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## IMPROVING THE INNOVATIVE RECEPTIVITY OF TEACHERS IN THE CONDITIONS OF THE DIGITALIZATION IN THE EDUCATIONAL ENVIRONMENT

УДОСКОНАЛЕННЯ ІННОВАЦІЙНОЇ СПРИЙНЯТЛИВОСТІ ПЕДАГОГІВ  
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**ABSTRACT**

**Purpose.** The challenges of modern education that this article deals with are the peculiarities of innovative receptivity of modern teachers in Ukraine. The aim of this research is to explore how to improve the innovative receptivity of Ukrainian teachers.

**Methodology.** In order to achieve this goal, first, the meaning of the concept 'innovative receptivity' was defined, and the components of teachers' innovative receptivity were identified. Then, the key components of the concept were determined by the method of expert evaluation. Subsequently, a survey was conducted among teachers.

**Results.** The results showed that the most important components are technological proficiency, openness to change, a supportive environment and reflective practice. After applying a number of methods for improving innovative receptivity and surveying teachers, the most effective tools and recommendations for their use were determined.

The present study research also highlights the importance of ongoing professional development in fostering innovation readiness. Incorporating technology into teacher training programmes enables teachers to experience its benefits firsthand. We utilised online platforms to demonstrate the tools and resources available for use in their own classrooms. It is very important to ensure access to resources.

To improve receptiveness to innovation, teachers should be provided clear guidelines and support materials. Video tutorials on the use of specific technologies can be invaluable for teachers who need quick assistance or are studying independently.

**Conclusions.** Our work has led us to conclude that it is important to develop the innovative receptivity of Ukrainian teachers. It can be a valuable quality for improving teaching competence and developing the level of professionalism.

**Keywords:** digitalisation, educational environment, improving educational process, innovative receptivity, teachers.

**Мета.** Відповідно до викликів сучасної освіти, у статті розглянуто особливості інноваційної сприйнятливості сучасних учителів в Україні. Метою дослідження є вивчення проблеми покращення інноваційної сприйнятливості вітчизняних учителів.

**Методологія.** Для досягнення цієї мети спочатку було з'ясовано зміст поняття «інноваційна сприйнятливість» і визначено його основні компоненти. Потім, за допомогою методу експертної оцінки, виокремлено ключові складники поняття. Після цього проведено опитування серед учителів.

**Результати.** Результати показали, що найважливішими компонентами інноваційної сприйнятливості є технологічна майстерність, відкритість до змін, сприятливе середовище та рефлексивна практика. Після застосування низки методів покращення інноваційної сприйнятливості та опитування вчителів було визначено найефективніші інструменти та рекомендації щодо їх використання.

Дослідження підкреслює важливість постійного професійного розвитку для сприяння готовності до інновацій. Упровадження технологій у програми підготовки вчителів їм безпосередньо відчуті переваги. Ми використовували онлайн-платформи для демонстрації інструментів та ресурсів, доступних для використання під час освітнього процесу. Дуже важливим виявилось забезпечення доступу до ресурсів.

Щоб покращити сприйнятливості до інновацій, учителям слід надати чіткі інструкції та допоміжні матеріали. Відеоуроки щодо використання конкретних технологій можуть бути безцінними для вчителів, які потребують швидкої допомоги або навчаються самостійно.

**Висновки.** Робота дала змогу дійти висновку, що важливо розвивати інноваційну сприйнятливості українських вчителів. Це може бути цінною якістю для підвищення педагогічної компетентності та розвитку рівня їхнього професіоналізму.

**Ключові слова:** цифровізація, освітнє середовище, удосконалення освітнього процесу, інноваційна сприйнятливості, учителі.

## INTRODUCTION

Over the past decade, scholars have reached a consensus regarding effective education reforms: they depend on fostering a supportive school environment that inspires and empowers teachers to innovate the educational environment. Teachers' innovativeness enables them to develop their own competencies, as well as bring the learning process closer to the modern information environment, and create learner-centred and cognitive learning experiences to improve student achievement (Blömeke et al., 2021).

As a result, there has been an increase in the study of teacher innovation, which is defined as an intentional process that involves generating, developing, implementing, evaluating, modifying, disseminating, perpetuating, and finally realising expected benefits (Kuril et al., 2023). Contemporary scientists do not agree on the teacher innovation definition, its importance and the necessity of its renewing it. However, most believe it plays a key role in improving the educational process through interdisciplinary teachers' skills, collaborative learning, developing critical thinking, increased cognitive activation and students' formative feedback (Liu et al., 2024).

As a result, students who learn from teachers with high levels of innovation experience increased their learning satisfaction, academic self-efficacy, and improved their academic outcomes (Knysh et al., 2023).

To reform the educational field, it is necessary to train competent teachers of the new generation to act productively and purposefully in modern conditions (Pashko & Pinchuk, 2019; Pashko & Pinchuk, 2021). Innovative receptivity will contribute to increasing their competitiveness.

Most higher education institutions in Ukraine today work in a mixed or distance format. So, teachers must improve their innovative receptivity within this contemporary educational environment. At the same time, the requirements for modern teachers' competencies are growing due to the need to prepare students for a competitive labour market. Therefore, modern teachers' innovative receptivity should be improved to meet contemporary demands.

There is a great number of scientific studies on improving the innovative receptivity of educators. The results of the analysis make it possible to determine that in Ukraine implementing teachers' innovative receptivity takes place in accordance with these documents: 'Recommendations of the Council of the European Union on key competences for lifelong learning' (2008), the New Ukrainian School Concept (Gryshchenko, 2026), etc.

Nguyen, Pietsch, and Gümüş (2021) examined the effects of teachers' classroom autonomy and school culture on teachers' collective innovativeness through integrated professional learning. The paper discusses the importance of enhancing teachers' sense of classroom autonomy and collaborative school culture to promote collective teacher innovativeness. It is suggested that collaborative culture can be used as a means to encourage teachers to participate in integrated professional learning activities which would enhance teachers' collective innovativeness.

Liu et al. (2024) demonstrate the importance of understanding the concept of teacher innovation. The authors emphasize the need for methodological advances and advocate for theory-driven research to deepen insights into the underlying mechanisms of teacher innovation processes. They conclude by emphasising the need to acknowledge both the positive outcomes and possible drawbacks of teacher innovation.

Cai and Tang (2022) argued that innovation is a core factor determining the success of organizations in the twenty-first century. The researchers show that teacher innovation is crucial in the current education reform, and its motivational mechanisms may be different, as teachers have a deep emotional connection with students. Chinese researchers explored the relationship between basic psychological needs and support, and teacher innovation. Their research proved that need satisfaction is an important theoretical mechanism to motivate teacher innovation. Relatedness had the greatest impact on teacher innovation, and was the antecedent of competence, while autonomy had insignificant relationships with other variables.

Teng, Pu, and Hao (2024) examined distributed leadership as a means of significantly enhancing both team and individual innovation. They demonstrated that the development of an innovative teaching force is highly related to educational modernisation. Teacher collaboration and self-efficacy partially mediate the relationship between distributed leadership and teacher innovation in Asian contexts.

Moreover, a great number of scientists all over the world have been researching different aspects of improving teachers' innovative receptivity (Liubashenko & Kornieva, 2019; Mykytenko et al., 2022; Rakhmanina et al., 2022; Bernacki et al., 2019; Fu & Hwang, 2018). Analysing scientific research shows that different definitions and aspects of developing innovative receptivity have been studied quite thoroughly. However, implementation of the means of improving teachers' innovative receptivity with the aim to modernize the educational environment may need further research.

Therefore, the purpose of this article is to explore how to improve the innovative receptivity of Ukrainian teachers. In order to achieve this goal, we decided to 1) define the term 'innovative receptivity of modern teachers'; 2) identify the key components of innovative receptivity by expert assessment, and define the most important ones for modern Ukrainian teachers; 3) give recommendations on the most effective ways of improving innovative receptivity of teachers.

## METHODOLOGY

The first step was to study the term 'innovative receptivity of modern teachers'. Our findings show that it is a relatively specific concept that combines ideas from educational theory and practice.

**Participants.** A stratified sampling approach was used. First, 32 schools (21 urban and 11 rural), and three universities in different regions of Ukraine were selected. Second, a total of 567 questionnaires were given to teachers (435 school teachers and 132 university teachers). Of these, 542 were usable for analysis (response rate = 95.59%).

The final sample consisted of 465 females (82.01%) and 102 males (17.99%). The average age was 40.6 years and the average length of service was 18.7 years; 246 respondents (43.39%) had a bachelor's (or specialist) degree, 193 respondents (34.04%) had a master's degree, and 128 teachers (mostly university lecturers) (22.57%) had a doctorate or doctorate of science.

**Procedure.** After clarifying the concept in the scientific literature, we conducted a survey in Ukrainian educational institutions to find out the practical aspect of the current state of the problem under study. The next step in our research involved analysing the results of the survey and questionnaire. After that, we identified the main components (teacher qualities) that together constitute the innovative receptivity of a modern teacher.

The next stage of our research was to reveal the most effective ways of improving each of four chosen components. We used the method of expert evaluation, questionnaires and surveys to determine the most effective means of developing key components of innovative receptivity.

First, we provided targeted training, offering professional development sessions focused on specific technologies and their use in the classroom. We also tailored these sessions to different skill levels to ensure they met the needs of all teachers.

We then provided ongoing support through technology coaches or IT specialists who could provide one-on-one assistance, answer questions, and help with troubleshooting. We provided curriculum planning support to help teachers integrate technology into their lesson plans and curriculum design. This was done by providing examples of effective technology integration and offering templates or guides.

Improving teachers' technological skills requires a mix of training, support and creating an environment where technology is integrated into the classroom in a meaningful way. We describe them in the next section of the paper.

## RESULTS

Innovative receptivity refers to teachers' willingness and ability to embrace and integrate new ideas, technologies, pedagogical methods and techniques into their practice. It involves openness to change, adaptability and an active interest in new approaches to teaching and learning.

In recent academic literature, the innovative receptivity of modern teachers is often discussed in relation to several key issues. Modern teachers are increasingly expected to adapt to rapid changes in educational technology and curriculum design (Kuril et al., 2023). Contemporary studies explore how teachers manage and embrace these changes, focusing on their willingness to incorporate new tools and methods into their teaching.

Effective professional development programmes are designed to improve teachers' skills and attitudes towards new innovations, making them more receptive to integrating new ideas (Knysh et al., 2023; Nguyen et al., 2021). With the rise of digital tools and online resources, the ability of teachers to effectively integrate technology into their teaching is an important focus of attention. Some researchers are investigating how teachers' receptiveness to technological innovation affects their teaching practices and student outcomes (Mykytenko et al., 2022; Rakhmanina et al., 2022). Some research emphasises that teachers' receptiveness is also influenced by the wider educational environment, including institutional support, organisational culture and policy frameworks (Cai & Tang, 2022). Research often examines how these factors either facilitate or hinder teachers' willingness to adopt innovative practices.

Overall, recent scholarly literature emphasises that the innovative receptivity of today's teachers is a critical factor in improving educational effectiveness, and addressing contemporary challenges in teaching and learning. Current understanding of the issue remains unclear and fragmented, despite growing recognition of the main role of teacher innovation, which hinders the development of knowledge in this area.

Ma, Yin, Tang, and Liu (2009) proposed an important theoretical framework that classifies educational resources supporting teacher innovation into three types of professional capital: decisional, social (teacher collaboration and trust), and human (teacher emotion and effectiveness). However, the specific relationship between these components and teacher innovation was not explicitly discussed in the model.

Amabile (1988) refined the definition ‘*innovation*’ as a mental process that involves both the creating and implementation of new and useful ideas. In Amabile’s (1988) component theory, domain-related skills, creativity-related processes, and task motivation are the three main components that form the structure of innovation.

Based on the analysis of scientific literature and using data from the survey (435 school teachers and 132 university teachers in Ukraine), the next stage of our research explored the main qualities of innovation receptiveness (see Table 1).

**Table 1**

*The Main Qualities of Teachers’ Innovative Receptivity*

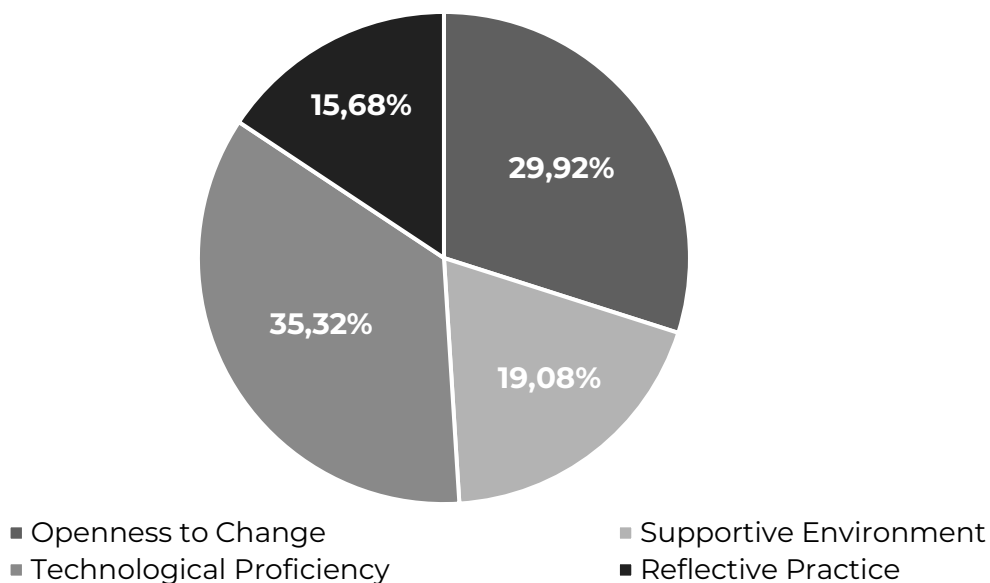
Nº	Qualities of innovative receptivity	Definition of qualities	Rank (% of respondents)
1.	<b>Openness to Change</b>	A willingness to adapt and experiment with new strategies or tools. Teachers who are open to change are more likely to explore and integrate innovative practices.	<b>2</b> (29,92)
2.	<b>Growth Mindset</b>	Believing that abilities and intelligence can be developed through dedication and hard work. Teachers with a growth mindset are more likely to view challenges as opportunities for growth and are more receptive to new approaches.	
3.	<b>Curiosity and Enthusiasm</b>	A genuine interest in learning and discovering new methods. Curious teachers are motivated to seek out and implement innovative practices.	
4.	<b>Supportive Environment</b>	Having access to professional development, resources, and encouragement from colleagues and administrators. A supportive environment fosters a culture of innovation and reduces barriers to adopting new practices.	<b>3</b> (19,08)
5.	<b>Reflective Practice</b>	The ability to critically evaluate one’s own teaching and be open to feedback. Reflective teachers are better positioned to identify areas for improvement and explore innovative solutions.	<b>4</b> (15,68)
6.	<b>Collaboration and Networking</b>	Engaging with other educators and participating in professional learning communities. Collaboration provides exposure to different perspectives and innovative ideas that can be incorporated into teaching.	
7.	<b>Risk-Taking and Resilience</b>	The willingness to take risks and experiment with new approaches, even if this involves potential failure. Resilient teachers learn from setbacks and persist in their efforts to innovate.	

8.	<b>Student-Centred Focus</b>	Prioritizing the needs and interests of students. Teachers who are attuned to their students' needs are more likely to seek out and adopt innovative practices that enhance learning outcomes.	
9.	<b>Technological Proficiency</b>	Comfort and competence with technology. Teachers who are proficient with technology can more easily incorporate digital tools and resources into their teaching.	<b>1</b> (35,32)
10.	<b>Reflective and Iterative Process</b>	Continuously evaluating and refining innovative practices based on their effectiveness and impact on student learning. An iterative approach allows for ongoing improvement and adaptation.	

The analysis of scientific literature and the application of the expert evaluation methodology made it possible to identify the main components of teachers' innovative receptivity, and to determine the four most relevant ones today. By cultivating these components, teachers can enhance their ability to embrace and implement innovative practices, ultimately benefiting their students and contributing to a more dynamic educational environment. The teachers and experts think that the most important components (qualities of a modern teacher) are technological proficiency, openness to change, supportive environment and reflective practice.

**Figure 1**

*Key Components of Teachers' Innovative Receptivity*



We used a number of effective strategies. During the research it was found that it is useful to integrate technology into professional development. Using technology in teacher training programmes allows teachers to experience the benefits first-hand. For example, we used online platforms for training, demonstrating the tools and resources that teachers could use in their own classrooms. Ensuring access to resources is very important. In general, we should ensure that teachers have access to the necessary hardware and software, and that these tools are reliable and up to date.

We should also ensure that they know how to use these resources effectively. In the process of improving receptiveness to innovation, teachers should be provided clear guidelines and support materials. Video tutorials on the use of specific technologies can be invaluable for teachers who need quick help or are learning independently.

By combining these approaches, schools can build teachers' confidence and competence in using technology, ultimately leading to a more effective and engaging learning environment for students.

Developing teachers' openness to change involves addressing their attitudes as well as their practical concerns. Involving teachers in the decision-making process when new initiatives are introduced is a very good way of improving receptiveness to innovation. When teachers had a say in how changes were implemented, they supported and accepted them. The most important strategy is to provide teachers with support and resources. Teachers had the necessary resources, time and support to implement new strategies, including access to teaching materials, technology or additional time for planning and collaboration. It is useful to showcase success stories, highlighting and celebrating examples of successful change within the school or from other schools.

Seeing concrete examples of positive outcomes motivated teachers to be more open to change. Gradual implementation is important as it allows teachers to adapt at a manageable pace, and reduces the risk of overwhelming them. Another way to improve openness to change is to encourage experimentation, encouraging teachers to try out new ideas on a small scale before full implementation. This builds confidence and provides valuable insights into how change might work in practice. By addressing both the emotional and practical aspects of change, an environment in which teachers felt supported and motivated to embrace new approaches was created.

Creating a supportive environment for teachers involved different aspects of their professional experience, from administrative support to fostering a positive school culture. We have described the most effective strategies. Building a positive school culture with open communication helped teachers to promote collaboration (encouraging teamwork and collaboration between teachers through regular meetings, team teaching opportunities and shared planning time). It was important for teachers to maintain transparent communication about school policies, decisions and changes that affect teachers; to establish regular feedback mechanisms where teachers can voice their concerns and suggestions; to celebrate achievements; to recognise and celebrate teachers' successes, both large and small, in order to build morale and a sense of achievement.

Supplying adequate resources provided an opportunity to allocate funds specifically for classroom resources and professional development. In addition, providing emotional and mental health support and ensuring fair workloads and balanced responsibilities prevented burnout. Administrative support helped reduce non-teaching tasks for teachers by streamlining administrative processes, and providing additional support staff when needed. Giving access to counselling or mental health services for teachers helped them to manage stress and maintain a work-life balance.

Promoting wellbeing practices such as mindfulness programmes or wellness initiatives supports teachers' wellbeing. Encouraging autonomy and trust encouraged and supported teachers to try new approaches and innovations in their teaching. Creating a safe environment and fostering supportive leadership promoted inclusivity, ensuring that all teachers feel valued and included, regardless of their background or teaching style. Dealing with conflict in a fair way helped to maintain a positive working environment.

Improving teachers' reflective practice significantly increased their capacity for innovation. We have selected the best strategies to support their development. Collaborative reflection is useful, and can be carried out using peer observation, and by fostering a culture of professional observation where teachers can observe and give feedback to each other, promoting shared learning experiences. Reflective teams established groups focused on discussing teaching practice and experience, allowing different perspectives to enrich the reflective process.

Feedback mechanisms that integrate student feedback as a tool for reflection, help teachers to understand the impact of their teaching methods and identify areas for improvement. Self-assessment tools included self-assessment rubrics to guide teachers in evaluating their practice, and encourage reflective thinking. The use of digital tools (blogs, forums, apps) helped teachers to share reflections and resources, making it easier for them to connect and collaborate.

Video reflection encouraged teachers to record and review their lessons, providing an objective lens through which to reflect on their practice. Cultivating a growth mindset created communities that emphasised a growth mindset, focusing on learning from failure, and celebrating innovative attempts. Time for reflection was important because it built regular periods of reflection into the school calendar, ensuring that teachers had time to engage in meaningful reflective practice. Inquiry-based learning can be modelled in staff meetings, encouraging teachers to ask questions and explore solutions together. By integrating these strategies into a school's culture, teachers improved their reflective practice, leading to greater innovation and adaptability in their teaching.

## **DISCUSSION**

It is important to gather feedback from teachers in order to improve the development process of innovation, and ensure that its components meet their needs and preferences. Research shows that innovative receptivity helps teachers manage their teaching activities effectively. It is important to note that many academics are embracing innovativeness as a valuable quality in teachers for improving the educational process.

Sobchenko and Vorozhbit-Horbatiuk (2022) and Tkachov et al. (2023) demonstrated the impact of digital tools on innovative teaching. This highlights the importance of integrating mindfulness practices into schools, and developing a national digital learning platform to improve teachers' innovativeness.

E. and H. Jackson (2024) suggest using AI as a significant tool for improving teachers' innovative receptivity and personalised learning, as it can facilitate decision-making and innovation.

Other researchers (Sobchenko et al., 2024; Veretiuk & Chetveryk, 2025) highlighted the lack of digital competence among modern teachers and proposed ways to enhance it as an essential component of teacher innovativeness. They demonstrate that an environment conducive to the development of information and digital literacy, clear step-by-step instructions and dynamic communication are essential for the effective implementation of mobile learning, with the ultimate goal of fostering the innovative receptivity of future teachers.

Therefore, we can conclude that many scientists have developed various components of teachers' innovative receptivity using different modern educational tools. This creates new roles demanding advanced technical skills and continuous education, highlighting

a shift in the job market towards more specialised, high-skill positions. Therefore, our research correlates with new scientific findings regarding the usage of modern educational tools, and makes the benefits more apparent in education.

## CONCLUSIONS

Our work has led us to conclude that it is important to develop the innovative receptivity of Ukrainian teachers. It can be a valuable quality for improving teaching competence, and developing the level of their professionalism. With regard to the purpose of this study, we formulated several conclusions:

- 1) We studied the scientific literature to determine the meaning of the term '*innovative receptivity of modern teachers*'. '*Innovation*' is considered a mental process that includes both the creation and the implementation of new and useful ideas.
- 2) The key components of the concept have been identified by expert judgement. They are technological competence, openness to change, a supportive environment and reflective practice. Our research found that 67% of modern Ukrainian teachers possess the core components of innovative receptiveness.
- 3) We proposed recommendations for improving the innovative receptivity of teachers by using each key component of innovative receptivity.

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## CONFLICT OF INTERESTS

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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