



## RESEARCH ARTICLE

## Educational Reform Challenges: A Motivated Pedagogue

Olena Kryvylova<sup>1\*</sup>, Karina Oleksenko<sup>2</sup>, Olha Kurylo<sup>3</sup>, Halyna Bondarenko<sup>4</sup>, Vlada Bilohur<sup>5</sup>, Vladyslav Pyurko<sup>6</sup>, Tetiana Khrystova<sup>7</sup>, Olga Pyurko<sup>8</sup>, Liudmyla Arabadzhy-Tipenko<sup>9</sup>

<sup>1,2,3</sup>Berdiansk State Pedagogical University, Zaporizhzhia, Ukraine

<sup>2</sup>Volodymyr Vynnychenko Central Ukrainian State University, Kropyvnytskyi, Ukraine

<sup>4</sup>Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine

<sup>5</sup>Uzhhorod National University, Uzhhorod, Ukraine

<sup>6,7,8,9</sup>Bogdan Khmelnytsky Melitopol State Pedagogical University, Zaporizhzhia, Ukraine

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**ARTICLE INFO**


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**ABSTRACT**

Received: Jul 19, 2024

Accepted: Sep 27, 2024

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**Keywords**

Pedagogical experiment  
motivation

Organizational and  
Pedagogical conditions  
primary school teacher

The article analyzes the pedagogical experimental features aimed at resolving the contradiction between general secondary education institutional teacher needs who are ready to design an educational environment in the New Ukrainian School conditions, and the pedagogical institution possibilities of higher education ensuring the formation of this readiness. The main research methods include mathematical statistics, in particular the Student's t-test and the non-parametric Pearson test calculations. The hypothesis is that the created organizational and pedagogical conditions provide an influence on the motivational component formation of the future primary school teacher readiness to design an educational environment. The results of the research confirmed the experimental condition effectiveness.

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**\*Corresponding Author:**

krivileva.lena@gmail.com

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**INTRODUCTION**

The key reform of the Ministry of Education and Science of Ukraine is the New Ukrainian School (Decree of the Cabinet of Ministers of Ukraine, 16), the main goal of which is to educate an innovator and a citizen who knows how to make responsible decisions and respect human rights. The main principles of the school education reform and the approximate its implementation schedule are laid out in the New Ukrainian School Concept, one of the principles is a motivated teacher. The creation of an educational environment depends on it, which primarily involves a change in attitude towards the child, the desire to find the best way for his effective education. In order to teach in a new way, the teacher must get freedom to act - choose educational materials, improvise and experiment. The success of this process will depend on the educational quality of primary students and the professional activity effectiveness of a new type of teacher, who should be distinguished by innovative thinking, research activity and deep inner motivation.

In this context, a contradiction arises between the general secondary education institution needs for teachers who are ready to design an educational environment in the the New Ukrainian School conditions, and the possibilities of pedagogical higher education institutions ensuring the readiness formation.

Therefore, the purpose of the research is to check the effectiveness of the organizational and pedagogical conditions for the motivational component formation readiness of the future primary school teachers to

design an educational environment. To achieve this, we tried to answer the following **research questions**: what is the initial formation level of the motivational readiness component in the control and experimental groups; whether the control and experimental groups are homogeneous in the state of the motivational readiness component formation; whether the selected organizational and pedagogical conditions are effective influencing the formation of the motivational readiness component in comparison with traditional training; whether qualitative and statistical changes are observed in the experimental group; whether the control and experimental groups are homogeneous at the end of the experiment.

## LITERATURE REVIEW

The main readiness feature for professional activity is integrative nature, which is manifested in the orderliness of internal structures, the agreement of the main professional's personality components, in the endurance, stability and heredity of their functioning. As an integral formation, readiness reflects the holistic state of the individual, which includes not only the presence of abilities and qualities needed in the future activity, but also the attitude towards it, which is manifested in needs, desires, motives.

Scientists consider the motivational component essence of the future primary school teacher readiness to perform various professional activity functions, such as: positive attitude to the profession, deep awareness of its importance and interest in creative activity; stimulated creative activity; stable internal motivation based on the dominant creative oriented pedagogical reality (Korolyova, 2019); motives, interests, needs in the information and communication technology use (Andriievskya, 2019); motivation to develop the younger schoolchildren creative potential (Kovinko, 2018); persistent interest in the chosen profession, peculiarity awareness of the modern primary education functioning in variability and one's own role conditions in this process, focus on the pedagogical modeling implementation in professional activity (Nesterenko, 2019); presence of moral and ethical, cognitive needs and interests; persistent desire to develop subject-subject interaction, to update and enrich knowledge on the problems development of primary education based on the Concept of the New Ukrainian School ideas; the positive attitude formation towards the interactive educational interaction organization of students (Petryk, 2020); a set of personally significant motives, the formation of interest in inter-ethnic interaction, awareness of its importance as a necessary prerequisite for the professional activity success in a multi-ethnic educational elementary school environment (Atroshchenko, 2020); integration of personal and professional needs, motives, interests, attitudes, which collectively determine the training direction of future teachers (Konovalchuk, 2019); professional and pedagogical focus of the future teacher on the methodical activity implementation and awareness of the goals, importance and necessity forming methodical competence, interest in the scientific and methodical orientation problems, active and persistent desire to perform methodical work, to improve in it (Upatova, 2019) and others.

Scientists distinguish internal and external motivations for learning. Internal ones are related to cognitive need, satisfaction from the learning process and are characterized by activity at the professional development stage. External motives are related to needs focused on material goods, the prestige of the chosen profession, recognition and show a positive or negative attitude towards obtaining the expected activity result. The development of internal motivation occurs due to shifting the emphasis of external motives on learning goals, which allows future primary school teachers to track the dominant motivation and project a hierarchy types of goals in accordance with their own needs, interests, and values.

Positive motivation is the first step towards quality future specialists' professional activity. That is, the development of positive learning motivation in future primary school teachers is a condition for personal development and effective professional training. According to the O. Soroka definition, positive motivation is "specially organized actions of a teacher in the higher education institution conditions, which encourage higher education students to act, form interest, including at the same time positive emotions and experiences" (Soroka, 2016).

We take into account that the development and stimulation of positive future primary school teachers' motivation to design the educational environment is influenced by certain factors, such as: the complexity

of the motivational system, which contains external and internal motives that are changing according to the specific situation, interests, etc.; psychological motivation (motivational switching, objectification needs, "shift" of the motive to the goal, motivational self-regulation, transfer of external motives into internal ones, emotional influence, etc.) mechanisms; individual and psychological features of higher education seekers and their educational and professional experience (knowledge organized at the professional formation stage and verified by own pedagogical experience during the period of industrial practice in primary school); reflection understanding as an universal understanding mechanism, analysis and transformation of one's own educational and professional experience, thinking stereotypes, etc.; organization of the educational process on the partnership basis; orientation to really significant professional problems of a projective nature; active interaction of participants in the educational process; favorable creation, relaxed atmosphere between all participants of the educational process, etc.

In relation to our research subject, we consider the motivational component of future primary school teacher readiness to design an educational environment and characterize it as: the formed cognitive need to master projective activity; interest in the creating an educational environment process; persistent desire to update and enrich knowledge on the primary education development problems based on the Concept of the New Ukrainian School ideas.

## **METHODOLOGY SECTION**

Higher education institutions of Ukraine were selected as the experimental research base: Berdyan State Pedagogical University, Central Ukrainian State University named after Volodymyr Vynnychenko, Melitopol State Pedagogical University named after Bohdan Khmelnytskyi, Ukrainian State University named after Mykhailo Drahomanov.

To conduct the pedagogical experiment, experimental (EG) and control (CG) groups of higher education applicants of the first (bachelor) higher education level, specialty 013 Primary education, with a total number 316 people, were selected. 158 people were selected for the control group (CG), whose professional training was carried out on the traditionally formed practice basis. The experimental group (EG) included 158 people, whose professional training was carried out with the implementation of the developed structural-functional formation readiness model of the of future primary school teachers to design an educational environment.

The purpose of the ascertainment experiment was to establish the real professional training state of future primary school teachers and the of the investigated characteristic level at the beginning of an experiment.

The formative experiment is aimed at checking the effectiveness of the formation of the motivational readiness component directly in the process of implementing defined and theoretically justified organizational and pedagogical conditions.

The first organizational and pedagogical condition is related to the positive motivation provision of future primary school teachers to design an educational environment, which contributes to the activation of an external and internal set driving forces that encourage activity and give it direction aimed at achieving the expected results.

*The expected implementation result of the first organizational and pedagogical condition regarding the motivational readiness component* is the awareness by future primary school teachers of the cognitive need to master project activities; sustained interest emergence in the creating an educational environment process; direction to achieve success in the desire to update and enrich knowledge on the problems of the primary educational development based on the Concept of the New Ukrainian School ideas.

The second organizational and pedagogical condition is the updating of the content (the practical-oriented component of the professional and practical training cycle disciplines) and the organizational form orientation in an educational process and the training future primary school teachers' methods to the

readiness formation for designing an educational environment, which will ensure the understanding of the defined project tasks, the knowledge methods acquisition solving them and achieving the goal means.

*The expected implementation result of the second organizational and pedagogical condition regarding the motivational readiness component* is the satisfaction of the cognitive need to master projective activity; support and development of interest in the process of creating an educational environment; stimulating the desire to update and enrich knowledge on the problem development of primary education based on the Concept of the New Ukrainian School ideas.

The third organizational and pedagogical condition is related to the involvement of future primary school teachers in reflective activities in the process of forming their readiness to design an educational environment aimed at systematic pedagogical reflection of their own actions.

*The expected implementation result of the third organizational and pedagogical condition regarding the motivational readiness component* is the presence of a stable cognitive need to improve project activity mastery; interest in gaining experience in creating an educational environment, updating and enriching knowledge on the problem development of primary education based on the Concept of the New Ukrainian School ideas.

The control experiment was conducted in order to compare the obtained results of the experimental (EG) and control (CG) groups. Conclusions regarding the dynamics of the readiness future primary school teacher formation to design an educational environment according to all criteria and levels are formulated.

The criteria for checking the formation level of the motivational component are: *personal* - awareness of the cognitive need to master the project activity; emergence of sustained interest in the creating an educational environment process; direction to achieve success updating pursuit and enriching knowledge on the problem primary education development based on the Concept of the New Ukrainian School ideas; *content-procedural* – cognitive need satisfaction to master the project activity; support and interest development in the creating an educational environment process; stimulation of the desire to update and enrich knowledge on the problem development of primary education based on the Concept of the New Ukrainian School ideas; *evaluative-regulatory* – the presence of a persistent cognitive need to improve project activity masteries; interest in gaining experience in creating an educational environment, updating and enriching knowledge on the primary education problem development based on the Concept of the New Ukrainian School ideas.

According to the defined system of criteria and indicators, the levels formation of the motivational readiness component are characterized.

*A high level* is characterized by a conscious need to master project activities with the habit of acting in an appropriate manner even in changing conditions; persistent and individually significant cognitive interest in the process of creating an educational environment; with the desire to independently update and enrich knowledge on the problem development of primary education based on the Concept of the New Ukrainian School ideas.

*A sufficient level* is characterized by a conscious need to master project activities with the recognition of one's own difficulties and making targeted efforts to overcome them; selective cognitive interest in the process of creating an educational environment related to a separate topic, section, subject, independent solution of project tasks. striving to update and enrich knowledge on certain issues of the problem of the development of primary education based on the Concept of the New Ukrainian School ideas;

*The average level* is characterized by a conscious need to master project activities with the recognition of one's own difficulties and the expectation of help from the outside; unstable cognitive interest in the process of creating an educational environment; the situational nature of the desire to update and enrich knowledge on the problem development of primary education based on the Concept of the New Ukrainian School ideas.

*A low level* is characterized by an unconscious need to master project activities; passivity of cognitive interest in the process of creating an educational environment; the lack of desire to update and enrich

knowledge on the problem development of primary education based on the Concept of the New Ukrainian School ideas.

The evaluation of the levels of formation of the motivational component was carried out not only by comparing the obtained results with certain norms, average values, but also by comparing them with the results of previous diagnostics to reveal the nature of progress in the development of each of its structural components.

The choice of methods for determining the formation level of the motivational component was carried out in accordance with methodological requirements. So, for example, we chose tests based on a functional feature in relation to the subject of the research: personality tests - psychodiagnostic methods, which can be used to determine various features of future primary school teachers and their characteristics. During the implementation of the tests, the requirements regarding the mandatory set of test tasks were observed for all; clear standardization of external conditions in which testing is carried out; availability of a standard system of evaluation and interpretation of the obtained results; using average indicators of measurement results.

During the development and implementation of the questionnaires, the following basic requirements were observed: the questions characterize the phenomenon in such a way that the expected answers to them can be reliable; questions can be both direct and indirect, both with and without answer options; the wording of the question should not lead to a certain answer; the answer options must have an unambiguous understanding; the number of answer options should ensure the maximum possible probability of them; offer control combinations of questions: direct questions; personal, impersonal questions; provide for a preliminary check of the level of understanding of the questions in a small number of higher education applicants and make adjustments to the content of the questionnaire.

The measurement was carried out with the help of diagnosis of personality orientation vectors according to B. Bass (*personal criterion*), analysis of activity products (*content-procedural criterion*), writing a motivational essay (*evaluative-regulatory criterion*). With the help of the B. Bass method, they determined the orientation vector of future primary school teachers, which is manifested in needs, interests, ideals, beliefs, dominant activity motives, and behavior. They distinguished the focus on communication and interaction, on the case and its result, on oneself. *The analysis of the activity products* of higher education seekers allowed us to draw indirect conclusions about the formation of a sustainable desire to update and enrich knowledge on the primary education problem development. *The essay* was used as a type of individual work with future primary school teachers, which reflected the individual reasoning of higher education seekers on a specific issue or problem. The essay was evaluated from the value attitude standpoint to the project activity, awareness of its significance and interest in it.

## RESULTS AND DISCUSSION

Data analysis and processing were carried out according to a single program, under identical conditions, using a single diagnosing method formation level of the motivational component in all groups. All this contributed to obtaining reliable experimental data.

At the ascertainment experiment stage, with the selected research method help and statistical processing of the results, it was determined that the probability level of the confidence interval is 95%, the difference between the samples, which were the experimental and control groups, is statistically insignificant and is within 5%, that is, the difference between the estimates levels of formation indicates approximately the same general formation level of the motivational future primary school teachers' component before designing the educational experimental environment (EG) and control (CG) groups (29.11% of the experimental group (EG) and 27.85% of the control group (CG) demonstrated low level), which subsequently made it possible to determine methods for its increase.

The objectivity of the experimental researching results, aimed at checking the effectiveness of the structural-functional formation model of the future primary school teacher readiness to design the

educational environment, is ensured by the equivalence of two student samples, that is, the control homogeneity (CG) and experimental (EG) groups in terms of the readiness level to design educational environment at the experiment beginning.

Separately, using the Student's t-test, the reliability of the matches and differences of the control (CG) and experimental (EG) groups was analyzed regarding the component readiness formation of future elementary school teachers to design the educational environment at the beginning of the experiment in order to prevent possible errors at the formative stage, in particular the motivational component - 1.15.

According to the results of the research, the initial formation level of the motivational readiness component of future primary school teachers to design the educational environment mainly corresponded to the average level (43.04% - control group (CG) and 43.67% - experimental (EG)), which is explained by the main motivation type for choosing a profession - external positive motives.

At the stage of the formative experiment, in the implementing organizational and pedagogical condition process, the motivational component of the readiness of future primary school teachers to design an educational environment was influenced. The result of such influence was *the awareness* of the cognitive need to master project activities; sustained interest *emergence* creating an educational environment process; *direction* to achieve success updating the pursuit and enriching knowledge on the primary education problem development based on the Concept of the New Ukrainian School ideas; cognitive need *satisfaction* to master project activities; *support and interest development* creating process an educational environment; desire *stimulation* to update and enrich knowledge on the primary education problem development based on the Concept of the New Ukrainian School ideas; persistent cognitive need *presence* to improve mastery of project activities; *interest* in gaining experience in creating an educational environment, updating and enriching knowledge on the primary education problem development based on the Concept of the New Ukrainian School ideas.

The result of the the motivational component readiness formation of future primary school teachers to design the educational environment in the table.1.

**Table 1. Measuring formation level results of the motivational component in the control and experimental groups before and after the experiment (%)**

Readiness level	At the beginning of the experiment				At the end of the experiment			
	CG = 158		EG = 158		CG = 158		EG = 158	
Low	44	27,85	46	29,11	30	18,99 (-8,86)	24	15,19 (-13,92)
Average	68	43,04	69	43,67	58	36,71 (-6,33)	40	25,32 (-18,35)
Sufficient	28	17,72	27	17,09	41	25,95 (+8,23)	63	39,87 (+22,78)
High	18	11,39	16	10,13	29	18,35 (+6,96)	31	19,62 (+9,49)

The analysis of experimental data (Table 1.) showed the most significant qualitative changes at a sufficient formation level of the motivational component, caused by an increase in the number of higher education recipients in the experimental group by 22.78%. Low and medium motivational component formation levels also showed positive qualitative changes: a decrease in the higher education recipients number in the control (by 8.86% and 6.33%, respectively) and experimental (by 13.92% and 18.35%, respectively) groups. Also, the qualitative changing dynamics the motivational component formation level were recorded in the "high level" category by 6.96% in CG and 9.49% in EG: the future primary school teachers number' who demonstrate the motivational readiness component formation for professional work at a high level increased activity (by 9.49%), namely: a conscious need to master projective activity with the habit of acting in an appropriate way even in changing conditions; persistent and individually significant cognitive interest in the creating educational environment process; with the desire independently update and enrich knowledge on the primary education problem development in accordance with the Concept of the New Ukrainian School ideas.

The obtained data were confirmed by the use of mathematical statistics methods, particularly, the Student's t-test and the non-parametric Pearson test - calculation. Thus, the obtained Student's t-criterion ( $t_{tab.} (1.969) < t_{calc.} (6.46)$ ) value indicates a difference in the formation level of the motivational readiness component to design the educational future primary school teachers' environment of the experimental and control groups with a probability 95%. The Pearson test  $\chi^2_{exp.} > \chi^2_{crit.} (11.848 > 7.8)$  value the at a significance level 0.05 indicates the influence of experimental organizational and pedagogical conditions on the motivational component formation of the future primary school teachers' readiness to design an educational environment.

## CONCLUSION.

Therefore, the positive formation level dynamics of the motivational component in accordance with personal, content-processual and evaluation-regulatory criteria gave grounds to assert the defined and theoretically grounded organizational and pedagogical conditions' effectiveness for the readiness formation of the future primary school teachers to design an educational environment (ensuring positive future primary school teachers' motivation to design the educational environment; updating the content of the practical-oriented cycle component professional and practical training and the orientation of the educational forms of future primary school teachers to the readiness formation for designing the educational students' environment; the involvement of future primary school teachers in reflective activities formation of their readiness to design an educational environment).

At the end of the experiment, the number of future primary school teachers who demonstrate at a high formation the of the motivational readiness component for professional activity increased (by 9.49%), namely: the perceived need to master projective activity with the habit of acting in an appropriate way even in changing conditions; persistent and individually significant cognitive interest in the process of creating an educational environment; striving independently update and enrich knowledge on the primary education problem development in accordance with the Concept of the New Ukrainian School ideas.

The reliability and validity of the obtained results was proven by mathematical statistics, namely: checking the control homogeneity (CG) and experimental (EG) groups in terms of readiness level to design the educational environment at the beginning of the experiment and their heterogeneity at the end of it by calculating the Student's t-criterion; by checking the effectiveness of influencing factors according to the Pearson test  $\chi^2$ .

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