presented in the questionnaire. The standard deviation from the mean was calculated using the formula:

D(X) = M(X - M(X))2

Where:

- X is a random variable that is defined on a certain probability space;

- M is the expected value.

The mean values before and after the experiment, the difference between the mean values and the statistical deviation were revealed. RESULTS

Presentation of the main research material with full justification of the scientific results obtained. The formation of technological competence is carried out directly in the classroom under the teacher's guidance. Classroom training includes a research component. Students perform various types of activities.

Among them are the selection and analysis of relevant literary sources, taking notes, and reproducing educational material. The formation of positive motivation of students to master educational technologies is carried out with their active inclusion in the educational process. Motivation makes it possible to form the need of future bachelors of vocational training in constant self-improvement, creative application of educational technologies [15].

The motivational component of technological competence consists of the motives of students, their needs, incentives and interests, which, in turn, are associated with the self-development and professional self-improvement of future teachers of vocational training for the implementation of an effective search for methods of implementing educational technologies [16]. The study identified three levels of formation of the motivational component of technological competence: high, medium, low.

The table shows the characteristics of the levels of formation of the motivational component.

Table 2 - Levels of formation of the motivational component of technological competence

1	6 1
Level	Characteristic
Tall	The student has a holistic view of the future professional and pedagogical activity, needs for constant professional self-improvement, strives for a deeper mastering of the material, strives to increase the level of knowledge of ed- ucational technologies, increase the level of technological mastery
Average	The student has an idea is, the future professional and educational activities, shows the desire for professional self-improvement, if necessary, develops additional ma- terial, exploring ways of implementing educational tech- nologies, the desire to improve the technological level of skill is weak
Low	The student has an idea of the future professional and pedagogical activity, shows a weak desire for professional self-improvement, as a rule, is not interested in studying additional material and educational technologies

* compiled by the author

The experiment made it possible to establish the growth of professional and educational-cognitive motivation of students over a three-year period. 2015 is the starting point. The diagram shows the average value of professional motives.

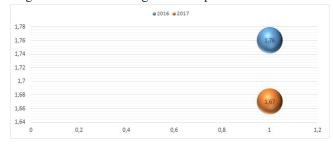


Figure 1 - Average value of professional motives

Compared to 2015, the average value of professional motives in 2016 increased to 1.76. In 2017, the average increased by 1.67.

Comparison of the obtained results with the results of other studies. Today, there is a wide range of researchers who turn to the formation of technological competence. This article focuses on the formation of the motivational component of the considered competence in vocational training bachelors.

FINDINGS

Research findings. The study makes it possible to es-

tablish that the formation of the motivational component of technological competence grows. Future teachers of vocational training have a strong interest in self-development and self-education, strive to improve the level of technological skill and creative implementation of educational technologies.

Prospects for further research in this direction. The formation of technological competence is a promising area, the study of which is carried out as professional education develops.

REFERENCES:

1. Parshina N.A. (2020). Structural-functional model of the formation of technological competence of students of a pedagogical university. PhD

thesis. Saransk. 2. Koklevsky, A.V. Model of the formation of technological competence of future specialists in the process of military training in a classical univer-Sity / A.V. Koklevsky // Safety of the world. World of Security: Sat. scientific. Art. / Military. acad. Rep. Belarus; under total. ed. V.A.Ksenofontova.
Minsk, 2016. - Issue. 1. - S. 87-101.
Tikhomirov V.G. (2004). The mechanism of selection and design of

applied services of mathematics in the professional training of a specialist. PhD thesis. Tambov.

4. Suslova OI (2007). Formation of the motivational component of the professional development of future educational psychologists. PhD thesis. Saratov.

5. Samoilova M. V. Diagnostics of formation of value and motivation component of the research competence of future teachers of professional training // Kant. 2019. No. 4 (33).

6. Sinagatullin I. M., Akhmedzyanova G. F. On the content and structure of professional competence of future bachelors of pedagogical educa-tion (primary education) // Humanization of education. 2017. No. 3. 7. Munavirova L. R. Research of the level of formation of the motiva-

Munavirova L. R. Research of the level of formation of the motiva-tional component of a student's professional competence as a factor of suc-cessful adaptation to the conditions of training and the implementation of the future profession // Izvestia VSPU. 2016. No. 8 (112).
8. Felipe Arabelaez-Campillo D., Rojas-Bahamon M. J. Pandemics in globalization times //Amazonia Investiga. 2020. m. 9. № 27, Pp. 3-4.
9. Alsraisry, N., Albakheet, H., Alsajjan, N., Aldaajani, N. Blended Learning Approach for Deaf or Hard of Hearing Students: Investigating university teachers' views // Amazonia Investiga. 2020. Vol. 9. № 2. Pp. 36-44

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10. Dobudko, T.V., Korostelev, A.A., Gorbatov, S.V., Kurochkin, A.V., Akhmetov, L.G. The organization of the university educational process in terms of digitalization of education // Humanities and Social Sciences Reviews, 2019, 7(4), Pp. 1148–1154. 11. Kryukov M.P. (2011), Formation of technological competencies of

future technicians based on the specified training. PhD thesis, Astrakhan. 12. Dobudko, T.V., Korostelev, A.A., Pugach, O.I., Ippolitova N. V.

Khayrullina, R.G., Sildikov, F.F. Training of pedagogical education mas-ters: Practice-oriented model // Humanities and Social Sciences Reviews, 2019, 7(4), Pp. 1155–1159.

2019, /(4), Pp. 1155–1159. 13. Badmaeva N.Ts. The influence of the motivational factor on the development of mental abilities: Monograph. - Ulan-Ude, 2004.S. 151-154. 14. Mushtaq, M., Ch., A., Parveen, S., Hussain, S., & Iqbal, S. Leadership Characteristics and Quality Prevalence in Higher Education // Amazonia Investiga, 2020, 9(31), 82-95.

15. Celik, S. Association between Influential Factors and Teaching Profession as Career Choice among Undergraduate Student Teachers: A Structural Equation Study // Amazonia Investiga, 2020, 9(31), 166-177.

16. Kidina L. M. Management of the pedagogical collective in the conditions of implementing distance learning // Baltic Humanitarian Journal. (Baltic Humanitarian Journal), 2020. Vol. 9 No 4 (33), Pp. 93-96.

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