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The main directions of the application of pedagogical innovations in modern times and the role of teachers in this activity

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Abstract

The article explores the application of pedagogical innovations and the role of the teacher in this area. The survey showed that the application of pedagogical innovations in education is conditioned by a complex of different factors. In addition to motivating teachers, their age characteristics, attitude to new pedagogical technologies and the level of their use, as well as the presence of the necessary skills and so on are important. The unequivocal lack of attitudes towards pedagogical innovations, as well as teachers' frustration, passivity and negative attitude towards innovation, also prevent the widespread application of innovation. The survey showed that there is no serious paradox in teachers' assessment of innovative teaching methods at real and predictable levels. There is no doubt that there is an intensive interest in the use of new methods in the organization of training, and the positive aspects of innovation in teaching, in the opinion of teachers, increase cognitive activity, reduce negative emotions and create lasting motivation in students.

Keywords

Pedagogical innovations in education. Teachers. Active learning methods.

As principais direções da aplicação de inovações pedagógicas nos tempos modernos e o papel dos professores nesta atividade

Resumo

O artigo explora a aplicação de inovações pedagógicas e o papel do professor nesta área. A pesquisa mostrou que a aplicação de inovações pedagógicas na educação é condicionada por um complexo de diferentes fatores. Para além de motivar os professores, são importantes as suas características etárias, a atitude perante as novas tecnologias pedagógicas e o nível de utilização, bem como a presença das competências necessárias, etc. A inequívoca falta de atitude em relação às inovações pedagógicas, bem como a frustração, passividade e atitude negativa dos professores em relação à inovação, também impedem a aplicação generalizada da inovação. A pesquisa mostrou que não há paradoxo sério na avaliação dos professores sobre métodos de ensino inovadores em níveis reais e previsíveis. Não há dúvida de que existe um intenso interesse na utilização de novos métodos na organização da formação, sendo que os aspectos positivos da inovação no ensino, na opinião dos professores, aumentam a atividade cognitiva, reduzem as emoções negativas e criam motivação duradoura nos alunos.

Palavras-chave

Inovações pedagógicas na educação. Professores. Métodos ativos de aprendizagem.

Las principales direcciones de la aplicación de innovaciones pedagógicas en los tiempos modernos y el papel de los docentes en esta actividad

Resumen

El artículo explora la aplicación de innovaciones pedagógicas y el papel del docente en esta área. La encuesta mostró que la aplicación de las innovaciones pedagógicas en la educación está condicionada por un conjunto de diferentes factores. Además de motivar a los docentes, son importantes las características de su edad, la actitud hacia las nuevas tecnologías pedagógicas y el nivel de su uso, así como la presencia de las habilidades necesarias, etc. La inequívoca falta de actitudes hacia las innovaciones pedagógicas, así como la frustración, pasividad y actitud negativa de los docentes hacia la innovación, también impiden la aplicación generalizada de la innovación. La encuesta mostró que no existe una paradoja seria en la evaluación de los profesores de los métodos de enseñanza innovadores a niveles reales y predecibles. No cabe duda de que existe un intenso interés en el uso de nuevos métodos en la organización de la formación, y los aspectos positivos de la innovación en la docencia, en opinión de los profesores, aumentan la actividad cognitiva, reducen las emociones negativas y crean una motivación duradera en los estudiantes.

Palabras clave

Innovaciones pedagógicas en educación. Docentes. Métodos activos de aprendizaje.

1 Introduction

Socio-economic changes in modern life, globalization, transformation of values, the introduction of new educational reforms have necessitated significant changes in didactics and teaching methods, as in many areas. The pedagogy and teaching method of the last century differs from the teaching method and pedagogy of the twenty-first century. These differences are deepening against the background of distance from traditional education, dictating the formation of new attitudes in the education system, while necessitating the introduction of new teaching methods.

Carrying out serious reforms in the development of education in Azerbaijan, including information and communication technologies operating in educational institutions in the State Program for the Development of Education, development of infrastructure in accordance with the requirements of basic training methodology, providing each educational institution with Internet, computer-tablet loaded with electronic textbooks in general secondary education, application of new teaching methods is set as the main task (DERCE OF THE PRESIDENT OF THE REPUBLIC OF AZERBAIJAN,

2016). Integration into the development of world education is the main leitmotif in this educational program.

It should be borne in mind that the most common phenomenon in the application of innovations in modern times is the internetization of society and the penetration of digital technologies in education. The scale of innovation in the pedagogical process can be different: to improve a certain method, form, to apply new work technologies, or to update the educational system. At present, reforms are being carried out in the field of education in our country, great changes are taking place in the material base of education, in the content, methodology, teacher-student relations, and management of education and upbringing. The main directions of innovations in the pedagogical system are as follows:

- Democratization of the school;
- Humanization of the pedagogical process;
- Application of collaborative pedagogy;
- Individualization of the educational process;
- Expansion of the content of education and upbringing;
- Optimization of the educational process;
- Application of new pedagogical technologies;
- Improving the school management system;
- Reconstruction of the in-service training system;
- Building education in accordance with world standards, etc.

Modern schoolchildren recognize new technologies by their digital, and social digital names. This system is a transition from the acquisition of knowledge through reading the text, from the teacher's monologue to visual perception or class discussion. From this point of view, the application of pedagogical innovations not only changes the form of education, but also has a serious impact on its content, lays the foundation for the development of a new system of relations, a new way of thinking, a new pedagogical thinking. Digital technologies are changing our way of life, our way of communicating, our way of thinking, our feelings, the channels of influence on other people, our social skills and social behaviour. As Myamesheva (2015, p. 152) said: "[...] high-tech environment - computers, smartphones, video games, Internet search engines - reshape the human brain".

The scope of application of pedagogical innovations includes not only new technologies, but also implies certain changes in the function of the teacher, his attitudes, the organization of training. The application of pedagogical innovations differs from traditional teaching in modern times. It is determined by the characteristics of the pedagogical direction. If the pedagogy of the 20th century is based on the theory of history, the pedagogy of the 21st century is more inclined to the concept of education. Such a situation requires taking into account the main trends in education in the application of pedagogical innovations. In this regard, Tagunova, Selivanova and Valeeva (2016, p. 4) write: "Education in a broad pedagogical sense is the purposeful influence of society to prepare the younger generation for life. Education in the narrow pedagogical sense is a purposeful influence on the development of specific personal qualities".

However, without taking into account new technological changes, including pedagogical innovations, the organization of the educational process cannot be built in accordance with the requirements of modern times.

Renewals, as well as innovations, are characteristic of any person's professional activity. That is why they become the object of study. Innovations do not arise by themselves, they are the product or result of scientific research. This is not a natural process and needs to be managed.

Pedagogical innovations are innovations in pedagogical activity, aimed at changing the technology of training, the content of training, the characteristics of education and increasing their effectiveness (STEINER-HAMSEY, 2018).

In this case, innovations are aimed at shaping the content and the organization of the new. The innovation process as a whole is the creation of a comprehensive action plan aimed at expanding, using, developing and creating innovation.

Innovation processes in the education system of Azerbaijan are aimed at creating new content, establishing the methodological basis of the curriculum, applying new pedagogical technologies to education and creating new types of educational institutions. At the same time, raising the professional level of teachers is part of the structure of innovations.

The main purpose of this work is to systematize innovative changes in education in Azerbaijan, as well as to determine the attitude of teachers to innovation and comparative analysis. Expanding the scope of pedagogy, environmental approach to

teaching, digital applications and changes, theoretical study of innovations in teaching are also the main goals.

2 Methodology

The survey was conducted online in 2020 with 60 teachers working in different faculties of the Azerbaijan State Pedagogical University. Teachers were asked questions online and asked to answer them. These teachers work at the Azerbaijan State Pedagogical University. Anonymity of teachers' names was ensured. The main goal here is to achieve practical results in terms of teachers' use of innovative teaching methods and understanding of their strengths and weaknesses. Questionnaires were used in the survey. In this situation, teachers were asked 8 questions to answer:

1. What innovative teaching methods do you use?
2. What are the advantages and disadvantages of innovative teaching methods for teachers?
3. For what purpose do teachers use innovative teaching methods?
4. How did teachers learn to use ICT?
5. According to teachers, what are the advantages of applying traditional and innovative teaching methods?
6. What are the pros and cons of the main results of the application of pedagogical innovations?
7. What areas should be covered by innovations in pedagogical activity?
8. Where do you get information about innovative methods?

The questions in the questionnaire will help teachers to understand the level of pedagogical innovations, the points necessary for their application, as well as to obtain the necessary information and prepare the necessary recommendations to improve the pedagogical level: First, the dynamics of development. Such a methodological strategy will allow to determine the dynamics of sustainable application of pedagogical innovations.

Each questionnaire was not developed separately, but was reflected in table 4 based on the necessary results and relevant criteria. There was no need to tabulate each of the questions separately.

3 Literature review

The term “innovation” related to education was first introduced to science by Botkin (1984, p. 320) and literally means “new”.

At the end of the 20th century, an American scientist who predicted which type of thinking a person would prefer was rightly concluding that there can be many types of knowledge acquisition because there are no restrictions on learning, and he mentioned four types of learning. These included: ‘normative’, shock-based learning (ie under the influence of crisis situations), basic, innovative training aimed at developing the ability to act together in new, perhaps unprecedented situations.

“Innovation is the process and activity of change, renewal” (KHASANBAEV; TURAKULOV, 2009). In this regard, the pedagogical innovation is understood in the pedagogical system in order to improve the training, educational process and the results of the education process. Innovation occurs at the expense of internal resources of the pedagogical system. The meaning of “in” the first part of the word innovation means the interior (NAZAROV, 2012).

It should be noted that the Western orientation of modern education is due to the integration of higher values into local education. The application of pedagogical innovations aims to ensure the implementation of new educational reforms. These reforms have some things in common for each country. “These include learning, application of curriculum standards, decentralization of education finance and management, privatization of higher education, standardization of student assessment and liberalization of textbook publishing” (SILOVA; STENIER-KHAMASI, 2008, p. 158).

These aspects act as a complex factor in the creation of pedagogical innovations. It should be noted that the application of curriculum standards in Azerbaijani education is already bearing fruit, and this system has been applied in secondary schools for more than eleven years. In particular, the problems of privatization of higher education, standardization of student assessment and liberalization of textbook publication have been reflected in educational reforms and are being successfully implemented. Of course, along with such aspects, the problems of raising the professional level of teachers, as well as their adaptation to the new environment of innovations remain relevant in Azerbaijan, as in all countries.

The formation and development of pedagogical innovations, of course, depends not only on these factors, but also on the modernization of education. They show various opportunities to modernize education. These include the quality of education, globalization and internationalization, politicization and the creation of a knowledge society, new teaching technologies, marketing and financing (AKMHETOVA, 2016).

If we look at the concept of innovation in the application of pedagogical innovations in different countries, we can see that its main features are as follows:

- 1) Everything new has old elements that were used before, with rare exceptions;
- 2) For the first time, the innovation itself is visible only to its creators, others can learn about it and work with it for a long time. Therefore, whatever the innovation, it will cover an earlier innovation process. (AKSARIN, 2015, p. 17).

It turns out that the basic concept of innovation is the innovation process itself. The development of innovative processes in education depends on three main aspects: psychological-pedagogical, organizational-managerial and socio-economic. There are certain conditions that facilitate or hinder the innovation process as a whole. Positive subjective assessment of innovations in this context is one of the most important features of a teacher, both in the vocational education system and in secondary schools.

Provided that the content of the novelty is accepted by the teacher, there will be no room for various types of imitation in his activity. "Everything is only 'on paper' (the actual experience of the novelist's activity does not correspond to his description); 2) 'intentionally' or 'accidentally' simplified innovation activity (low innovation activity); 3) a combination of two types of imitation" (KRASNOV, 1995).

It should be taken into account that the presence of certain indicators of innovation potential of pedagogical staff is also a guarantee of quality. These indicators are the following: teachers' openness to innovation, of course, provided that they maintain mobility, educators are informed of innovations and their readiness to accept innovation, teachers' level of innovation - innovation, development of communicative relationships, level of ICT skills, level of creative activity, initiative, aesthetic and cultural development.

Professional development plays a key role in the structure of pedagogical innovations. In this regard, Mikayilova and Kazimzada (2016, p. 127) rightly point out that:

In the prevailing conventional teacher training system, teachers are perceived as beneficiaries of professional development programs. However, over the last decade, policy-makers are beginning to attach greater importance to professional

development where teachers are seen as learners that are encouraged to make professional development decisions based on their needs. Including teachers in the design of professional teacher development programs might be suggested as a way to ensure learning activities have a greater impact on the quality of teaching. Such a participatory approach that strengthens teachers' roles as decision makers in their professional development has the potential to advance teacher support during education reforms.

The teacher's resistance to participation in innovation is a negative subjective assessment of innovation. Yusifbekova (1991) notes that resistance to innovation is a natural and logical process. Because maintaining the stability of existing ideas about education and training practice plays a very important role in pedagogical activity (YUSIFBEKOVA, 1991). Therefore, it is better to use developmental, positive motivating educational methods and technologies that will create a positive environment for development in didactics.

The teacher becomes a mediator of the child's development. His attitude to pedagogical innovations is the basis for a complete renewal of the pedagogical process. If the teacher is an important person for the student, he will play a major role as a subject in the implementation of innovations.

Of course, there are opposing views on how pedagogues will respond to pedagogical innovations or changes. There is a need for a wide range of ideas, from conservatism to a complete overhaul of the education system.

The knowledge of schoolchildren and students, which is focused on the results of the exam and then forgotten, is reflected in the short-term memory. That is, their memory lasts until a certain goal is achieved. For this reason, new methods are needed to restore long-term memory and develop practical skills. Such a trend is observed in the education system of all countries. That is why the role of the teacher in the application of pedagogical innovations should be increased. In this regard, an innovative approach to teacher performance can lead to the transformation of knowledge, self-regulating learning, active epistemology, relative views and knowledge-based approaches, and more in-depth learning levels.

In order to assess the pedagogical activity of the teacher in the conditions of new innovations, it is necessary to take into account the features of modern education that take it away from traditional education. In other words, it should be noted that the perception of learning outcomes in education has changed from the mechanical memory of knowledge to

the formation of knowledge, skills and habits. If knowledge is formed consistently, then skills develop in a complex way. It is difficult to develop skills in one lesson, so it is necessary to focus on “learning strategies” implemented over a period of time.

The teacher's training strategy combines approaches and principles, as well as the direction of development, as well as teaching methods and types. Training strategies focus on competence - the expected learning outcomes. Active, innovative teaching, project-oriented and plastic learning strategies can be implemented within constructivist approaches (USCHER, 2011). Along with all this, it should be noted that the challenges and research in modern times are very different.

Of course, this is due to the fear of school, the interaction of students and teachers, the parents of students, the relationship with society. It is clear that teachers also need to understand the personality and psychological state of each child and find a way to educate the student (DARLING-HAMMOND, 2006). This makes it necessary to apply (to use) new innovative methods.

Studies show that, concerning the challenges and difficulties involving the use of active methodologies in Higher Education, we noticed the mention of certain resistance both from some teachers and from some of the students. This can indicate the need to overcome the traditional paradigm, moving toward an innovative, complex or holistic education (BLASZKO; CLARO; UJIIE, 2021).

Innovative teaching methods are teaching methods that cover new ways of interaction between “teacher-student”, “teacher-student”, a certain innovation in the practical activity of mastering the teaching material. Derijan and Valchev (2012, p. 130) combine possible innovations in pedagogical activity as follows:

- belief that human potential is not limited;
- pedagogical approach is aimed at mastering the reality of the system;
- stimulation of nonlinear thinking;
- They are based on the hedonistic principle, ie the enjoyment of learning, the joy of success and the pedagogy of success.
- Teacher's mobile role-playing skills - the teacher learns from the student at the same time

In 2010, Unesco recommended the following teaching strategies for the twenty-first century: learning by experience, story explanation? value education, research learning, appropriate assessment, future problem solving, extracurricular learning and community problem solving (UNESCO, 2016).

One of the innovations in the pedagogical process is the further increase of pedagogy in education. In the process of imparting knowledge to students, interactive learning also develops and shapes them in the direction of voluntary, moral, intellectual, aesthetic, cultural, legal, ecological, economic and other axiological values. It is impossible to raise education to the level of innovation without pedagogical staff meeting the new requirements. It all depends on the teacher, the people who are in charge of education, their citizenship, dignity, morality, culture and professional training that meets modern requirements. The active use of innovative teaching methods by teachers is a necessity today. The more the teacher's teaching strategies and methods, the more interesting and colorful the lessons, the better the student's cognitive activity, the more experience in solving non-standard problems, the deeper the training and the continuous mastery of practical technologies.

4 Results and discussion

In order to explore the practical aspects and directions of the application of pedagogical innovations, we considered it expedient to study the attitude of teachers to pedagogical innovations and the learning process. For this purpose, we did not analyze the survey questions separately. The ideas reflected in 8 questions are reflected in 4 tables. Since the analysis of the questions expands the quantitative characteristics, here we have focused only on the attitude. Here, age criteria are taken as the main criteria.

Table 1 – The indicators of teachers' attitude to active learning

Active teaching methods	Teachers' attitude N = 60		
	23-30 years old	31-45 years old	45-60 years old
Problem situations	7.18	17.12	32.45
Learning through activities	8.15	23.15	22.51
Learning through play	16.00	14.08	17.03
Group and pair work	35.00	21.28	8.13
Business games	21.12	7.01	6.24
Creative game "Dialogue"	12.55	17.36	13.64

Source: Own elaboration.

As can be seen from Table 1, teacher's use of active training method and attitudes vary according to the age parameters. This difference is mainly reflected in active learning methods such as "business games", "problem situations", "group games".

Teachers around the age of 23-30 “prefer business games” and “group games”, 31-45 year olds “learn through activities” and “group games”, and 45-60 year olds prefer “learn through activities” and ‘problem situations’. Of course, the main reason for this is that age-related innovations are not fully understood. This means that no serious efforts are made to apply innovative methods in practice, or the teacher is not interested in it. As can be seen from Table 1, the teacher's use and attitudes of active learning vary according to age parameters. This difference is mainly reflected in active learning methods such as “work games”, “problem situations”, “group games”. Teachers between the ages of 23-30 “play games” and “group games”, children aged 31-45 “learn by activity” and “group games”, those between the ages of 45-60 “learn by activity” and “prefer problem situations”. Of course, the main reason for this is the lack of understanding of age-related innovations. This means that no serious effort is made to apply innovative methods in practice, or the teacher is not interested in it.

The analysis shows that the passive attitude of teachers to innovations, especially those of middle-aged teachers, is a preference for traditional teaching methods. It seems that the previous experience and stereotypes of the formed thinking also have their say here. The innovative methods they choose are relevant to the teaching methods and allow us to explain this fact.

Table 2 – The indicators of teachers' attitude to active learning

Innovative changes	Teachers' attitude N=60			
	23-30 years old	31-45 years old	45-60 years old <	Average indicator
Creating new context	8.02	14.11	23.32	15.15
Publication of new books	12.14	13.15	25.36	16.88
Online lessons	32.00	27.07	7.01	22.03
Application of new pedagogical technology	16.00	21.00	7.12	14.70
Humanization of training	9.16	10.58	12.25	10.77
Application of collaborative pedagogy	22.68	14.09	24.94	20.57

Source: Own elaboration.

As can be seen from Table 2, teachers of different age groups have different approaches to innovation. However, the average indicators were 15.15% for the creation of new content, 16.88% for the publication of new textbooks, 22.03% for online lessons, 14.70% for the application of new pedagogical technologies, 10.77% for the humanization of training, and 20.57% for the application of collaborative pedagogy. The most visible

changes are the introduction of online lessons and collaborative pedagogy. In general, the attitude to innovations on these parameters is moderate and sometimes negative manifestations.

Interactive and discussion lessons take the leading place in the study of teachers' attitudes to innovative methods, and there is no age difference for teachers. 55.60% of teachers surveyed said they prefer interactive lessons. This shows that teachers have a positive attitude towards innovative methods.

As can be seen from Table 2, teachers of different age groups have different approaches to innovation. At the same time, the average indicators are 15.15% for the creation of new content, 16.88% for the publication of new textbooks, 22.03% for online lessons, 14.70% for the application of new pedagogical technologies, 10.77% for the humanization of teaching and 20, 57 for the application of collaborative pedagogy. The most notable changes are the introduction of online lessons and collaborative pedagogy. In general, the attitude to innovations in these parameters is moderate and sometimes negative.

Interactive and discussion classes play a leading role in the study of teachers' attitudes to innovative methods, and there is no age difference for teachers. 55.60% of teachers surveyed said they prefer interactive lessons. This shows that teachers have a positive attitude towards innovative methods.

When answering questions about the advantages and disadvantages of innovative teaching methods, the majority of teachers, ie 60.18%, note the low activity of students. Reducing lesson time, as well as creating new content, are cited as key benefits. The disadvantages are that the application of new methods reduces the impact of a favourable environment for the acquisition of new knowledge. Also, the difficulty of using technology is one of the main aspects. There are many technical problems.

Despite the unequivocal attitude to innovation, 72.23% of teachers try to learn innovations in education. They try to create the necessary motivation for this. Despite the fact that only 15.15% of teachers are actively positive about innovation, they initiate and promote the introduction of new technologies in the teaching process. Although it is difficult for teachers to adapt to this process, 25.23% are emotionally positive about pedagogical innovations.

Table 3 – Indicators of teachers' attitude to innovations

Innovation criteria	Attitude levels to the innovative changes (N=60)		
	23-30 years old	31-45 years old	45-60 years old <
Creating new context	average	high	high
Publication of new textbooks	average	high	average
Online lessons	high	average	low
Application of new pedagogical low technology	high	high	average
Humanization of training	average	high	high
Application of collaborative pedagogy	average	high	average

Source: Own elaboration.

As can be seen from Table 3, the attitude towards innovation on various criteria is in fact positive. However, for a number of subjective or objective reasons, it was not possible to determine the average of attitudes towards innovation. However, the low level is only due to the age factor, which is due to the process of adaptation.

Our surveys show that 28% of teachers are frustrated, 24% are passive, and 9% are actively negative about innovation. In terms of the level of motivation for innovation, 35.12% of teachers emphasize the lack of the necessary incentives, and 15.12% highlight the fact that innovation has a serious impact on values. It is important to note that teachers are somewhat concerned that innovation is undermining national and traditional values, which reduces motivation.

The role of ICT in the application of pedagogical innovations is high. Dozens of surveys were conducted to determine teachers' use of ICT. The survey found that 86.48% of teachers admit to using innovative ICT. We think this is a high figure. However, technical problems in the application of ICT, including the slowdown of the Internet, in some cases reduce the effectiveness of its application. At the same time, it can be assumed that teachers have some experience in trying to improve their specialty, update teaching methods, and apply ITM. In addition, the application of ITM is widely implemented in the education system of Azerbaijan. Therefore, we can assume that this result is partly similar to the information provided by teachers on the application of ICT for various reasons related to innovations in teaching in post-Soviet countries. The research showed that teachers understand the positive aspects of the application of innovative teaching methods based on the strengths of ICT.

Table 4 – Evaluation of teachers' innovations

Positive aspects created by innovation in teaching	Indicators of teachers' attitude (N=60)	
	Real indicators are expressed in %	Predicted indicators
Increasing cognitive activity	62.23	36.50
Reduction of negative emotions	45.56	45.23
Continuous motivation in students	52.78	36.89
Understanding the expediency of training	42.45	48.56
Strong knowledge, sustainable skills	63.21	54.12
Development of creativity	48.20	56.14

Source: Own elaboration.

As can be seen from Table 4, there is no serious paradox in teachers' assessment of innovative teaching methods at real and predictable levels. This situation shows an intensive interest in the use of new methods in the organization of training to move away from cognitive dissonance. According to teachers, the positive aspects of innovation increase management activity (62.23%), reduce negative emotions (45.56%), create lasting motivation in students (52.78%), provide an understanding of the purpose of training (42.45%), develop strong knowledge and sustainable skills (63.2%), develops creativity (48.20). At the same time, it corresponds to the real indicators in the forecast.

These indicators are a good example of teachers' understanding of the selection of existing advantages and challenges in the application of innovations.

Summarizing our research, we can conclude that the application of pedagogical innovations in the pedagogical process depends on the teacher, who is a central element. The fact that the majority of teachers support the implementation of pedagogical innovations is an indicator of their active participation in this process. Creating a creative and favourable educational environment can lay the foundation for both the effective organization of teachers' activities and the rapid leadership of pedagogical innovations in the education system. These facts must be taken into account. At the same time, it is necessary to eliminate the problems that arise on the Internet, provide technical support to teachers and use certain training programs.

5 Conclusion

Our research has shown that the opportunities for the application of pedagogical innovations in education are conditioned by a complex of different factors. In addition to

motivating teachers, their age characteristics, attitude and level of use of new pedagogical technologies, as well as the availability of the necessary skills, etc. There are many studies that overlap and differ from our research. The main leitmotif in these studies is the focus on the sphere of importance, not on the mechanisms of innovation.

Recent research shows that the application of pedagogical innovations activates the motivational component. So that by analyzing the different components - expectations, interest, importance, practicality, and value - the students surveyed did not respond with appropriate motivation in any way, although students surveyed said they enjoyed reading. This obvious contradiction in the results may be due to the fact that the respondents chose to give a politically correct answer rather than an honest one, and to idealize their thinking about their work (SANTOS DÍAZ; JUÁREZ CALVILLO; TRIGO IBÁÑEZ, 2021).

The ambiguity of the approach to pedagogical innovations, as well as teachers' frustration, passivity and negative attitude towards innovation, also prevent the widespread application of innovation. Especially in terms of the level of motivation for innovation, the majority of teachers focus on the lack of the necessary incentives (stimulants) as a key factor. The problem of employment of students in the labor market also hinders their active participation in this process. Another factor to consider is that a certain degree of concern that innovation undermines national and traditional values also reduces the impact of motivational opportunities on innovation. The study showed that based on age parameters teachers' use of active learning and attitudes toward it are ambiguous. The use of new teaching methods for different age groups is related to their skills that reflect pedagogical innovations. Preference of young teachers to "business games" and "intergroup games", middle-aged people to "business games" and "problem situations", and older people to "problem situations" and "learning through activities" is related to the application of their experience. In fact, all three age groups emphasize the need for pedagogical innovation. However, there is a difference in the choice of the most important for the condition and situation for the optimization of training. It can be concluded that the difficulty of age-related use of ICT makes selection of pedagogical innovations or active learning methods implemented only through discussion inevitable. So, age is getting more no serious effort is made to put the methods into, or teachers are not interested in it.

Research has shown that there is no serious paradox in teachers' assessment of innovative teaching methods at real and predictable levels. There is no doubt that there is an intensive interest in the use of new methods in the organization of training, and the positive aspects of innovation in teaching, according to teachers, increase cognitive activity, reduce negative emotions, create lasting motivation in students. Ensuring the understanding of the purposefulness of training, the formation of solid knowledge and sustainable skills can also be the result of the application of pedagogical innovations. Corresponds to the actual indicators with the forecasted indicators during the research, and this is an effective example for teachers to understand the selection of existing advantages and difficulties in the application of innovations.

There is no doubt that there is an intensive interest in the use of new methods in the organization of training, and the positive aspects of innovation in teaching, according to teachers, increase management activity, reduce negative emotions, create lasting motivation in students. Also, ensuring the understanding of the expediency of training, the formation of solid knowledge and sustainable skills can also be the result of the application of pedagogical innovations. It corresponds to the real indicators with the forecasted indicators during the research, and this is an effective example for teachers to understand the selection of existing advantages and difficulties in the application of innovations.

Our research is consistent with many studies, including Tagunova, Selivanova and Valeeva (2016), Steiner-Hamsey (2018), Nazarov (2012) and others. These researchers also came to the relevant conclusions on the issues of increasing the professionalism of teachers in the application of pedagogical innovations, the introduction of new content, as well as finding new ways to stimulate the work of teachers.

Similar results were obtained in the research conducted by Krasnov (1995), Aksarin (2015), Akhmetova (2016) and others. However, the results of our research contradict a number of studies. In this regard Sharples *et al.* (2019) showed that it is important to test learning interventions and teaching approaches before applying pedagogical innovations to practice. Improving learning outcomes and taking into account the expectations of a constantly changing society is a fundamental requirement. In this study, the main directions of the application of pedagogical innovations were considered in terms of increasing the effectiveness of learning.

According to some researchers, continuity of education must be ensured to ensure pedagogical innovation. Thus, the main thesis revolves around the need for a considerable investment in terms of continuing training in order to show concrete results from the point of view of teachers participating in these training courses. It is, therefore, that there is a need for a constant process of continuous formation, under the focus of a new transformative model, posed in the present times (JUNGES; KETZER; OLIVEIRA, 2018).

Taking into account all the above factors, it is possible to effectively implement the innovation process in the education system, both theoretically and practically. The path or direction of development of pedagogical innovations is an ideal tool for success in education and personal life. The main task is to coordinate and implement them, taking into account the above factors. In general, the facts show that, despite the conservatives, innovators are increasingly entering the educational life, and despite all the difficulties, build their pedagogical activities in accordance with modern education.

In order to accelerate this process against the background of the implementation of educational reforms, it is necessary to ensure the unimpeded development of the innovation process within the vocational education system and to define the criteria for innovation. It is necessary to reconsider the principles applied in education, and most importantly, to intensify the support of innovation and its promotion in national education. This is the way to integrate into world education.

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