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Students' Educational Motivation Features in the Context of Distance Learning

Natalia V. Ivanova (a), Maria A. Vinogradova* (b)

(a), (b) Cherepovets State University, 162600, Cherepovets (Russia), 5 Lunacharsky Avenue,
ms.vimary@mail.ru

Abstract

The research was aimed at studying the influence of distance learning format on the educational activity motivation of full-time students, as well as at conducting a comparative analysis of the 1st and 2nd year full-time students' educational activity motivation in the context of traditional and distant learning formats. The article presents the results of the study conducted in Cherepovets State University.

Theoretical background is primarily based on the studies of activity motivation phenomenology. To collect empirical data, a standardized diagnostic technique "Scales of internal and external motivational orientation" by Amabil (adaptation of Gordeeva and Osin) and survey methods were used. The results analysis showed that in distance learning conditions, the number of students with internal motivation decreased from 32% in 2019 to 28% in 2020, while the number of students with external negative motivation increased significantly from 29% in 2019 to 42% in 2020. To understand the reasons for the changes in educational activity motivation, the survey of students and teachers was carried out.

The comparative analysis of educational activity motivation of full-time students in traditional and distance learning formats, the analysis of external and internal reasons for negative tendencies manifestation in changing educational motivation allowed us to identify and to test the tools for supporting the students' internal motivation and minimizing negative trends arising in the process of forming educational motivation in the context of distance learning.

Keywords: educational activity, motivation, distance learning, students, support.

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* Corresponding author. E-mail: ms.vimary@mail.ru

Introduction

Motivational sphere formation is an integral part of future teachers' professional development and an important condition for the successful educational process at the university. Under the influence of external factors, the motivational sphere can change in terms of its stability, structure, subordination of motives, their hierarchy, which, in turn, affects the manifestation of educational activity, subject position in educational activities and students' career development (Ilyin, 2006). Various aspects of studying the educational motivation of university students in a traditional teaching format are considered in a number of studies: Gordeeva and Osin (2012), Pavlova (2005), Meshkov and Yashkova (2018), Guay, Vallerand and Blanchard (2000), Lepper, Corpus and Iyengar (2005), Linnenbrink and Pintrich (2002).

The pandemic and the transfer of training to a distance learning format have become aggravating conditions that had a significant impact on the formation of students' learning activity motivation. The influence of distance learning on the students' educational activities is confirmed by the studies conducted by Afanasyeva (2018), Gladkikh (2019), Danilov (2016), Ovchinnikov (2008), Kononykhina (2021), Skvortsov (2015), Jones and Issroff (2005), Owens, Hardcastle and Richardson (2009).

At this stage, the study which is aimed at identifying the manifestation features of the students' educational activity motivation in the context of distance learning has become relevant.

Purpose and objectives of the study

The study considers the influence of the distance learning format on the full-time students' educational activity motivation, as well as the results of the comparative analysis of the 1st and 2nd year full-time students' educational activity motivation in the context of traditional and distant learning formats.

Literature review

Educational activity motivation at the university

All definitions of motivation can be divided into two groups. The first group considers motivation regarding its structure, interconnection of factors and motives (Shadrikov, 2003). In the second group, motivation is seen as a mechanism or means of realizing actual motives (Ivannikov & Izhevskiy, 1998; Leontiev, 2005).

In the context of our research, it should be noted that many researchers, understanding motivation as behavior determination, distinguish the following two types:

- external motivation (extrinsic), not related to a certain activity, but determined by some external circumstances as related to the subject;
- internal motivation (intrinsic), associated not with external circumstances, but with the very content of the activity.

The study of motivation as an element of educational activity is singled out as an independent psychological and pedagogical problem. The main directions of studying the educational activity motivation are as follows:

- determination of the structure and mechanisms of educational motivation functioning (Bozhovich, 1972; Galperin, 1998; Kuzmina, 2002; Leontiev, 2005; Markova, 1990; Talyzina, 1988; Deci, 1975);
- identification of age-related pedagogical aspects of motivation changes in the process of school and university education (Gutkina & Pechenkov, 2006; Matyukhina, 1984; Lepper, Corpus, & Iyengar, 2005);
- determination of the role of methods, content and forms of education in the development and formation of educational motivation (Verbitsky, 1997; Voronkova, 2008; Epifanova, 2000; Orlov, Tvorogova, & Shkurkin, 1988).

The features of educational motivation of university students in the context of traditional teaching format are considered in a number of studies:

- structure, mechanisms and factors of motivation development of students' educational activity (Verbitsky & Bakshaeva, 2000; Bakshaeva, 2019; Gordeeva, 2006);
- features of educational activity motivation of the students of pedagogical universities (Pavlova, 2005);
- features of educational motivation of students demonstrating different types of academic achievements (Gordeeva & Osin, 2012).

According to Zimnyaya (2000), learning motivation is determined by a number of factors: by the educational institution where learning activities are carried out; by educational process organization; by students' subjective characteristics (age, gender, intellectual development, abilities, level of aspirations, self-esteem, interaction with other students, etc.), by the teacher's subjective characteristics and, above all, by the system of the teacher's relationship with students and to their profession; by the specifics of the subject.

The analysis can be summarized in a diagram representing the main parameters of studying motivation as a component of educational activity (Fig. 1).

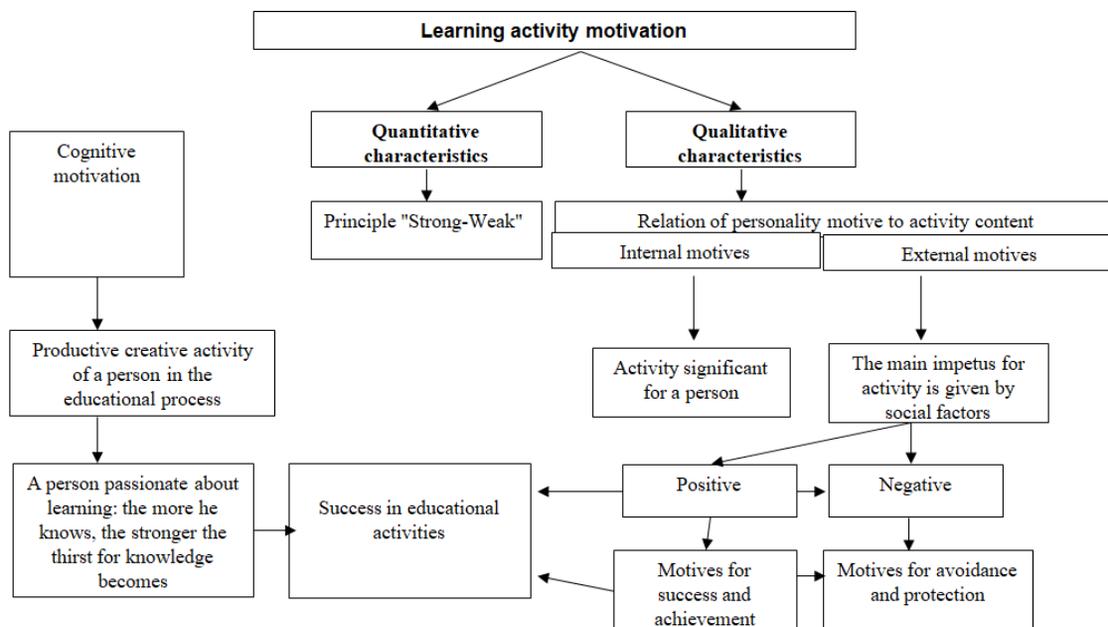


Fig. 1. Parameters of studying motivation as a component of educational activity

Distance learning at the university

Distance learning is understood as the transfer of some educational information to students using modern information and communication technologies, stimulating their educational activities and, if necessary, taking measures to correct. In recent decades, distance learning technology has been widely used by the leading universities in America, Europe and Russia.

Foreign studies on distance learning implementation are given in the works by Sewart (1993), Garrison and Anderson (1999), Baath (1994), Amundsen (1993), Holmberg (1998), Garrison and Shale (1994), Nipper (1989).

In Russian studies, the specific features of distance learning were studied by Shchennikov (2003), Ovchinnikov (2008).

According to the researches, distance learning has a significant potential in vocational education.

Pedagogical potential of distance learning is considered in the works of Golubeva (2006), Ivannikov & Izhvanov (1998), Polat (1998), Polat, Bukharkin and Moiseeva (2004), Robert (2014), Svintorzhitskaya (2001). Distance learning as a pedagogical technology, implemented in a certain sequence under the indirect control of a teacher at a distance is studied in the works by Shuklin (2010) and Evdokimov (2006).

It should be noted that all authors are unanimous in the opinion that distance learning involves other means, methods, organizational forms of training, a different form of interaction between the teacher and the student, as well as between students, in contrast to traditional training. But at the same time, distance learning has the same component composition: goals, content, methods; organizational forms; learning tools and results. The implementation of these components in distance learning is due to the specifics of the used technological basis.

However, despite the wide coverage of the theory and practice of distance learning, the issue of the distance format influence on the manifestation of motivation for educational activities, as well as the identification of effective ways to maintain internal motivation of students, remains insufficiently studied.

Methodology

The research was carried out on the basis of Cherepovets State University in several stages. The study included 4 stages.

The first research stage: the first term of the 2019-2020 academic year

The participants in the experiment: 72 full-time freshmen of 44.03.05 Pedagogical Education (with two training profiles).

The purpose of the first research stage: analysis of the conceptual and terminological research field apparatus; analysis of the ratio of external and internal motivation of students in traditional learning conditions.

The research methods:

- theoretical (analysis of psychological and pedagogical literature);
- empirical (standardized diagnostic technique “Scales of internal and external motivational orientation” by Amabil (adaptation of Gordeeva and Osin, 2012);
- quantitative data analysis.

The second research stage: June 2020

The participants in the experiment: 72 full-time freshmen of 44.03.05 Pedagogical Education (with two training profiles).

The purpose of the second research stage: influence of distance learning on the ratio of external and internal motivation of the students.

The research methods:

- standardized diagnostic technique “Scales of internal and external motivational orientation” of T. Amabil (adaptation of Gordeeva and Osin, 2012);

- survey methods;

- quantitative data analysis.

The third research stage: the first term of the 2020-2021 academic year

The participants in the experiment: 72 full-time second year students of 44.03.05 Pedagogical Education (with two training profiles).

The purpose of the third research stage: minimizing negative trends arising in the process of forming educational motivation in distance learning.

The research method: approbation of the tools for supporting the internal motivation of students.

The fourth research stage: December 2020

The participants in the experiment: 72 full-time second year students of 44.03.05 Pedagogical Education (with two training profiles).

The purpose of the fourth research stage: effectiveness assessment of the tools for supporting the internal motivation of students.

The research methods:

- standardized diagnostic technique “Scales of internal and external motivational orientation” by Amabil (adaptation of Gordeeva and Osin, 2012);

- quantitative data analysis.

Results

The experiment involved 72 full-time students of 44.03.05 Pedagogical Education (with two training profiles). Participation in the study was voluntary.

The first stage was implemented in the first term of the 2019-2020 academic year. It included the annual monitoring of the freshmen's educational motivation. The research was aimed at determining the dominant motives for entering a university and choosing a specialty, as well as identifying the type of motive for the students' educational activity. The results obtained are used in the educational process in order to prevent maladjustment and academic failure.

The results of the first stage are given in Table 1.

Table 1. The ratio of external and internal motivation of students at the beginning of the 2019-2020 academic year

Field of study and specialization	External motivation				Internal motivation	
	positive		negative		Absolute value	%
	Absolute value	%	Absolute value	%		
Preschool education	15	21	10	14	9	13
Additional education						
Primary education	13	18	11	15	14	19
Organization of extracurricular activities						
Total	28	39	21	29	23	32

The results analysis of the first assessment in the 1st term of the 2019-2020 academic year showed the following: 23 students (32%) revealed internal motivation, 49 students - external, of which 39% - external positive, and 29% - external negative motivation. The data obtained are similar to the results of the annual diagnostics of the educational activity motivation, which is carried out while adapting the freshmen to educational activities at the university. Table 2 shows the ratio of the students' external and internal motivation during two previous years.

Table 2. The comparative analysis of external and internal motivation of students at the beginning of the 2018-2019 and 2019 -2020 academic years

Field of study and specialization	External motivation				Internal motivation	
	positive		negative		Absolute value	%
	Absolute value	%	Absolute value	%		
2018-2019 69 people	27	39	20	29	22	32
2019-2020 72 people	28	39	21	29	23	32

Thus, it can be stated that the majority of first-year students (about 70%) shows external motivation for learning activities in traditional learning conditions.

The second assessment was carried out in June 2020 after three months of distance learning. The results are shown in Table 3.

Table 3. The ratio of external and internal motivation of students at the end of the 2019-2020 academic year

Field of study and specialization	External motivation				Internal motivation	
	positive		negative		Absolute value	%
	Absolute value	%	Absolute value	%		
Preschool education	13	20	13	20	8	12
Additional education						
Primary education	9	10	17	22	12	16
Organization of extracurricular activities						
Total	22	30	30	42	20	28

The number of students showing internal motivation decreased to 28%, while the number of students with external negative motivation increased significantly. The data obtained differed significantly from the results of the annual monitoring of educational activity motivation, which are given in Table 4.

Table 4. The ratio of external and internal motivation of teacher training students at the end of the 2018-2019 and 2019 -2020 academic years

Field of study and specialization	External motivation				Internal motivation	
	positive		negative		Absolute value	%
	Absolute value	%	Absolute value	%		
2018-2019 69 people	28	41	12	17	29	42
2019-2020 72 people	22	30	30	42	20	28

Every year, the second assessment showed an increase in the number of students with internal motivation, while the number of students with external negative motivation decreased significantly. But in the context of distance learning, this tendency did not manifest itself.

To understand the reasons for the changes in educational activity motivation, an additional survey of the students and teachers was carried out. The purpose of the survey was to identify the main difficulties that students experienced at distance learning.

The analysis of the results made it possible to single out two groups of reasons:

- external reasons associated with the organization of the educational process, in general, and learning activities in the classroom, in particular;
- internal reasons associated with psychological and personal features of the students.

When characterizing external reasons, almost all of the surveyed students (94%) highlighted a lack of feedback from the teacher. The lack of an assessment from the part of the teacher about the completed assignment in class reduced the pace of educational activity. Mistakes at the very beginning of the assignments led to an incorrect result, while the students could not independently determine the location of the mistake. This was especially evident for the students with external positive motivation. The students from this particular group showed a tendency to manifest internal negative motivation in the second assessment. The teachers noted that in distance learning, even via a video link, it is difficult to timely respond to all student requests. Also, the teachers noted that, without seeing the students' reply to the task or question, it was difficult for them to choose the means of pedagogical influence in the educational process.

It should be noted that the feedback from the student community is also significant for the students: 63% noted that it is easier for them to respond in groups and to have the opportunity to see their support.

The students' main psychological characteristics, which determined the internal reasons for negative tendencies manifestation in changing educational motivation, were a low or insufficient level of volatility, stability and concentration of attention. This was shown by the survey of students and teachers. The traditional one-and-a-half-hour lecture format is not effective in the remote interaction. Many students (89%) noted difficulties in choosing the means of educational activity and in using internal mental actions, such as analysis, synthesis, classification. In the classroom the students expected a clear algorithm of actions from the teacher. This was confirmed by the teachers' responses. In addition, the students had a difficulty in perceiving and maintaining the aim of the lesson. Also, all students pointed to the difficulty of self-organization without external control.

Thus, the results of the first and second research stages confirmed the need to search for additional means of forming and maintaining positive motivation for the students' learning activities at distance learning.

The third stage research was carried out during the summer exam period and in the first semester of the 2020-2021 academic year. The changes in the traditional system of the university motivational environment were determined on the basis of the analysis of difficulties identified by the students. We have defined two areas of work:

- 1) determining and implementation of different feedback formats in the educational process and new formats of educational assignments;
- 2) determining and implementation of methods for the development of students' self-organization and self-control as important educational qualities for distance learning.

It should be noted that the division into these directions is conditional. Each task or educational format, to one degree or another, ensures the implementation of each direction. This contributes to the formation of "cross-cutting motivation", which affects the external and internal aspects of the educational process.

Within the framework of the first direction, the content of the studied material is structured into blocks, each holding the student's attention for no more than 10-15 minutes. You can use a series of presentations, each containing 15-20 slides with interlinear text, or text presentation formats. It is important that they are easy to read and that key ideas should be highlighted.

The form of the studied material control can be a completion of the tasks of two types: tests and cases. The student can check the test results immediately, the answers are given on the last page of the text or the last slide of the presentation. The example of a formulation that motivates to complete the task independently: "The test is not assessed; it is used as a training exercise. In case of an incorrect answer, you must click on the hyper-link located opposite to each answer; it will refer to the necessary information. It is necessary to start an assignment in the format of a case, which will be assessed, after you have no mistakes in the test".

The feedback at the lesson, when students are supposed to speak, for example, with a presentation of a solved case, can be organized as a chat vote based on the criteria for evaluating the answer, which students are familiar with when giving out the assignment. In the process of answering in the chat, an expert survey protocol is formed, and the student can see his/her strengths and weaknesses.

The assignments for practical exercises should also be transformed. First of all, this concerns the task volume.

As an example, we can give the theme of the course “Methodology of Pedagogical Research”, which deals with the formation of students’ competencies in determining the methodological apparatus. In the traditional format, this topic is mastered by the students in 1 hour of lectures and 4 hours of practical training. An effective, offline format is a collective way of teaching, when students are divided into subgroups, and after a certain period of time 2-3 teams take turns to display the results on the screen. Comparison and correction of mistakes is carried out. In a remote format, collaborative ways of working are difficult to organize. In this case, the most effective will be the use of elements of gamification and the method of a deliberate mistake.

The task is split into parts. On the presentation slide, the topic and answer options are written. Among them there are the numbered correct and incorrect answers. The student in the chat under his/her own name is to write the correct answer. The teacher immediately sees mistakes, both individual and group, systemic. But in order for the student to learn to identify the components of the methodological apparatus not only on the basis of the choice from the proposed answers, he/she has to independently complete an individual task and send it to the teacher. At the same time, this task can be educational and reflexive in order to simultaneously provide feedback and develop the student’s independence in educational activities, which will contribute to a better comprehension of the material. The task can be formulated as follows: “Identify the components of the methodological apparatus. Each component is assessed as a separate assignment. Rate yourself on a five-point scale for each completed assignment. In the notes, you can write what difficulties you have encountered in the process of completing each task”.

The example of such reflective task is given in Table 5.

Table 5. The example of educational-reflexive task on the topic “Pedagogical conditions for overcoming anxiety of 5-6 years old children”

Component of the research methodological apparatus	Respond	Self-assessment	Notes	Teacher's assessment	Comments
Aim	Determine pedagogical conditions for overcoming anxiety of 5-6-year-old children	5		5	
Object	The process of overcoming anxiety of 5-6-year-old children	5		5	
Subject	Pedagogical conditions for overcoming anxiety of 5-6-	5		5	

	year-old children		
Tasks	<ol style="list-style-type: none"> 1. To theoretically substantiate the research problem 2. To identify the level of anxiety of 5-6-year-old children 3. To formulate recommendations for overcoming anxiety in pre-schools 	5	4
Hypothesis	Overcoming anxiety of 5-6-year-old children will be more effective when interacting with families		<p>The first task needs to be specified. There is no task to analyze the pedagogical conditions implemented in pre-schools. In task 3, the age of children is not indicated and recommendations are not specified.</p> <p>The highlighted condition is correct but insufficient as several conditions must be highlighted. Think about what kind of creative games you can use.</p>

In the distance learning, it is very difficult to implement educational tasks related to analysis, synthesis and classification. In this case, you can gradually complicate the tasks. For example, invite students to prepare a visualization of a diagram that reflects the relationship between the object and the subject of the research. For its implementation, the student must actualize the knowledge that the object of research is wider than the subject of research, and present the vision of this thesis. Then students are given a ready-made version of visualization (Figure 2) and asked the question: "Do you agree with this representation of the relationship between the object and the subject of the research. Prove your answer, give examples".

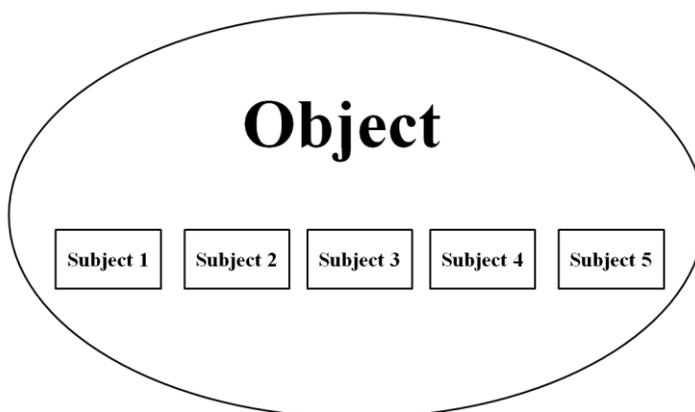


Fig. 2. Example of a task on the ratio of the object and the subject of research

Within the framework of the second direction, implying the student's self-organization and self-control development as important educational qualities in distance learning, you can use a roadmap indicating the sections, modules, topics, deadlines, assignments, points, feedback forms. In addition, students need to provide a guide (navigator) for the electronic resources offered by the teacher. Since, within the framework of traditional communication, the teacher at any time can pay attention to a particular source or resource. The student, studying independently, has to provide the information about the reference to a certain topic or task. The roadmap should be updated on the screen at each lesson and students should see their progress in the course study. At each stage, the teacher determines the key knowledge, abilities, skills, competencies that the student should master. Such guidelines will help the student to understand why he/she has not succeeded in this or that task.

Change in the class format is a connection uniting both directions and forming "cross-cutting motivation". They become integrated and include an appropriate combination of lecture material, practical tasks, various forms of control and verification, reflective tasks. An hour and a half classroom time can be planned the following way:

1. Demonstration of the roadmap indicating the "educational location" in the course information space - 3 minutes.
2. Presenting a new material using different visualization options -15 minutes.
3. Practical task - 10 minutes.

4. Checking the completed tasks - 10 minutes.
5. Continuation of the lecture - 15 minutes.
6. Viewing video content supporting the new material - 5-7 minutes.
7. Reflexive task 5-7 minutes.
8. Continuation of the lecture -15 minutes.
9. Explanation of the task for the next lesson using visualization and a guide (navigator) - 8 minutes.

The fourth stage of research was carried out in December 2020. The next assessment, conducted the same month, showed a positive trend in the development of motivation for learning activities. The results are shown in Table 6.

Table 6. The ratio of external and internal motivation of the students in the 2020-2021 academic year

Field of study and specialization	External motivation				Internal motivation	
	positive		negative		Absolute value	%
	Absolute value	%	Absolute value	%		
Preschool education	21	29	6	8	10	14
Additional education						
Primary education	17	24	4	6	14	19
Organization of extracurricular activities						
Total	38	53	10	14	24	33

The analysis of the data showed the following: the number of students with external positive motivation increased (53%); there has been a tendency towards an increase in the number of students with internal motivation for learning activities.

Discussion

The transfer of the educational process at the university to a distance format has led to the emergence of a number of negative trends regarding the students' educational motivation: the number of students with internal motivation has decreased and the number of students with external negative motivation has significantly increased.

The empirical research has shown that this is due not only to the organization of the educational process, but also to a large extent to the psychological characteristics of students, including the peculiarities of mental processes development in the cognitive sphere. In addition, the ascertaining stage confirmed the dependence of the formation of certain educational qualities and the type of educational motivation.

Based on this, we have identified two main groups of changes in the motivational educational environment of the university when implementing distance learning format: the use of various types of educational tasks and feedback to maintain the arbitrariness of mental cognitive processes and arranging the conditions for the development of important educational qualities (self-organization, self-control) by visualizing the reference stimuli-symbols of external and internal control (guide, roadmap for studying the discipline, etc.).

We consider structural and technological changes in the lecture system of traditional teaching to be extremely important. A variety of options and models for designing the logistics of the course content can be implemented based on the use and combination of different types of educational activities and visualization formats, which support the formation of “cross-cutting motivation” to ensure the relationship between the external and internal aspects of the educational process.

Conclusion

Diagnostics of the educational activity motivation of full-time pedagogical education students (with two specializations) has revealed negative trends in its manifestation: a decrease in the number of students with internal motivation and a significant increase in the number of students with external negative motivation. The comparative analysis of the full-time students’ educational activity motivation in the conditions of traditional and distance learning formats has allowed us to identify and test the tools for supporting the internal motivation of students and minimizing negative trends arising in the process of forming educational motivation in distance learning.

Due to the fact that distance learning format is becoming an integral part of the educational process at the university, the problem of developing various models for designing the motivational component of the educational space for training future teachers in a mixed learning format becomes urgent.

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Competing interests

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