

The impact of a dual education system on the professional training of future preschool teachers in higher education institutions

O impacto de um sistema de ensino dual na formação profissional de futuros professores de educação infantil em instituições de ensino superior

El impacto de un sistema de educación dual en la formación profesional de los futuros docentes de preescolar en instituciones de educación superior

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Abstract: *The aim of the article is to determine the specifics of the impact of dual education on the future preschool teachers' professional competence. The study employed such methods as testing, observation, and formative experiment. It was established that future preschool teachers are characterized by low motivation for professional activity, medium level of theoretical knowledge and professional skills, insufficiently developed pedagogical reflection. The hypothesis about the difference between the influence of dual and institutional education on the future preschool teachers' professional competence was partially confirmed. Dual education demonstrated the best effectiveness in developing the active and reflective components in future preschool teachers. They are slightly better in the development of indicators of the cognitive component, the results belong to the institutional form of higher education. The dual education programme is ineffective in developing the motivational component of the future preschool teachers' professional competence. The obtained results open up opportunities to improve dual education programmes for the training of future preschool teachers: focus on the development of future preschool teachers' professional motivation, improving theoretical knowledge in a preschool education institution. The results also indicate the need to enhance the development of motivation and professional reflection of future specialists in the institutional form of higher education. The prospects for further research are the study of the possibilities of using dual education in the training of students of other pedagogical majors.*

Keywords: *Dual education. Professional education. Professional training.*

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Resumo: O objetivo do artigo é determinar as especificidades do impacto da educação dual na competência profissional dos futuros professores de educação infantil. O estudo empregou métodos como teste, observação e experimento formativo. Constatou-se que os futuros professores da pré-escola são caracterizados por baixa motivação para a atividade profissional, nível médio de conhecimentos teóricos e competências profissionais, reflexão pedagógica insuficientemente desenvolvida. A hipótese sobre a diferença entre a influência da educação dual e institucional na competência profissional dos futuros professores de educação infantil foi parcialmente confirmada. A educação dual demonstrou a melhor eficácia no desenvolvimento dos componentes ativos e reflexivos nos futuros professores de pré-escola. São ligeiramente melhores no desenvolvimento dos indicadores da componente cognitiva, os resultados pertencem à forma institucional de ensino superior. O programa de educação dual é ineficaz no desenvolvimento da componente motivacional da competência profissional dos futuros professores de educação pré-escolar. Os resultados obtidos abrem oportunidades para melhorar os programas de educação dual para a formação de futuros professores de educação pré-escolar: aposta no desenvolvimento da motivação profissional dos futuros professores de educação pré-escolar, melhorando os conhecimentos teóricos numa instituição de educação pré-escolar. Os resultados indicam ainda a necessidade de potenciar o desenvolvimento da motivação e da reflexão profissional dos futuros especialistas na modalidade institucional do ensino superior. As perspectivas para novas pesquisas são o estudo das possibilidades de utilização da educação dual na formação de alunos de outros cursos pedagógicos.

Palavras-chave: Educação dupla. Educação profissional. Treinamento profissional.

Resumen: El objetivo del artículo es determinar las particularidades del impacto de la educación dual en la competencia profesional de los futuros docentes de preescolar. El estudio empleó métodos tales como pruebas, observación y experimentos formativos. Se encontró que los futuros docentes de preescolar se caracterizan por una baja motivación por la actividad profesional, un nivel medio de conocimientos teóricos y habilidades profesionales y una reflexión pedagógica insuficientemente desarrollada. Se confirmó parcialmente la hipótesis sobre la diferencia entre la influencia de la educación dual e institucional en la competencia profesional de los futuros docentes de preescolar. La educación dual demostró la mayor efectividad en el desarrollo de los componentes activo y reflexivo en los futuros docentes de preescolar. Son ligeramente mejores en el desarrollo de indicadores del componente cognitivo, los resultados pertenecen a la forma institucional de educación superior. El programa de educación dual es ineficaz para desarrollar el componente motivacional de la competencia profesional de los futuros docentes de preescolar. Los resultados obtenidos abren oportunidades para mejorar los programas de educación dual para la formación de futuros docentes de preescolar: centrarse en el desarrollo de la motivación profesional de los futuros docentes de preescolar, mejorando los conocimientos teóricos en una institución de educación preescolar. Los resultados también indican la necesidad de potenciar el desarrollo de la motivación y la reflexión profesional de los futuros especialistas en la forma institucional de la educación superior. Las perspectivas de futuras investigaciones son el estudio de las posibilidades de utilizar la educación dual en la formación de estudiantes de otras carreras pedagógicas.

Palabras clave: Educación dual. Educación profesional. Entrenamiento profesional.

1 INTRODUCTION

The Russian-Ukrainian war, which began on February 24, 2022, posed a number of existential challenges for Ukraine. It became clear that the survival of the state depends on urgent systemic reforms in all spheres of life, not only in the army. Professional education is one of the pillars of the effective functioning of the socio-economic structure, as it provides the training of professionals in various fields. The issue of the transformation of higher education in Ukraine has been relevant for many years, but it became especially acute with the beginning of a full-scale war. Moreover, world

trends determine the need for reforming steps, as higher education in the current conditions is no more a guarantee of a secure and stable life (Akour, Alenezi, 2022). Increasing the efficiency of the educational process involves the substantiation of new forms of pedagogical influence in higher education institutions (HEIs).

In recent years, there has been growing public interest in the combination of academic education and direct field training — the so-called dual education (ERTL, 2020). The application of this form of higher education provides advantages for students, educational institutions, and employers (Pogatsnik, 2018). The results of the theoretical analysis of the

problem confirm that the use of a dual form of education increases its quality, as it considers the employers' requirements (Martseniuk, Hruzdiev, 2021) and increases students' formal success (Mora *et al.*, 2022). At the same time, the lack of information about the educational approach does not give advantages to students who received appropriate training when interacting with employers (MAIER, 2022). There are a number of difficulties in the mechanisms of combining studies at an educational institution and professional field training (Mordhorst, Jenert, 2023). It is obvious that the optimization of dual education involves a thorough study of the problem in the context of specific socio-cultural conditions.

In Ukraine, the dual form of education began to be implemented relatively recently. The legal justification of the process began with the Cabinet of Ministers' Order "On the Approval of the Concept of Training Specialists under the Dual Form of Education" dated September 19, 2018 (Verkhovna Rada of Ukraine, 2018). In 2023, the Ministry of Education and Science of Ukraine approved the "Regulations on the Dual Form of Professional Pre-Higher and Higher Education" (Verkhovna Rada of Ukraine, 2023). The intensification of legal mechanisms indicates the growing social significance of the phenomenon. It is obvious that the introduction of a new form of education is aimed at solving problematic issues, which requires appropriate research. One of the problematic aspects of the implementation of dual education is going beyond the boundaries of working professions. A promising direction is the implementation of a new educational approach for training students of pedagogical majors. It should be noted that there are almost no studies on building future teachers' professional competence under dual education. This situation is unacceptable, as the establishment of effective cooperation with employers is one of the conditions for optimizing professional training of preschool teachers (Anishchuk, 2022).

So, the theoretical, practical, and social significance of the study of the phenomenon determines the relevance of this research.

The aim of the research is to determine the specifics of the impact of dual education on the development of future teachers' professional competence. Research objectives:

- determine the conditions for the effectiveness of dual education in the professional training system;

- develop an effective dual education programme for the training of future teachers, which takes into account the specifics of the field and educational programmes;

- analyse the effectiveness of the use of dual education for building professional competence of future preschool teachers.

2 LITERATURE REVIEW

The Law of Ukraine "On Education" (Verkhovna Rada of Ukraine, 2017) states that dual education provides for combining the training of individuals in educational institutions with field training at enterprises, institutions and organizations to acquire certain qualifications, usually on the basis of a contract. It is incorrect to consider dual education as an extension of the share of practice in institutional education — it is about the student's integration into an institution or organization. The main reason for the emergence and introduction of a dual form of professional education is the contradictions, needs and specific conditions of existence of the economic system and production (Gessler, 2017).

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Rayter and Davlikanova (2017) determine the main features of dual education: the field training shall take at least 30% of the volume of the educational programme; active involvement of employers in the development of training software; the educational process is implemented under contracts between the educational institution and the production institution. In the EU countries, the dual form of education must meet the following criteria: the conclusion of a contract between the

enterprise, the student, and the educational institution; 70-80% of the educational process takes place at the field and 20-30% of the time — at the educational institution; the main economic costs of training are borne by the enterprise; the students' work at the enterprise is paid; dual education is economically supported by the state and business; final control of knowledge is carried out by independent commissions; clear legal mechanisms for regulating dual education (Azhazha, 2019).

The main tasks of dual education are a harmonious combination of theoretical and practical aspects, overcoming barriers between production and professional education, consideration of market requirements when training specialists (KALENSKYI et al., 2023). The effectiveness of dual education is determined by the coordination of actions between institutions, changes in educational programmes and organizational aspects of education, including collaboration and communication across learning sites, as well as factors related to curriculum development and educational organization (SAPPA et al, 2018). The financial stimulation of students and the introduction of a system of individual counselling of students by company specialists have a positive effect on increasing the efficiency of education (Davoine, Deitmer, 2020).

The researchers point to a number of advantages of distance learning: reducing the distance between the theory and practice of the professional field; optimization of psychological training of the future specialist; the possibility of timely correction of educational programmes taking into account the current requirements of the labour market; stimulation of motivation to acquire knowledge, skills and abilities; economic optimization of connections between enterprises and educational institutions; the possibility of choosing personnel from among students who have shown themselves best at the enterprise (Romanyshyna, Dundiuk, 2021). Dual education improves theoretical knowledge and practical skills, compared to traditional institutional forms of education (Kocsis, Pusztai, 2021).

One of the most urgent problems of the implementation of dual education is the discrepancy between theoretical training and practical on-the-job training (Sauli *et al.*, 2021). Valiente and Scandurra (2017) point out that the simple transfer of dual education models of other countries to new socio-cultural conditions can negatively affect their effectiveness. In this regard, a necessary condition for the implementation of foreign programmes of dual education is theoretically grounded social adaptation. The main social factors hindering the effectiveness of dual education are weak interaction between educational institutions and production institutions, negative social attitude towards non-institutional forms of education, instability of the labour market (Pilz, Wiemann, 2021).

Studying theoretical sources, we could not find information about the introduction of a dual form of education into the practice of professional training of future teachers. At the same time, the improvement of the preschool education system significantly depends on the system of training and employment of future teachers, the allocation of sufficient resources for the implementation of individualized educational programmes (Hamre *et al.*, 2017). It is emphasized that teachers should be given more opportunities for professional development and more attention should be paid to the formation of professional identity (AKABA et al., 2022). The necessity of training young specialists under the guidance of a more experienced teacher is also substantiated (Khandaker, 2021). The opinion that educators have insufficiently developed skills to motivate children to work (Atsoniou, 2020), and students majoring in 012: Preschool Education have low level of professional reflection can serve as a guide for professional training (Voronova, 2020).

All these considerations indirectly point to the theoretical significance of studying the possibilities of using a dual form of education in the training of future teachers. In this regard, it is urgent to conduct pilot projects of formative experiments.

3 METHODS AND MATERIALS

The aim of the study was achieved through planning and conducting a formative experiment.

3.1 RESEARCH STAGES

The experimental study was planned in december 2022. This stage involved the theoretical justification of the research, the analysis of the research resources, the definition of the sample and the variables of the experiment, and the consideration of the ethical parameters of research. The hypothesis was formulated that the dual and traditional form of professional education differ in terms of indicators of influence on the future preschool teachers' professional competence.

The experiment was conducted during the winter-spring period of 2023. The independent variable of the study is the dual education programme for future preschool teachers. The dependent variable is the professional competence of future preschool teachers. The following structural components are distinguished in the studied phenomenon: motivational (orientation towards the profession), cognitive (theoretical knowledge of preschool pedagogy and professional methods), activity (professional skills and abilities), reflective (pedagogical self-analysis) (Zdanevych *et al.*, 2022). The formative influence involved the coordination of the actions of HEIs with preschool education institutions and the conclusion of relevant contracts. The opinion of specialists and the administration of preschool education institutions was considered when developing relevant training programmes. The educational programmes of particular preschool education institution were taken as a basis, but the specifics of dual education were determined according to the resources and employment of specialists of the preschool education institution. The "practical" part of the dual education programme was implemented in preschool education institutions in the cities of Rivne, Lutsk, and Odesa. The general strategy of a student's activities in a preschool education

institution involved moving from trial classes with preschool students to an ever-increasing level of involvement in the educational process. An empirical section aimed at establishing the levels of the components of future preschool teachers' professional competence of was conducted before the start of the implementation of the programme.

The secondary empirical test was conducted in May 2023. The methods implemented in the primary diagnostic section were used. A parallel form of knowledge testing with a similar level of difficulty of the assignments was applied only when studying the cognitive component.

Data processing and generalization was carried out in the summer of 2023. The results of the study were summarized through the structural method of interpretation, which involves a qualitative analysis of the components of the studied phenomenon.

3.2 INSTRUMENTS

The following methods were used for the primary and secondary diagnostics of the level of professional competence: The Level of Satisfaction with the Profession test to study the motivational component (Starosta, 2019); tests to test the knowledge of future teachers of preschool education institutions; questionnaire for pedagogical reflection to study the reflective component (Starosta, 2019).

Observation was used to study the activity component of future preschool teachers' professional competence. Monitoring criteria and indicators are selected based on the analysis of academic and methodological literature and the experience of preschool education specialists. In particular, observation was made of communication skills, the level of mastery of methodological techniques, emotional self-control, the ability to manage a children's team, the ability to understand the child's personality.

The validity and reliability of the research tools is substantiated by their use in studies of the preschool teachers' professional development (Zdanevych *et al.*, 2022).

The sample included students majoring in 012: Preschool Education at South Ukrainian National Pedagogical University named after K. D. Ushynsky, Rivne State Humanitarian University, Lutsk Pedagogical College.

The fourth-year bachelor students took part in the study. According to the plan of the formative experiment, a control group consisting of 73 people and an experimental group consisting of 82 people were created. The relatively small quantitative composition of the sample is related to the administrative difficulties of dual training and its general experimental nature.

The data were collected in the course of direct interaction with students. The authors of the study regularly monitored the students' progress in the preschool education institution in order to timely level the factors of destabilization of the educational process. It should be noted that there were no conflicts between students and preschool education specialists.

Data analysis: percentage analysis, Student's t-test. The distribution of different levels of professional competence was determined and the statistical significance of the results of the experiment was established.

Ethical criteria: were observed through the students' consent to participate in the study, where the course and possible problematic aspects of the experiment were determined. On the other hand, the parents of preschool students were informed about the implementa-

tion of the experimental programme. The experimenters were not related to the research participants, which helped to avoid conflicts of interest.

4 RESULTS

Table 1 presents the generalized data of the research, which were collected during the formative experiment. The changes in the level of the components of the future preschool teachers' professional competence that occurred during the implementation of the dual education system are analysed below.

The initial diagnostics indicates the predominance of a low level of the motivational component of future preschool teachers. Such indicators are recorded in almost 60% of the subjects. A third of the students showed medium level of the component. The fewest persons (a little more than 10%) have low indicators of professional motivation. In general, the results indicate insufficient level of the component of satisfaction with the teaching profession. No significant changes in the tendencies of the manifestation of the motivational component in both groups were found after the formative experiment. Transformations of the level of satisfaction with the profession are the basis for stating the lack of effective influence of dual education on the motivational component of preschool teachers' competence.

Table 1 — Dynamics of the structure of future teachers' professional competence in the course of implementing the dual education programme

Components of professional competence	Development levels	Number of subjects							
		Control group				Experimental group			
		Before the influence		After the influence		Before the influence		After the influence	
		%	Q-ty	%	Q-ty	%	Q-ty	%	Q-ty
Motivational component	Low	0	43	54.79	40	54.88	45	54.88	45
	Medium	28.77	21	31.51	23	31.71	26	31.71	26
	High	12.33	9	13.7	10	13.41	11	13.41	11
Cognitive component	Low	19.18	14	1.37	1	18.29	15	3.66	3
	Medium	50.68	37	50.68	37	51.22	42	64.63	53
	High	30.14	22	47.95	35	30.49	25	31.71	26
Activity component	Low	23.29	17	4.11	3	24.39	20	1.22	1
	Medium	64.38	47	80.82	59	64.63	53	54.88	45
	High	12.33	9	15.07	11	10.98	9	43.9	36
Reflective component	Low	34.25	25	31.51	23	32.93	27	9.76	8
	Medium	56.16	41	57.53	42	56.1	46	78.05	64
	High	9.59	7	10.96	8	10.97	9	12.19	10

Source: Developed by the authors (2023).

The primary diagnostics of the cognitive component revealed the predominance of the medium level in half of the respondents. A third of future preschool teachers are characterized by a high level of theoretical training in their future profession. About 20% of the research participants have a low level of knowledge in their major 012: Preschool Education. The cognitive component has higher initial indicators of development compared to other components of students' professional competence. Component changes were detected in both groups during the implementation of the dual education programme. In the control group, the number of persons with a high level of theoretical knowledge in the major 012: Preschool Education increased by 17.81%. A

similar percentage is observed in the trends of a low level of the cognitive component, only towards a decrease in the number. In the experimental sample, changes in the level of the component were diagnosed only in a few students, so the results are within the limits of statistical error. The result of our analysis is the statement that the traditional form of education is more effective for acquiring theoretical knowledge than dual education.

At the beginning of the study, 64% of the studied students had a medium level of the activity component. Almost a quarter of respondents have low values. The smallest percentage of future preschool teachers has a high level of the component. The development of professional abilities and skills of future pre-

school teachers is insufficient, considering the fact that we are talking about the undergraduate bachelor students. In the control group, the number of individuals with a high level of the component did not change significantly after the experiment. Medium indicators increased in 16.44% of respondents. The share of students with a low level of preschool teacher skills and abilities decreased by 19.18%. In general, there is a moderate improvement in the level of activity component in institutional higher education. In the experimental group, the high indicators of the component increased in 32.92% of students after the implementation of the dual education programme. The medium level was levelled at 9.75%. The low level of the activity component of professional competence decreased in 23.17% of the study participants. In general, the effectiveness of dual education for the development of professional skills and abilities of future preschool teachers is somewhat higher than the effectiveness of the traditional form of professional education.

More than half of the study participants have medium indicators of pedagogical reflection. About a third of students are characterized by a low level of this component. A high level of pedagogical reflection is typical for 10% of future preschool teachers. In the control group, this component did not change significantly after the implementation of the dual

education programme. All shifts are within statistical error. In the experimental sample, significant transformations in the trends of high indicators were not detected. At the same time, 21.95% of the studied students majoring in 012: Preschool Education improved the indicators of the medium level of the reflective component. The number of people with a low level decreased by 23.17% after the implementation of the dual education program. The results indicate the positive role of formative influence for the development of professional self-analysis.

It was decided to calculate the Student's t-test coefficients for dependent samples in order to clarify the conclusions (Table 1). We see that the results of the statistical calculation confirm our previous conclusions. No significant changes were recorded for the motivational component of future preschool teachers' professional competence ($t = 1.122$; $t = 1.551$). In the control group, the significance of changes in the cognitive component is at the level of $p = 0.01$ ($t = 2.993$), and in the experimental sample — at the level of $p = 0.05$ ($t = 2.287$). The significance of the shift in the component of professional abilities and skills in both groups is at the level of $p = 0.05$ ($t = 2.359$; $t = 3.174$). Statistically significant shifts in the reflective component of professional competence are only in the experimental group at the level of $p = 0.01$ ($t = 2.714$).

Table 2 — Coefficients of the Student's t-test of the components of professional competence of future preschool teachers after the implementation of a dual education system

Components of professional competence	Student's t-test	
	Control group	Experimental group
Motivational	1.122	1.551
Cognitive	2.993**	2.287*
Activity	2.359*	3.174**
Reflective	1.861	2.714**

Source: Developed by the authors (2023).

So, the dual education programme influences the development of future preschool teachers' professional competence, but this influence cannot be defined as unequivocally positive.

It is appropriate to describe the impression of observing the participants of the formative experiment. Sufficiently high indicators of interest in participating in the dual education programme were recorded, as all students participated in the study on the basis of voluntary consent at the beginning of the experimental procedures. After 1-2 months, approximately half of the experimental group experienced a decrease in motivation and interest in working in a preschool education institution. Eleven students expressed a desire to stop participating in the study after several weeks of implementation of the experimental programme. Their request was granted, as this possibility was provided for in the consent text. The results of these students were not included in the final data processing. The main reasons for refusal are the lack of understanding of the essence of the preschool teacher's educational work, increased fatigue, low stress resistance, conflicts with the employees of the educational institution.

In the dual form of education, a situation was observed when students with fairly high formal success rates (approximately 20% of the studied) demonstrated confusion and low practical realization of professional skills and abilities. It was possible to stabilize the situation and optimize the results due to the direct participation of preschool education specialists in methodical consultations. The possibility of such actions was previously noted in the dual education programme.

Expressed conflicts with employees of the preschool education institution were recorded in seven future teachers of the experimental group. Two of these participants refused to participate in the experiment. The main reasons for such conflicts were being in stressful conditions, psychological incompatibility, lack of pedagogical communication skills of subjects of dual education.

In general, most of the study participants were characterized by increased fatigue be-

fore the end of the experimental dual education programme. At the same time, most participants-maintained self-control and tried to effectively realize their professional skills and abilities.

5 DISCUSSION

The study showed that the fourth-year students majoring in 012: Preschool Education are mainly characterized by low motivation to the profession, medium level of theoretical knowledge and professional skills, insufficiently developed pedagogical reflection. The lack of motivation for the profession of a preschool teacher can be explained by the general low prestige of the relevant profession, difficult socio-economic conditions, disappointment in professional training as a result of an unbalanced educational process in a HEI. Institutional and dual forms of education do not contribute to increasing motivation towards the profession of a preschool teacher. In our opinion, this result can be explained by insufficient focus of educational influence on the motivational structures of the individual, compared to cognitive and instrumental components. Both forms of education are effective for the development of professional knowledge, skills, and abilities. Teaching practice is also provided in traditional forms of higher education, but this component is strengthened more significantly in the dual system. Taking this into account, the greater effectiveness of dual education for the formation of the activity component of professional competence is recorded. Dual education has a positive effect on the development of pedagogical reflection of research participants, which is explained by a greater immersion of the individual in the professional process. Besides, the effectiveness of professional self-analysis of future preschool teachers can be positively influenced by productive friendly interaction with senior colleagues. The insufficient level of pedagogical reflection of future preschool teachers is confirmed by the results of other studies (Voronova, 2020).

We did not find confirmation of a significant increase in the formal performance of

students, which contradicts the results of previous studies (Mora *et al.*, 2022). The obtained results confirm the conclusions about the positive impact of dual education on the development of professional skills and abilities (Kocsis, Pusztai, 2021). At the same time, statements regarding the positive impact of dual education on the assimilation of theoretical knowledge are not confirmed. Differences in the results of studies are explained by the socio-cultural context of the research.

The main ways of optimizing dual education in the professional training of future preschool teachers are analysed below. The dual education system can be improved through a more detailed consideration of employers' requirements when creating educational programmes (Martseniuk, Hruzdiev, 2021). It is also advisable to popularize a certain form of higher education (MAIER, 2022). Regular adjustment of educational programmes in accordance with the specific configuration of labour market requirements is also important (KALENSKYI *et al.*, 2023). We support the opinion about the relevance of optimizing methodical aspects, in particular, in relation to the development of educational and professional training programmes (Sappa *et al.*, 2018). It is promising to stimulate the intensity of individual counselling of students by company specialists in a dual education system (DAVOINE & DEITMER, 2020). It is important that such consultative practices go beyond formal information. We confirm the distance between the theory of the educational institution and practical activities, which cannot always be overcome in dual education (Sauli *et al.*, 2021). Consideration of issues related to systematic informing of students and society about the features of dual education is relevant (Pilz, Wiemann, 2021).

6 LIMITATIONS

Obtaining more accurate data may be associated with the creation of diagnostic methods aimed not at the teaching profession as a whole, but specifically at preschool teachers. The development of such tools requires the in-

volvement of specialists in psychodiagnostics and large-scale testing of the developed methods. The results should also be checked on a sample with a larger quantitative composition.

7 CONCLUSIONS

The relevance of studying the influence of the dual education system on the development of future preschool teachers' professional competence lies in the insufficient theoretical development of the problem and its significance for the social and economic development of the state. The main conditions for the effective implementation of dual education in the professional training of preschool teachers are taking into account the requirements of employers and the labour market, providing detailed information about the features of dual education, updating educational and methodological support, individual counselling of students by specialists of the organization, overcoming the gap between theory and practice, financial stimulation of all subjects of the educational process. It was established that future specialists are characterized by low motivation for the profession, medium level of theoretical knowledge and professional skills, insufficiently developed pedagogical reflection. Dual education demonstrated the best effectiveness in building the active and reflective component in future preschool teachers. In the development of indicators of the cognitive component, slightly better results belong to the institutional form of higher education. The dual education programme is not effective in developing the motivational component of the future preschool teachers' professional competence. The obtained results open up opportunities for improving dual education programmes for the training of future preschool teachers: focus on enhancement of professional motivation of future preschool teachers, improving theoretical knowledge in preschool education institutions. The results also indicate the need to improve the development of motivation and professional reflection of future specialists in the institutional form of higher education. The prospects for further research

are the study of the possibilities of using dual education in the training of students of other pedagogical majors.

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