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MAIN BARRIERS TO DEVELOPING INNOVATIONAL ACTIVITIES OF UNIVERSITY TEACHERS IN KAZAKHSTAN

Abstract. The relevance of studying the problem of university teacher's barriers for innovative activities is due to modern requirements for the personality of an instructor in the field of higher education. This article is devoted to university teacher's barriers to innovative activities. Currently, the main goal of innovations in the higher education is the harmonious development of personality, creative abilities of a person, as well as increasing the intellectual and innovative potential of the country. Innovations in education are the part of the process of acquiring innovative knowledge, skills and values by individual teachers. Therefore, the problems associated with the research on formation of innovative activities of a university teacher are of particular importance.

To obtain the results of the study in this article, the following methods were used: theoretical (analysis and synthesis of scientific works of domestic and foreign authors on the research problems); empirical (questionnaires, pedagogical observation). An anonymous survey was conducted with teachers of Kazakhstan's universities. The main goal was to identify barriers to the development of innovations by university teachers. The conducted survey revealed that there are certain barriers in innovative activities of university teachers.

The study demonstrates that not all teachers are engaged in innovative activities and there are possible reasons behind that. Most of them are fear before innovations and old methods are more effective than new ones and others. The authors of the article came to conclusion that fruitful and successful work of tertiary teachers is one of the ways of overcoming barriers. Of particular importance is university teachers' self-education and self-development, the desire for innovation, determination to achieve goals, as well as the ability to eliminate the causes of difficulties.

Keywords: innovations, university teachers, innovation activities, barriers to innovations, education.

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**Қазақстандағы университет оқытушыларының инновациялық қызметін дамыту
жолындағы негізгі кедергілер**

Аңдатпа. ЖОО оқытушыларының инновациялық «кедергілері» мәселесін зерттеудің өзектілігі жоғары білім саласындағы оқытушы тұлғасына қойылатын заманауи талаптарға байланысты. Бұл мақала университет оқытушыларының инновациялық қызметінің «кедергілерінің» мәнін анықтауға арналған. Қазіргі уақытта жоғары білім берудегі инновациялардың негізгі мақсаты тұлғаның, адамның шығармашылық қабілеттерінің үйлесімді дамуы, сондай-ақ елдің зияткерлік және инновациялық әлеуетін арттыру болып табылады. Білім берудегі инновациялар тұлғаның жаңашыл білімді, дағдылар мен құндылықтарды игеру үрдісінің бөлігі болып табылады. Сондықтан университет оқытушысының инновациялық қызметін зерттеу мен қалыптастыруға байланысты мәселелер ерекше маңызға ие.

Осы мақалада зерттеу нәтижелерін алу үшін келесі әдістер қолданылады: теориялық (зерттеу мәселесі бойынша отандық және шетелдік авторлардың ғылыми жұмыстарын талдау және синтездеу); эмпирикалық (сауалнама, педагогикалық бақылау). Қазақстан университеттері оқытушыларының қатысуымен анонимді сауалнама жүргізілді. Сауалнаманың негізгі мақсаты университет оқытушыларының инновацияларды меңгеруде туындайтын кедергілерді анықтау еді. Жүргізілген сауалнама ЖОО оқытушыларының инновациялық қызметін іске асыруында бірқатар кедергілер бар екенін көрсетті.

Сонымен қатар зерттеу нәтижелері барлық оқытушылар инновациялық қызметпен айналыспайтынын және оның себептері болуы мүмкін екендігін көрсетті. Оларға инновациядан қорқыныш, ескі әдістер жаңа әдістерге қарағанда тиімдірек және т.б. жатады. Мақала авторлары жоғары оқу орнындағы оқытушылардың тиімді және табысты жұмысты кедергілерді еңсерудің жолы деп қорытынды жасайды. Университет оқытушыларының өздігінен білім алу және өзін-өзі дамыту, жаңашылдыққа ұмтылу, мақсатқа жету, туындайтын қиындықтардың себептерін жоя білу ерекше маңызға ие.

Кілт сөздер: инновация, университет оқытушылары, инновациялық қызмет, инновация жолындағы кедергілер, білім беру.

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**Основные барьеры развития инновационной деятельности
преподавателей вузов Казахстана**

Аннотация. Актуальность изучения проблемы барьеров преподавателей университетов к инновационной деятельности обусловлена современными требованиями к личности

педагога в сфере высшего образования. Данная статья посвящена определению сущности «барьеры» инновационной деятельности преподавателя университета. В настоящее время основной целью нововведений в высшем образовании является гармоничное развитие личности, творческих способностей человека, повышение интеллектуального, инновационного потенциала страны. Инновации в образовании выступают только частью процесса усвоения инновационных знаний, умений и ценностей личности. Соответственно, особое значение приобретают проблемы, связанные с изучением и формированием инновационной деятельности преподавателя университета.

Для получения результатов исследования в данной статье были использованы методы: теоретические (анализ и синтез научных работ отечественных и зарубежных авторов по проблеме исследования); эмпирические (анкетирование, педагогическое наблюдение). Проведено анонимное анкетирование с преподавателями университетов Казахстана. Главной целью определить барьеры, препятствующих освоению инноваций преподавателей университета. Проведенный опрос показал, что существуют определенные барьеры в инновационной деятельности преподавателей вузов.

Исследование показывает, что не все преподаватели занимаются инновационной деятельностью, и существуют возможные причины. Большинство из них являются: страх перед инновациями; старые методы эффективнее, чем новые методы и т.д. Авторы статьи пришли к выводу, что плодотворная и успешная работа преподавателей в высшем учебном заведении является одной из способов к преодолению барьеров. Особое значение имеет самообразование и саморазвитие преподавателей университетов, стремление к инновационной деятельности, достигать поставленных целей, уметь устранять причины возникающих трудностей.

Ключевые слова: инновации, преподаватели университетов, инновационная деятельность, барьеры на пути инноваций, образование.

Introduction

Currently, the development of education seems to depend entirely on the changes in society. The requirements for education are modifying and the demands for the development of education are increasing. Moreover, teachers seem to be entirely dependent on the needs of society. Thus, in order to meet these current requirements, teachers must make changes in teaching, constantly search for new teaching tools, be versatile, and also be ready for innovation. Each teacher has his/her own individual ways of presenting knowledge and working with students as well as his/her own teaching methodology. However, not every teacher can immediately move to a new level of educational services, actively engage in innovative activities, and master, new methods and new technologies.

In higher education, innovation means the introduction of new elements into the goals, content, methods and ways of student training and education. Innovations in education can be changed in such a way as to interest students in their future profession, improve their abilities and contribute to solve the social and professional problems.

Many researchers attempted to define the term ‘innovation’. According to Ch. Liyanagea, R. Thakore and others “Innovation is the formation of new ideas or the necessity to respond to change in order to add more value to the societal contribution of higher educational institutions. Innovation occurs at various levels, including product innovation, process innovation, marketing innovation and organizational innovation. These are inevitably important to any country as these contribute to competitiveness and economic diversification in emerging economies” [1].

S. Sutanro argues that innovation in education is about more than just technology. He claims that it’s about how you can use technology to empower students to become lifelong learners who are agents of change [2]. Th. Levitt states that “creativity is thinking up new things. Innovation is doing new things” [3].

L. Esdal describes innovation in education as doing things in a new way. In his text “Four Demensions of Innovation in Education” to do something differently requires coming up with a new approach, process, product or strategy [4].

Furthermore, according to R.R. Masyrova, innovations in pedagogical education are a natural and necessary pedagogical condition for its development following the constantly changing needs of society [5].

It seems that in every country teacher are burdened with great responsibility. In this regard, not all teachers can immediately switch to new forms of education when faced with numerous problems, which leads to obstacles to innovation.

The implementation of innovation faces the following problems, such as how to make educational activities more motivating, how to increase the amount of material studied in the classroom, how to accelerate the pace of learning, how to eliminate the loss of time, how to introduce new methods and new technologies into training and education, as well as how to develop innovative ideas.

Thus, we can agree that innovative activity is a process of transition from a theoretical academic idea to its practical implementation and use in the socio-pedagogical environment. Not every teacher is engaged in the implementation of innovative activities. There are various barriers to working with innovations, which led us to do this research project. Hence, the purpose of the study is to identify obstacles to teachers’ innovative activities, as well as, professional activities subject to highly dynamic changes, which might limit their individual capabilities.

There are different definitions of the term “barriers” in the scientific and pedagogical literature. For example, in the dictionary by S.I. Ozhegov, a barrier is an obstacle to the implementation of something [6].

The word “barrier” (which derives from the French word “barrier”, which means “obstacle”) refers to more than just unwelcome interference. According to R.H. Shakurov, the idea of a “barrier” is a constant and all-encompassing characteristic of life. Wherever certain forces or movements interact, he believed that walls exit, regardless of the environment [7].

In the psychological dictionary by A.V. Petrovsky and M.G. Yaroshevsky, the term “barrier” is considered as a kind of human reaction to an obstacle, accompanied by the emergence of a tense mental state, inadequate passivity of a subject, selective inhibition of activity as a result of low self-esteem [8].

The barrier is always a component of some system and engages in interaction with those components. It is more than just an item. A barrier can be made up of both present and missing system components, as well as obstacle caused by time and space. A barrier is a predetermined combination of components that affects the entire system or a subset of it. As a result, the impact is the fundamental component of the barrier. A barrier in the educational process is define as a “critical point” that hinders the efficient operation and development of this system, creating an emotional and judgmental attitude in the students, and having the power to compel them to take action to get over it.

Having considered the problem discussed in different sources we can undoubtedly draw the conclusion that university teachers have difficulties in innovative activities due to some barriers. Thus, in order to identify these problems, we put the research question: Which barriers hinder university teachers from doing innovative activities?

The research study attempts to identify the barriers university teachers encounter in their innovational activities. The study mentioned above helped us to determine that there are numerous levels on which the teacher’s issues are concentrated.

Research methods and materials

The theoretical and empirical research methods have been used in this study. The theoretical methods included analyses of foreign and domestic sources written in the field of innovation in teaching at universities. At an empirical method a questionnaire was based on Slastenin’s methodology has been employed [9].

The basis for the study was the data from anonymous surveys on the topic: “Barriers to innovation” which were created and distributed with the help of Google Forms.

The conclusions are based on a theoretical analysis of scholarly material and study of empirical material.

Research tool and participants

In order to study the barriers preventing the development of innovations, an anonymous questionnaire was distributed among university teachers. Its purpose was identifying university teachers’ barriers in the development of innovations (Barriers preventing the development of innovations) [10].

The questionnaire consisted of 15 questions devoted to teachers’ the interest in innovations, their implementation in the educational process, attitudes to innovation, advantages and disadvantages of innovations, as well as barriers to innovations.

Overall 92 university teachers from L.N. Gumilyov Eurasian National University (51), Turan-Astana University (14), Manash Kozybaev North Kazakhstan University (6), S. Seifullin Kazakh Agrotechnical Research University (7), Pavlodar Pedagogical University (5), Ekibastuz technical and Engineering institute named after the academicaian K. Satpayev (5), Astana International University (4) took part in the survey. 57.6% of the participants were senior teachers, 23.9 teachers, 8.7% of the participants were associate professors, 5.4% of the participants were acting associate professors and 4.3 % of the participants were professors – in other words a significant majority of the respondents were senior teachers and teachers.

Results

The results obtained with the help of the questionnaire, demonstrated the barriers and obstacles that hinder university teachers’ engagement with innovative activities.

To the statement “Instead of new methods and techniques we can teach with the old ones as well” the university teachers answered as follows (Figure 1).

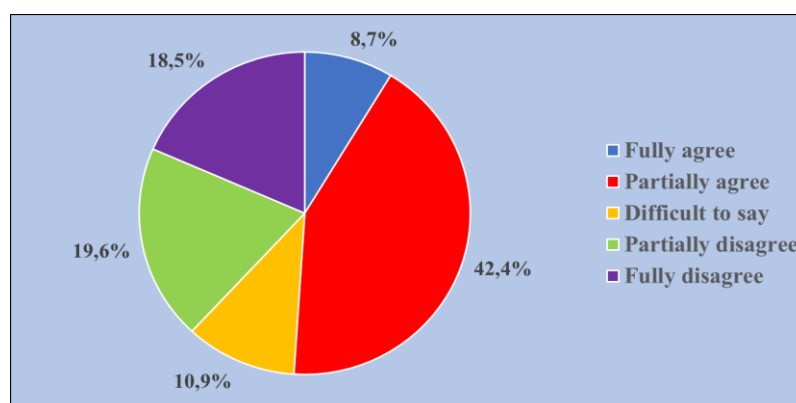


Figure 1 – The belief that you can effectively teach using old methods

As can be seen in Figure 1 8.7% of the teachers fully agree that it is effective to teach using old methods, 42.4% of the participants partially agree with this statement, 10.9% of the participants find it difficult to say whether they agree or disagree with the statement, 19.6% of the participants partially disagree, and 18.5% of the participants completely disagree with the statements.

Thus, the data show that half of the respondents indicate that they use innovative teaching methods, while the others still adhere to classic teaching methods. It seems that resistance to the new is often associated with the fear of being perceived as incompetent, individual failure or low self-esteem, etc.

Figure 2 shows that the teaching staff has large workload. Lack of time, heavy workload connected with public affairs, inconvenient working hours, low motivation, personal achievements, and necessity to publish articles in peer-reviewed and other journals as well as preparing students for research activities. More than half of teachers responded that they are busy with teaching classes and this means that they have less time to engage with innovative activities.

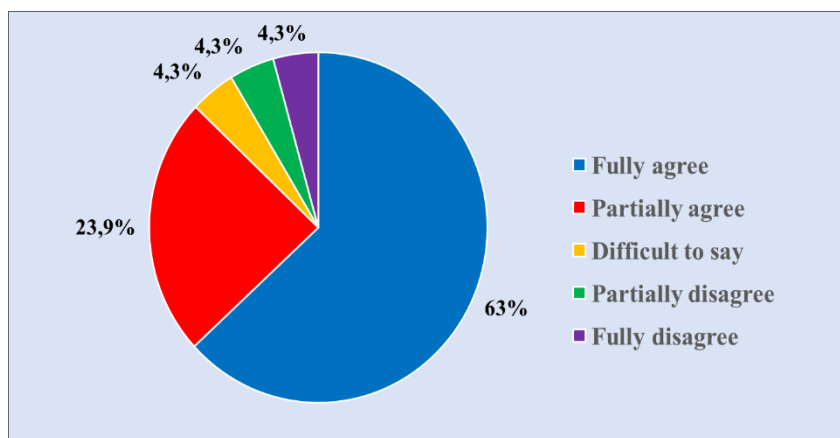


Figure 2 – Large workload at work

Figure 3 presents the level of teacher’s feeling fear of negative results.

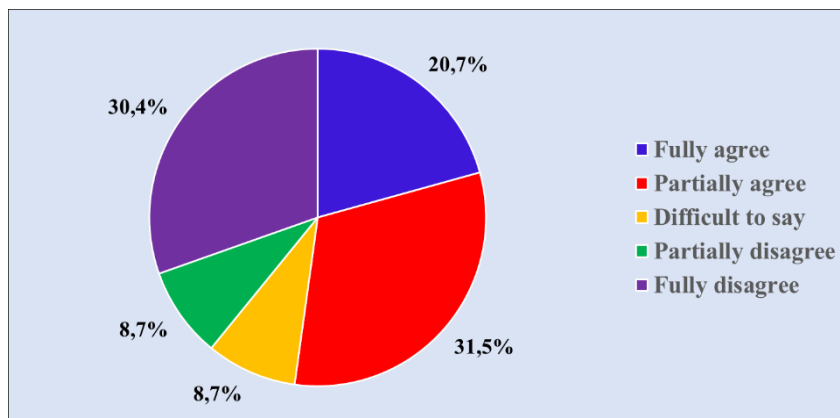


Figure 3 – The level of teacher’s feeling fear of negative results

20.7% of all respondents have a psychological fear of negative results. 31.5% partially agree with this question. 8.7% find it difficult to answer, 8.7% partially disagree with the question posted, 30.4% completely disagree. As the data show, teachers are not confident in scientific activity. Based on the results obtained, it can be assumed that the fear of rejection affects a person’s life. He may have goals and dreams, but he refuses them only for the reason that he is testing him: career prospects, relationships with colleagues, as well as any social interactions. It’s like a barrier that he doesn’t want to cross. However, the fact is that constant self-improvement is necessary – the desire to strengthen one’s self-confidence and self-esteem.

Figure 4 shows the results of university teachers’ answers to the statement “Lack of social and pedagogical support”.

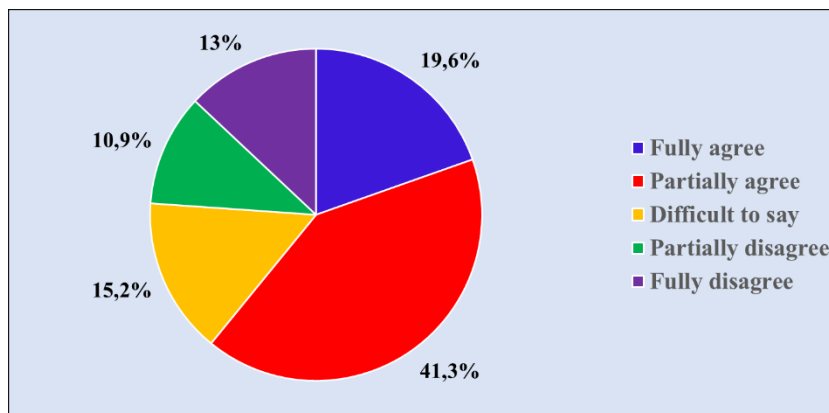


Figure 4 – Lack of social and pedagogical support

The data revealed that 19.6% of the participants completely agreed with the statement. 41.3% of the participants partially agree with it, 15.2% of the participants found it difficult to answer, 10.9% of the university teachers disagreed, and 13% of them completely disagreed with the statement.

Figure 5 shows the percentage of lack of conditions for professional growth.

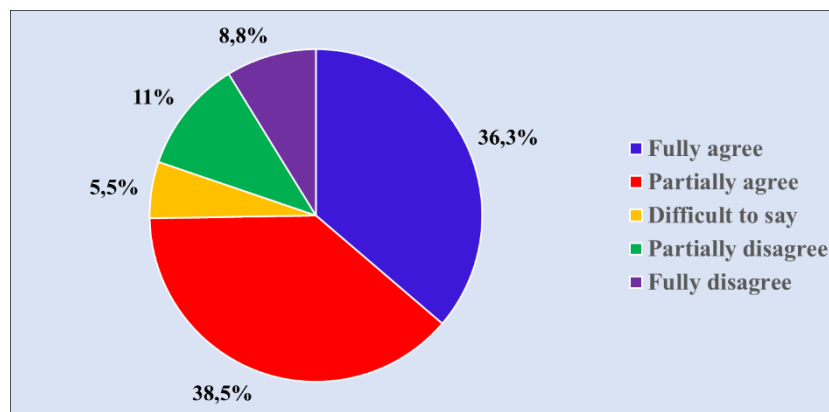


Figure 5. Lack of conditions for professional growth.

Figure 5 shows the answers to the statement on the lack of conditions for professional growth of the teaching staff. 74.8% of the teachers agreed that there are no conditions for professional growth. Thus, when faced with barriers to professional activities, teachers often ignore or do not want to overcome the barriers, and only a small number of teachers are trying to overcome them. Difficulties are associated with the inability of the teacher to adjust their actions in accordance with their own subjective characteristics. Thus, professional development is needed in order to develop the skills of self-control, self-correction, personal, subject-professional and activity self-regulation.

The data obtained in the study made it possible to agree with N.V. Solovova, O.Y. Kalmykova, O.V. Lavrentieva’s point of view that in order to successfully overcome barriers, it is necessary to significantly change patterns of behavior, to show a desire to adopt new ones. Innovative behavior is not an adaptation, but the maximum development of one’s individually, self-actualization through training and self-correction by trainings [11].

Moreover, these data coincide with the studies conducted by Derkach A.A. and Selezneva E.V., who describe overcoming obstacles as a set of inter- and intrapsychological activities that are intentional and ordered based on their indicative basis [12].

Researchers I.A. Zimnaya, A.K. Markova, L.I. Bozhovich consider barriers in pedagogical activities.

I.A. Zimnaya divides the barriers to pedagogical activities into:

- 1) barriers to the content and shape of the educational process;
- 2) barriers related to the characteristics of the teacher as an individual capable of learning, his/her ability to modify his/her actions, lack of self-control and insufficient reflection;
- 3) communication barriers [13].

According to A.K. Markova, barriers to pedagogical activities include:

- 1) barriers to planning, setting and implementing pedagogical tasks, lack of reflection on past mistakes, narrowing of the teaching content;
- 2) barriers to pedagogical influence on the participants of educational activities, who, without personally engaging in communication, might feel a sense of discomfort;
- 3) barriers to the combination of productive and reproductive forms of work and active teaching methods [14].

L.I. Bozhovich identified the following barriers to pedagogical activities:

- 1) the demands made by the teacher are alien to students' experience, their views on the social environment, their attitude to what is required of them;
- 2) in pedagogical activity and communication on the part of the teacher, the collision of two (several) contradictory tendencies is manifested;
- 3) the discrepancy between the student's capabilities and his claims, when in the case of a high level of claims and a low assessment of success, the teacher has a negative emotional reaction to the teacher, and the child considers the assessment itself as unfair;
- 4) students experiencing constant learning failures which affect their relationships with their teachers the discrepancy between the actual student's capabilities and his/her claims about what he/she can do. Additionally, when the learner is highly confident of his/her abilities which, in reality, turn to be low, the said learner might have a negative emotional reaction towards the teacher, and consider the assessment unfair [15].

In the paper by A. Lasakova, L. Bajzikova, I. Dedze, education is not detached from the other spheres of society. The authors indicate that the motors of societal growth i.e. cooperation, dialog, empowerment, participatory governance, professionalization, and leaders' role in modelling morality and excellence are the very same as the drivers of educational innovation. On the other hand, lack of transparency, corruption, nepotism, economic instability, rigid control, distrust and lack of collaboration all act as barriers to societal development [16].

E. Huizingh, a researcher, took into account innovation in higher education. He asserted that creativity is a crucial component for institutions of higher learning. To increase the value of higher education institutions' contributions to society, innovation is the creation of new ideas or the need to adapt to change [17]. Publishing innovation, according to the OECD, takes place at a variety of levels, including organizational, marketing, process, and product innovation. These are unavoidably significant to any nation because they support growing countries' competitiveness and economic diversity [18].

The innovation barrier is the factor that causes difficulties in the process of implementing teachers' innovative activities. Implementation largely depends on teachers, i.e. their readiness for innovation, acceptance of innovation, implementation, testing and implementation of innovations in the educational process. Taking into account all the factors, it is not surprising then that not all university teachers are ready to participate in innovative activities.

Analyzing the importance of barriers in the modern educational process, it is important to note that the teacher must cope with pedagogical, psychological, social barriers that significantly affect the qualitative and quantitative indicators of work, such as interest in activities, satisfaction, efficiency, the degree of tension that ensure the achievement of the goals of an activity.

Thus, this study shows that it is necessary to increase the level of professionalism, to develop the ability to withstand the numerous difficulties that arise, to find solutions to critical situations.

Conclusion

Thus, the research showed that the ability to overcome innovation barriers is a necessary condition for innovative activities of a university teacher. The data show that in order to successfully overcome barriers, it is necessary to significantly change some stereotypes that prevent the effective implementation of innovations. In order to truly innovative, a teacher must learn how to extract information, process it, be able to compare and apply the acquired knowledge and skills to solve professional problems. The task is aimed at training a professional who has thorough professional knowledge, is able to think analytically, be able to develop and implement various innovation in a professional way into in the pedagogical process.

In our opinion, in order to overcome difficulties to innovation, it is necessary:

- to activate innovative activities undertaken collectively by tertiary teachers;
- stimulate teachers' willingness for adopting new solutions to pedagogical problems;
- use the mechanisms of material and moral encouragement to reward teachers for extra work;
- develop strategies for monitoring, analyzing difficulties in innovation, developing possible options for predicting, preventing and overcoming them;
- effective functioning of the system of advanced training and retraining of teachers in the aspect of innovation.

In conclusion teachers' barriers for innovation, the development of innovation contributes to overcome barriers in the search, selection, development and implementation of pedagogical innovations.

The experimental study of the issue of socio-pedagogical support of innovative activity of a university teacher is the subject of further research.

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