



## **Studying Future Educational Psychologists' Readiness for Innovation Management Competencies in Universities of Kazakhstan**

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The aim of the research is to analyze the professional readiness of future high school educational psychologists for innovative management activities. The effectiveness of innovation management activities in the educational environment depends on educational psychologists' acquired competencies. The experimental study included a survey of 320 graduate students majoring in Pedagogy and Psychology at eight leading Kazakhstani universities and regional experts' assessment on the readiness of graduates for innovative managerial work in educational institutions. The sampling technique used to select the sample audience is the convenience based, exponential non-discriminative snowball sampling where the initial subjects are recruited from campus or through social groups based on ease of accessibility and the rest are selected based on referrals made by the selected students. The article reveals the importance of the personality component of educational psychologists' professional readiness for innovative management. In addition, it gives an expert assessment of the effectiveness of training educational psychologists for innovative management in educational institutions. Studying the future educational psychologists' readiness for innovative managerial competencies remains relevant for researchers. It is associated with the need for purposeful investigation and formation of professional competencies according to general patterns and alterations in vocational training in higher educational institutions. In this regard, educational psychologists' training with managerial competencies should become one of the priority directions of practical psychology development in Kazakhstan.

**Keywords:** educational psychologist, innovation technologies, managerial competencies, social communication, correction, unified psychological environment

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## **INTRODUCTION**

Issues related to the effective formation of future educational psychologists' competencies have been the focus of scientific publications in recent times. Researchers have emphasized the importance of economic education for students, graduates, and future specialists in higher educational institutions (Chodasova et al., 2015). Keeping a child-oriented approach in pre-school and school education appears to be an effective teaching method to train school psychologists (Maziah, Seemah&Noorziah, 2017). Keeping a child-oriented approach is feasible as it motivates learners to imply knowledge received on a daily basis while also contributing to the development of effective teaching styles for future teachers along with the curation of innovative management skills based on the theories of motivation – ability – opportunity and self-determination (Laia, Hsiaob & Hsieh, 2018; Casti, 2021).

Readiness in a literal sense refers to two values. The first focuses on the conscious and voluntary decision directed towards the achievement of activity, whereas the second refers to the state at which things are ready to be implemented. The leading component of readiness is thus related to psychological readiness, which is a complex construct focusing on personal and functional components as motivational and mental readiness for the implementation of professional activity (Baimenova, Bekova&Saule, 2015). Professional readiness to support inclusive practices in an educational environment is essential for innovative management competencies (Hero, Lindfors&Tautila, 2017). It is mainly attributed to the level of knowledge and professionalism that allows the making of optimum decisions in a pedagogical situation.

Professional readiness is a resultant of vocational training along with the contributing factors of personality that serve as a regulator in the success of professional activity. The process of learning and training extends throughout the life span (professional) for all college and university students. For educational psychologists specifically, the development of competencies bases on the skills acquired throughout college and student life. The determination of skills of educational psychologists facilitates training through mentoring, counseling and advising. The development of competencies among educational psychologists has far-reaching benefits as it helps in the establishment of close relationship between learning and implementation (Marin-Diaz, Gonzalez-Lopez & Flores, 2014). Thus, for the purpose of determining the competencies, the readiness of future psychologists in Kazakhstani universities must be studied.

### **Research Aims and Objective**

Thus, the aim of the research is to study the readiness of future psychologists' competencies at Kazakhstani universities. To achieve this aim, the following objective is established: To analyze the readiness of educational psychologists to fulfil professional competencies. This will allow the development of competencies of future psychologists at Kazakhstani universities.

### **Literature Review**

#### **Innovation in educational institutions**

In today's world, schools are not just any other learning institutions; rather, they need to be innovative organizations. In order to be innovative, they must be able to discover the

relationship between learning mechanisms and innovation management skills. Innovation refers to a positive and intentional change that requires proper planning and management (Omur& Argon, 2016). The purpose of innovation in an educational context is to enhance and improve educational outcomes. In recent times, cultural, interactive and individual innovations have gained popularity and importance as compared to technical and rational-based innovations. There exists a two-way interaction between innovation and education. First, the schools not only reshape themselves according to the social changes occurring in the surrounding; rather, they also pioneer social innovation (Omur& Argon, 2016). Thus, institutions that are responsible for planning the future human resource for the country are responsible for predicting and determining the required changes in order to make these changes permanent. The insufficiently high level of educational psychologists' professionalism is a challenging issue of the modern school today. Most educational psychologists working in educational institutions have little work experience; simultaneously, the goals and objectives of young educational psychologists' activities require them to have personal and professional maturity, managerial competencies of teamwork, and educational environment management.

In recent years, researchers have been actively discussing issues related to the need to analyze the readiness of educational psychologists for innovation management activities in an educational environment: Sullivan et al. (2019) and Braden et al. (2001) point out that school psychologists have long been recognized as highly influential in the processes and decisions made by schools; however, the role of modern school psychologists must also take into account the evolving and sometimes conflicting changes in theoretical and popular concepts of schooling goals and learning technologies.

Želvys et al., (2019), examining the links between student learning and school leadership, focusing on Lithuania from a comparative perspective, notes that learning leadership is most effective in adding value to student achievements. When training educational psychologists, special attention should be paid to communication in leadership among students.

Froese and Montgomery (2014) believe that school psychologists should bring empirically substantiated approaches to educational attitudes as practicing scientists. At the same time, the transfer of knowledge and its meaningful translation into functional conditions are vital for the profession and cover a central role in all areas of clinical competence. Godelek and Kayarb (2012) emphasize that the training of educational psychologists in the university should include a wide range of appropriate methodologies, such as teaching and programs for joint work with students, teachers, and parents. In addition, specialist training involves mediation on behavior and stress management issues in the educational environment.

Shakir and Sharma (2017) believe that educational psychology helps teachers understand their students' development, the range, and limits of their abilities, the process through which they learn, and their social relationships. In the authors' opinion, educational psychology, namely, positive verbal/non-verbal affirmation and corrective

feedback, makes future teachers effective. Dunlosky and coauthors (2013) emphasize the need to improve educational outcomes, which helps students better regulate their learning through effective teaching methods. For example, cognitive and educational psychologists develop and evaluate easy-to-use teaching methods to help students achieve their learning goals.

### **The need for educational psychologists**

Digital technologies have the capability to impact societies; however, despite the potential of digitalization in fostering and enhancing learning, the impact of these appears to be shallow. Despite massive investments in information and communication technologies (ICT), schools are not yet able to transform their educational practices. This is mainly because the focus of the institutions has been towards the hardware and connectivity rather than on the skill and professional development, reforming pedagogies and formulating the right courseware. Innovation cannot take place in a vacuum; rather, it requires interactions not only among the environments but also the system (Pena-Lopez, 2016). School psychology was inceptioned in the late nineteenth century and is closely related to clinical and special education psychology. The concept refers to the application of psychological principles and techniques required in the education of individuals (Nolan & Moreland, 2014). There are several roles and functions associated with teacher-psychologists. First, they support psychoeducational assessment where a school psychologist generally spends around 50 percent of their in conducting interviews, observing and gathering the required information to understand any problems related to learning or adjustment. Consultation is a significant function of educational psychology where the psychologist spends almost 20 percent of their time either collaborating, empathizing, summarizing the reasons or reformulating strategies to yield the best results (Fagan, 2022). Around 4 percent of the total school psychologists have employment in academic settings/ universities, either as a faculty member assigned to training programs or as a representation of psychological service centers to assist students with disabilities. The criteria for readiness to innovation activity include awareness of the need to get involved with the innovative activities, willingness to involve in creative activities, consistency, confidence, overcoming creative failure, motivation for inclusion, and competence in pedagogical innovation, among others (Pishchanska et al., 2021). Innovative practices also support the interaction by developing interpersonal dimension through exploring the ideas, generating leads and information, championing ideas and implementation of the same to encourage intrinsic motivation, self-confidence, persistence, autonomy, management, and negotiation (Yams, 2017).

### **Importance of educational psychologists and readiness for innovative management competencies**

Hadromi and coauthors (2021) identify seven basic skills of graduates' readiness that every teacher candidate needs to adapt to the workplace: 1) oral and written communication, 2) critical thinking and problem-solving, 3) work ethics and professionalism, 4) working in a team and collaborating, 5) working in different groups,

6) using technology, and 7) project management and leadership. Russian researchers Dolgova, Salamatova, Potapova, Yakovleva and Yakovleva (2017) consider it important to measure the personal qualities of future educational psychologists, which are, in fact, the sum of knowledge, skills, abilities, socially necessary personality traits that allow a psychologist to solve problems in all domains of professional activity. The dynamics measurement and tracking are carried out through the PQFEP system modules, which, according to the authors, contribute to the effective innovation and managerial training of educational psychologists.

Nyshanova et al., (2014) believe that psychologists should focus on functional training. Therefore, the university's educational process should be focused on their functional training. According to the authors, the university focuses primarily on the technology of teaching professional activities. At the same time, the role of a future specialist's professionally important personal qualities is unfairly underestimated in universities.

Baimenova et al., (2015) consider that educational psychologists should teach children with special educational needs. Inclusive education, especially it's the practical part, should also be an integral part of psychologists' training in the higher education system. Aimaganbetova et al., (2015) refer to the main determinants of the cognitive-operational component of psychosocial readiness for professional activity in psychology students: general abilities (intelligence), verbal creativity, reflexivity (the ability to reflect), striving to acquire knowledge and self-develop, the success of training and learning, which is the auto-personal component of the psychosocial activities of educational psychologists.

Mynbayeva et al., (2016) emphasize the need for practical adaptation of educational psychologists to modeling work with unsuccessful children. Kekeeva and Sherayzina (2016) single out teachers' professional development, including management, as the main source of social and qualifying career. A theoretical analysis of the scientific publications of recent years shows that the transition from the traditional system to the innovation implementation requires new ways to solve educational problems, presupposes a serious breakdown of the usual stereotypes associated with a change in the approach to education, its goals, and the methods used. An educational psychologist is the main link in any transformation. It depends on the psychologist, his/her motivation, knowledge of the organizational foundations of management, the ability to solve emerging problems, how fully and adequately the learners will realize their potential in cognitive and personal development.

In the context of the link between the future psychologist and readiness for innovation management competencies, it is found that the professional psychology is an emerging phenomenon in the context of readiness for innovation and organizational management. It is asserted that psychology is an important that affect the human behavior (Fogaça et al., 2018). Strategic and innovative decisions taken in an organization are the product of humans and require carefully curtailed human thinking. Thus, these decisions are highly influenced by human psychology (Poorgholami et al., 2016). The innovation management decisions are, therefore, significantly influenced by the human psychology as they require managerial (human input) (Met et al., 2020). It is also asserted that the

considering the fact that innovative behavior stems from mental function, the professional competencies of the psychologist appear to be crucial for effective innovation management competencies in the organization (Silva et al., 2020; Tiwari & Buse, 2020). This makes psychology an important aspect for the management of innovative behavior and competencies in the organization. Thus, psychologists appear to have important potential roles in the organizations which necessitate it for them to achieve sufficient expertise in order to fulfill professional competencies.

### **Challenges in innovative competencies and the role of teacher**

Valeeva, and Karimova (2015) highlights the importance of studying and diagnosing the level of social competence of future educational psychologists' pedagogical conditions for the formation of their social competence to correct them in the conditions of a university experiment. Islamov (2015) believes that the teacher's training activity should be fully integrated into the managerial activity in terms of work and teaching.

Tsytulina, Sokolova and Sergeyeva (2017) point out that teachers face the problem of transferring knowledge, skills, and abilities to learners and forming the personality of a future graduate capable of professional development. R. Akhmadullina,

Valiakhmetova and Khurmatullina (2019) note that teaching students critical thinking for conscious analysis and design problems arising to teachers when solving professional tasks in innovative education will help in the organizational activities of the future teachers. Gordienko et al., (2020) emphasize that the demand for self-management skills in teachers' professional activities and the need to focus on educational process management are relevant in future teachers' training. Khakunova, Shkhakhutova and Bersirova (2020) identified markers of professional competence formation and presented the subsequent diagnosis of professional competencies, where organizational abilities and management play an important role.

A group of authors; Bogomolov et al., (2021) conducted a study to assess a tutor's role in implementing an applicant's educational strategy exemplified by preparing for an exam in biology for admission to a medical university. The researchers noted personal motivation, which forms the required knowledge, as the main factor in the applicants' readiness. Kazakhstan researchers (Osplanova et al., 2015) consider that the teacher's professional reflects a significant number of integrative components of his/her educational activities, which combines the functions of a subject teacher and class teacher and, therefore, puts a constant need to develop his/her pedagogical skills and organizational and managerial qualities. Algozhayeva et al., (2016) highlight emotional regulation in the educational process as an effective learning strategy, leading students (adolescents) to better progress in learning, using emotions as the main source of information.

### **Research focus**

It is important to mention that there is currently a clear interest in this topic. Kazakh researchers Shalgynbayeva and Aimoldanovna (2018) consider the concept of a "teacher's managerial competence" as a subject of philosophical, psychological, and pedagogical analysis that is a basic one in teaching future teachers. Ryskaliyev et al.

(2020), investigating the professional competencies of future teachers, highlighted “managerial competence” as one of the significant indicators of future teachers’ professionalism. In general, the theoretical analysis of the recent scientific discussions of the problem under study made it possible to clarify the most important aspects in the formation of teachers’ motivation for innovation activities in the context of the educational space of the school, namely the formation of managerial competence in future educational psychologists.

### **Research gaps**

Various studies have attempted to study the innovativeness within the educational sector across various disciplines. However, the preliminary analysis of the past papers has directed the attention towards the dearth of literature focused on the innovative practices within the discipline of educational psychology. Very few studies have attempted to link the innovation with the discipline of psychology. For instance, Govindan & Regina (2018) investigated the role of innovation in the psychological teaching and found that the innovative pedagogical practices are imperative for the development of potential innovative capabilities of the students. Similarly, Repkina et al., (2021) studied the professional development of the educational psychologists and found that there exists a need to improve the innovative potential of the teaching staff in order to prepare the educational psychologist in a more innovation-oriented environment and enhance their potential readiness for innovative capabilities. Nonetheless, none of the previous studies have focused on the investigation of the innovative practices which have been incorporated within the educational institutes of Kazakhstan. Due to limited empirical evidence focused on Kazakhstan, it is difficult to assess the readiness of changes through the implementation of innovative management competencies in a specific region. Therefore, to fill this knowledge gap, it is imperative to focus on studying and analyzing the future educational psychologists to determine the readiness for innovation management competencies in the Republic of Kazakhstan. To the knowledge of the researcher, this is the first time, the study of this kind is being conducted. In particular, none of the previous studies have investigated the educational psychologists’ readiness for innovation management competencies. Thus, this reflects the novelty of the present study and its contribution to the existing literature.

## **METHOD**

### **Research Approach and design**

This empirical research incorporated a quantitative methodology based on a combination of two research designs: a sociological survey of psychology students and an expert survey of specialists in the educational environment. The initial methodological positions provide the validity and reliability of the results obtained, the analysis of modern achievements of psychological and pedagogical science, the choice, and application of approved methodological tools corresponding to the goal, object, subject, tasks, and hypothesis of the study, the representativeness of the sample and quantitative analysis of experimental data, confirmed by methods of mathematical statistics. There are three distinguishing characteristics of the survey research design which facilitate the investigation of the readiness related to the innovative management

competencies by keeping a scientific and systematic approach. Firstly, the survey research quantitatively describes the unique attributes of the population. This will be done for the present study by identifying the number of universities in the Kazakhstan regions and their comparison to facilitate the achievement of research objectives, as the focus of the study is directed towards the Kazakhstani universities to study the role of educational psychologists. The survey research design uses a sample from the population to investigate the phenomenon (Glasow, 2005); for the present study, the sample size of 320 respondents, the results from which can then be generalized to the larger/during population. The reason survey research design is deemed suitable for the present study is that the approach makes it easier to gather large samples of information and is well-suited to collect demographic data, and is inclusive of all the variables. Surveys are found to be useful in gathering information related to attitudes (for the present study, readiness) which may become difficult if investigated by using observational techniques.

#### **Data Collection Tool/Method**

In order to address the research problem for the present study, the data was collected via survey tool. In particular, the researcher developed a self-administered survey to be filled by the graduate students majoring in Pedagogy and Psychology. The questionnaire comprised of four basic questions on the main areas of innovative and managerial readiness of graduating psychologist. Another questionnaire was developed to collect data from the educational psychologists. This questionnaire, developed for assessing the readiness of managerial competencies among psychology graduates, consisted of 20 basic questions, divided into three blocks: 1) assessment of graduating psychologists' motivational and creative orientation; 2) assessment of graduating psychologists' creativity; 3) assessment of educational psychologists' professional abilities to implement innovative activities.

The benefit of using a questionnaire is that it helps the researcher to maintain the focus of the study and yield responses to achieve a generalized viewpoint relating to the research phenomenon under study (Visser et al., 2000). The focus of the questions, therefore, remains on the following schemes; graduating psychologists' motivational and creative orientation, their creativity, and their professional abilities for effective implementation of innovative activities in the Kazakhstani context.

#### **Sampling and Participants' Recruitment**

As established, the population for the present study comprised of the students majoring in Pedagogy and Psychology as well as the professional experts and educational psychologists. However, the researcher recognized that this was such a wide audience base, and it was virtually impossible to recruit such a wide audience in the study. In this concern, the researcher recruited a small representative group from the study population known as sample (Vehovar et al., 2016).

Sample size in research is referred to the number of observations or participants involved in the data collection process to study and/or investigate the research phenomenon. The determination of sample size in the research is of utmost importance, as the selection of respondents largely influences the precision of estimates made



regarding the research population and also impacts the power of the study to draw appropriate and informed conclusions (Saunders et al., 2007). The mean value, standard deviation, standard error, and sample variance were calculated for sampling survey students and experts. A special professional sample was based on the principle of targeted, proportional selection of respondents among the leading universities of the Republic of Kazakhstan: 4-year students (majoring in Pedagogy and Psychology at the universities of the Republic of Kazakhstan). The proportional selection of 40 4-year Pedagogy and Psychology students from eight Kazakhstani universities determined the final size of the representative sample – 320 respondents. Moreover, the total number of experts who participated in the survey was 48 persons, corresponding to a representative sample of a qualitative study. The competent participation of experts specializing in analyzing the problem under consideration determined a qualified conclusion on analyzing managerial innovation competencies among graduating psychologists.

The survey experts were sampled using the “snowball” method to form lists of narrow professional groups. Snowball sampling is also known as a chain-referral sampling. It is a type of non-probability sampling where the researcher determines the sample size based on their judgment and convenience. The reason snowball sampling is considered suitable for the present study is that it allows the researcher to select the sample with rare traits (Vehovar et al., 2016). The reason why the sampling method is also known as the chain referral sampling because participants who are selected in the sample size help in recruiting future subjects of the study due to the rare nature and difficulty of finding the sample population. Since the prevalence of educational and social psychologists in Kazakhstan is not widespread, the chain-referral technique of selecting respondents to investigate the research objectives was deemed appropriate. The survey experts, specializing in the field of education: university teaching staff, heads of psychological centers, heads (directors) of educational institutions: lyceums, gymnasiums, secondary schools, heads of departments, specialists of municipal and regional Departments of Education, were selected according to a proportional target sample. The researcher divided the finite population suitable for survey expert into subpopulations and then applied random sampling technique for the selection of the survey experts (Salkind, 2010). On the other hand, the students of Pedagogy and Psychology students were sampled using a combination of convenience-based and snowball sampling technique. Using convenience-based sampling, the researcher recited the students that were readily available and easily accessible (e.g., on campus or through social groups etc.) and further asked them to identify their classmates, friends or other students from their department that can be recruited in the study. The process of identifying the future samples from the recruited subject is known as the exponential non-discriminative snowball sampling (Dudovskiy, 2016). Each new referral from the students is explored until the final size of the sample, that is, 320 respondents is achieved. The respondents were hesitant at first in terms of making referrals, however the challenge was rectified by maintaining full disclosure with the subjects. The choice of the sampling method was an efficient one as the chain referral method speed up the process of finding the sample size while also ensuring the reliability of the referrals as they came from credible sources (Glen, 2014). Thus, the sampling method simplified the otherwise challenging

task of identifying and recruiting the sample audience educational and social psychologists in Kazakhstani universities.

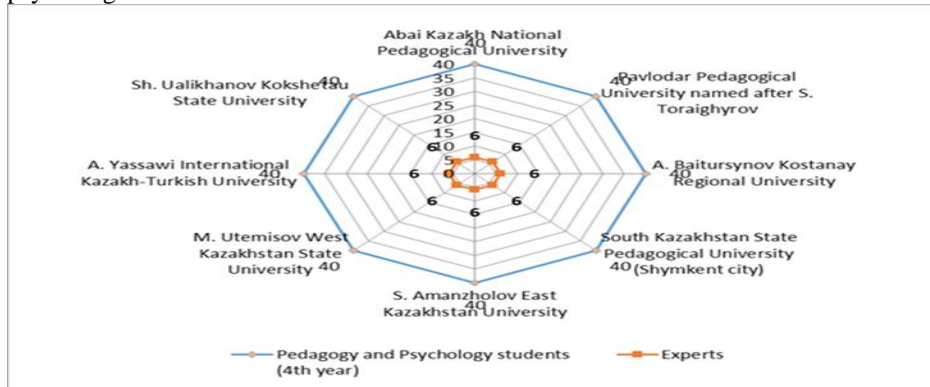


Figure 1  
Characteristics of the experimental study sample

For the collection of data from the recruited participants in the study, the researcher first obtained the written informed consent of the participants. All the participants were provided with sufficient information about the purpose of the research and ensured that the collected data would also be used for the completion of the present study. Once, the participants signed the consent forms, they were provided with the survey questionnaire to be filled for the present study.

#### Data analysis

Since, the collected data was in numeric form, a static tool was needed for the analysis and the interpretation of data. In this regard, at all the stages of the data processing, the SPSS 20.0 statistical software for Windows was used for generating reports on the value of variance (univariate analysis of variance), correlation, and cluster analysis of data. The applied methods of one-dimensional descriptive analysis solved the problem of compressing the initial information and its compact representation. Correlation analysis made it possible to study the interdependencies of such variables as students' "readiness" for innovative group and team technologies and to study the experts' assessment concerning three main variables "motivational and creative orientation of graduating psychologists", "graduating psychologists' creativity", and "readiness for innovative activities".

#### FINDINGS AND DISCUSSION

The results of a comprehensive study are based on the quantitative analysis and survey of the psychology major students and professionals across eight universities of the Republic of Kazakhstan. These results made it possible to integrate the opinions and views of psychology students and educational environment experts. Overall, the results have revealed that educational psychologists' have a high level of readiness for towards the innovation management competencies. As per the results of the graduates' survey and experts' assessment, the internal psychological factors of readiness for

innovation among graduates are clearly expressed in terms of pro-activeness, teamwork, organizational qualities, and leadership.

The results of a comprehensive study of eight universities of the Republic of Kazakhstan are presented below. These results made it possible to integrate the opinions and views of psychology students and educational environment experts. Most of survey respondents (students) in all geographical objects of the research consider the work of a teacher-psychologist to be innovative, related to the modeling of situations in the educational environment, the application of advanced technologies, and communication with all subjects of the educational process. Additionally, major proportion of the survey respondents are greatly interested in showing creative initiative as a teacher-psychologist. Nevertheless, few of the respondents are interested in the part, since, in their opinion, everything depends on the school team and the role of the psychologist in it.

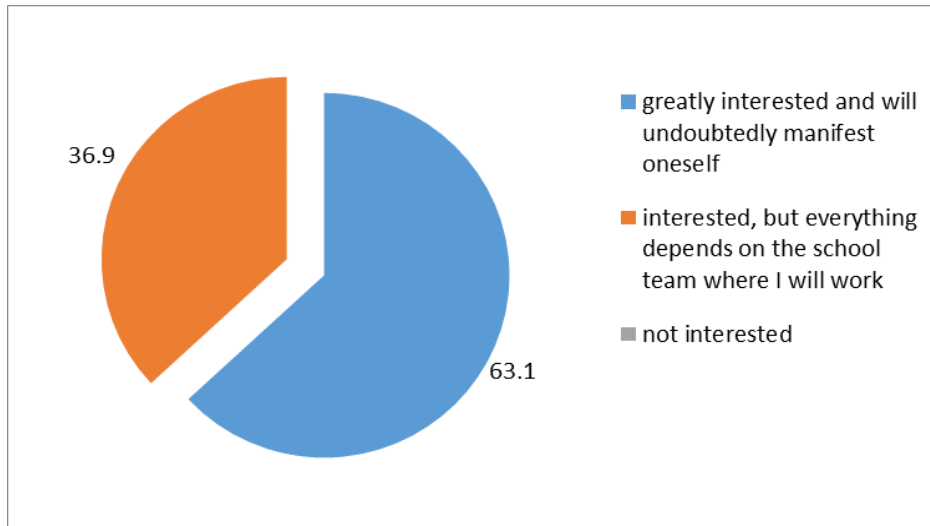


Figure 2

The interest of respondents in the manifestation of creative initiative as a teacher-psychologist at the schools of the Republic of Kazakhstan

More than 78% of psychology students generally feel confident as a teacher-psychologist. Furthermore, 21.6% are confident in part, since it is difficult for a university graduate to become a “central figure” in the school communication process.

In addition, 88.4% of the survey respondents note a complete readiness to implement psychological technologies and methods in the educational process. Professional practices allow graduates to start their work at school confidently. At the same time, 11.6% of respondents are not completely ready to implement innovative technologies. Concerning the issue of readiness to perform the following activities related to innovative management competencies, the respondents pointed out the following:

Table 2  
Distribution of respondents' answers to the question "How ready are you to perform the following activities at school?"/"Completely ready."

Types of innovation management competencies	Total for RK university sample	
	Number of students	Percentage %
Joint discussion of the psychological situation	314	98.1
Testing	308	96.3
Creation of non-standard role situations	284	88.8
Questionnaire surveying	296	92.5
Sociometry	279	87.2
Brainstorming	294	91.9
Psychological monitoring of the pedagogical process	277	86.6
Organization of correctional and developmental technologies at school	288	90.0
Organization of remote counseling for target groups	278	86.9

As can be seen from Table 2, the smallest indicators refer to the following competencies: Psychological monitoring of the pedagogical process, Organization of remote counseling for target groups, Sociometry, Creation of non-standard role situations in the respective order.

However, the complexity of these technologies makes high demands on their practical application in the school educational environment. In particular, remote counseling for target groups (students, parents, teachers) is one of the newest and simultaneously demanded competencies of educational psychologists. Sociometry in an educational context is supported by the work of Yams (2017), where the author has focused on strengthening the interactive dimension through persistence, intrinsic motivation, autonomy, confidence, and management and negotiation.

The overwhelming majority of survey respondents are ready to abandon stereotypes in teaching, overcome the inertia of thinking and offer innovative technologies in schools. Only a small proportion of the sample surveyed believe that it is "partly" possible to overcome inertia and implement new technologies, since it is difficult to break "stereotypes of thinking immediately".

This supports the literature that signifies a positive correlation between innovative management competencies and innovativeness levels of teachers (Eksi et al., 2021). The ability to identify opportunities to develop innovative management competencies is significant and beneficial; for personal, academic as well as professional growth (Capella-Peris et al., 2021), which has also been proven by the responses collected from the questionnaires regarding the willingness to abandon stereotypical teaching and overcoming inertia to implement new technologies.

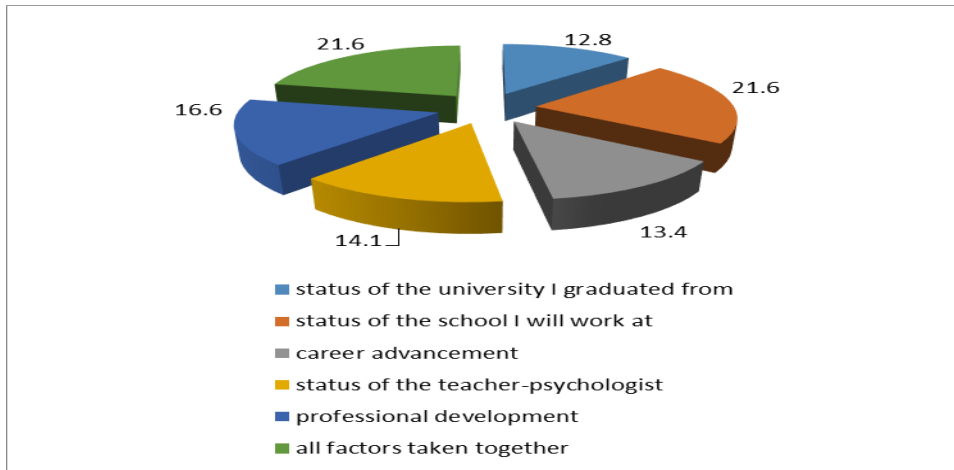


Figure 4  
Readiness of educational psychologists to fulfill innovation management competencies

Table 3  
Readiness of university graduates for online activities as a teacher-psychologist

Types of online activities of a teacher-psychologist	Total for RK university sample	
	Number of students	Percentage %
Joint discussion of the psychological situation	314	98.1
Testing	297	92.8
Creation of non-standard role situations	290	90.6
Questionnaire surveying	286	89.4
Sociometry	265	82.8
Brainstorming	293	91.6
Psychological monitoring of the pedagogical process	261	81.6
Organization of correctional and developmental technologies at school	302	94.4
Organization of remote counseling for target groups	259	80.9

Table 3 depicts that the smallest indicators refer to the following competencies (in order): Psychological monitoring of the pedagogical process, Organization of remote counseling for target groups, Sociometry, Questionnaire surveying, Creation of non-standard role situations.

According to the survey, most of the respondents are ready to correct their activities in the educational process. Correction of the psychologist's activities in the educational environment is a natural process of adaptation to changing conditions, particularly updating technologies or online learning conditions. However, there still remains a small portion of the respondents who are not completely ready to correct their activities in the educational process, since this implies the experience of restructuring the work algorithm, the use of new psychological methods, which is somewhat difficult for university graduates with little practical experience.

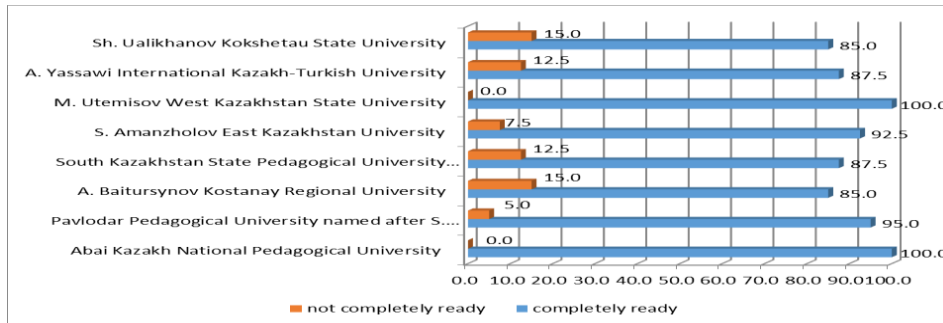


Figure 5  
Respondents' readiness for correctional work

More than ninety percent of survey respondents are ready for social communication and organization with a team of teachers, school authorities, students, and their parents. Currently, the school educational environment has changed the structure of work due to the conditions of the global pandemic. Nevertheless, the psychologists' work remains highly relevant and significant. University graduates are ready for the following online activities:

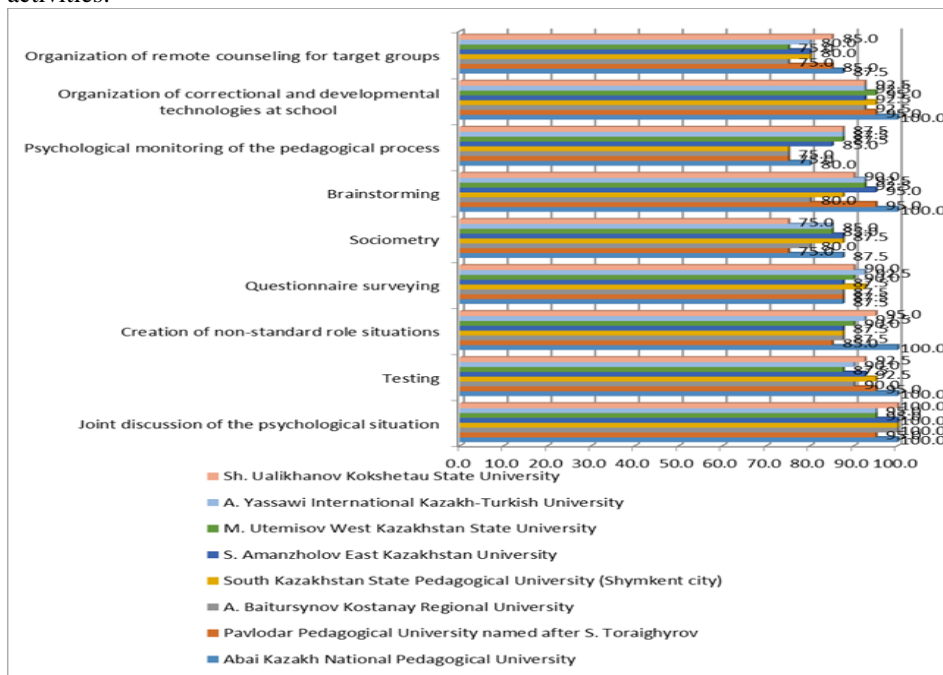


Figure 6  
The main factors motivating university graduates to show creative initiative as a teacher-psychologist

Almost all of the survey respondents answered the question positively “Do you think it is possible to create, maintain and manage a unified psychological environment in an educational institution in which you will work as a teacher-psychologist”, with 65.9% considering it a possible and necessary condition of the psychologist's work, and 34.1% considering it possible and noting the complexity at the same time.

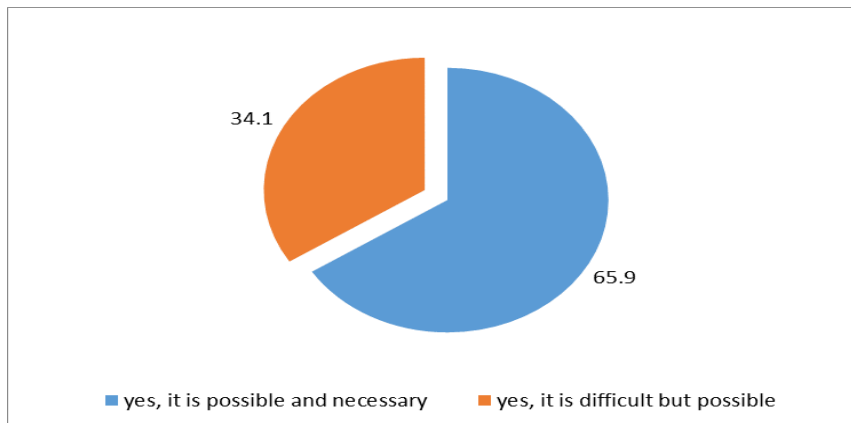


Figure 7

The possibility of creating, maintaining, and managing a unified psychological environment in an educational institution

The survey experts assessed the effective formation of future educational psychologists' innovation managerial abilities in the context of three main macro-indicators, that is, the motivational and creative orientation of graduating psychologists, the creativity of graduating psychologists, the professional abilities of educational psychologists to carry out innovation activities.

The reason the response is of significant importance in investigating the readiness to adapt to innovative management competencies is that the psychologists working in the field of education facilitate the learning and retention of knowledge by continuously improving and evolving the education delivery and promoting educational success for all students (APA, 2014). It tends to support the development of positive personality traits along with the nurturing of self-esteem through therapy and psychological techniques (Fedorenko&Bykova, 2016).

Concerning the first macro-indicator, “The motivational and creative orientation of graduating psychologists”, the following indicators were obtained:

Table 4  
The main factors motivating university graduates to show creative initiative as teachers-psychologists

The motivational and creative orientation of graduating psychologists	Total for RK university sample	
	Number of students	Percentage %
Interest in creative activity	48	100.0
Striving for creative achievements	48	100.0
Striving for leadership, organizational activities	34	70.8
Striving to obtain a high assessment of the activities on behalf of the administration	48	100.0
The personal significance of the creative activity	37	77.1
Striving for self-improvement	44	91.7
Interest in the implementation of innovative psychological techniques and technologies	48	100.0

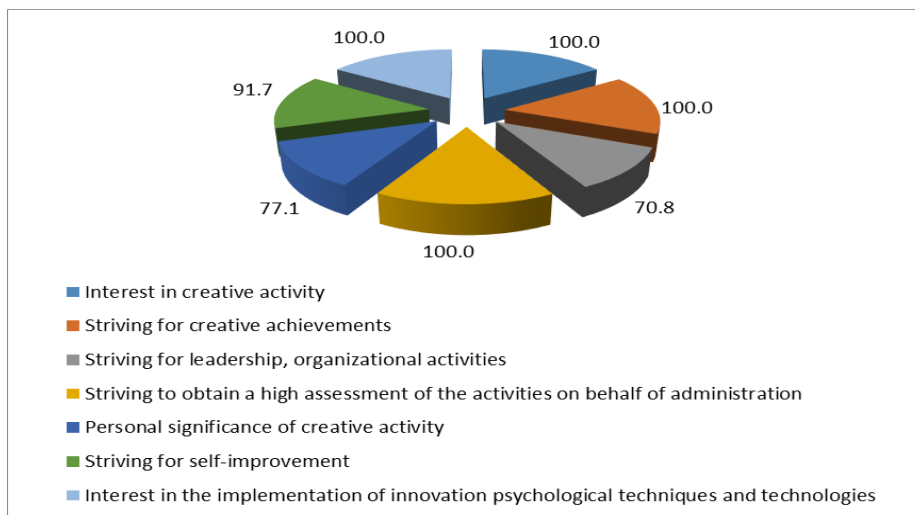


Figure 8  
Expert assessment of the motivational and creative orientation of graduating psychologists

The competencies thus yielded from the primary responses of the sample uses the qualitative approach of investigation (questionnaire); it can be seen that the motivational and creative orientation, as explained by Pishchanska et al. (2021) and Yams (2017), is similar to the responses received focusing on the exploration, generation, championing and implementation of ideas to fulfill the interpersonal dimension of innovative competence.



The following indicators were obtained for the second macro-indicator, “Graduating psychologists' creativity”:

Table 5  
Macro-indicators of psychologists' creativity

№	Graduating psychologists' creativity	Total for RK university sample	
		Number of students	Percentage %
	Ability to abandon stereotypes in pedagogical activity, overcome the inertia of thinking	34	70.8
	Risk appetite	32	66.7
	Critical thinking, ability to give evaluative judgments	34	70.8
4.	The ability for self-analysis, reflection	36	75.0

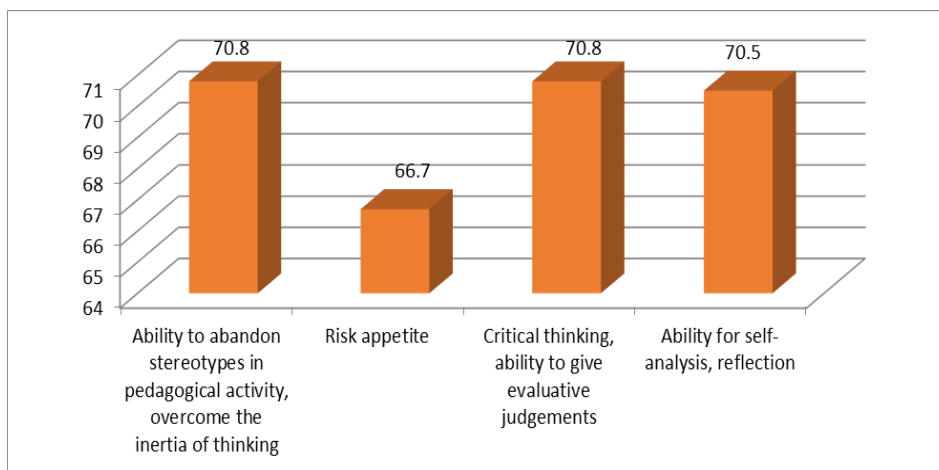


Figure 9  
Expert assessment of the graduate psychologists' creativity level

Concerning the third macro-indicator, “Professional abilities of educational psychologists to carry out innovation activities,” the following indicators were obtained:

Table 6  
Macro-indicators of the psychologists' professional abilities

No.	Professional abilities of educational psychologists to carry out innovation activities	Total for RK university sample	
		Number of students	Percentage %
	Mastery of pedagogical research methods	36	75.0
	Ability to plan experimental work	34	70.8
	Ability to create an author's concept of research	32	66.7
	Ability to organize an experiment	36	75.0
	Ability to correct own activities	37	77.1
	The ability for social communication and organization of work with a team of teachers, school authorities, students, and their parents	39	81.3
	Creation, maintenance, and management of a unified psychological environment in an educational institution	45	93.8
	Ability to organize online psychological counseling	40	83.3

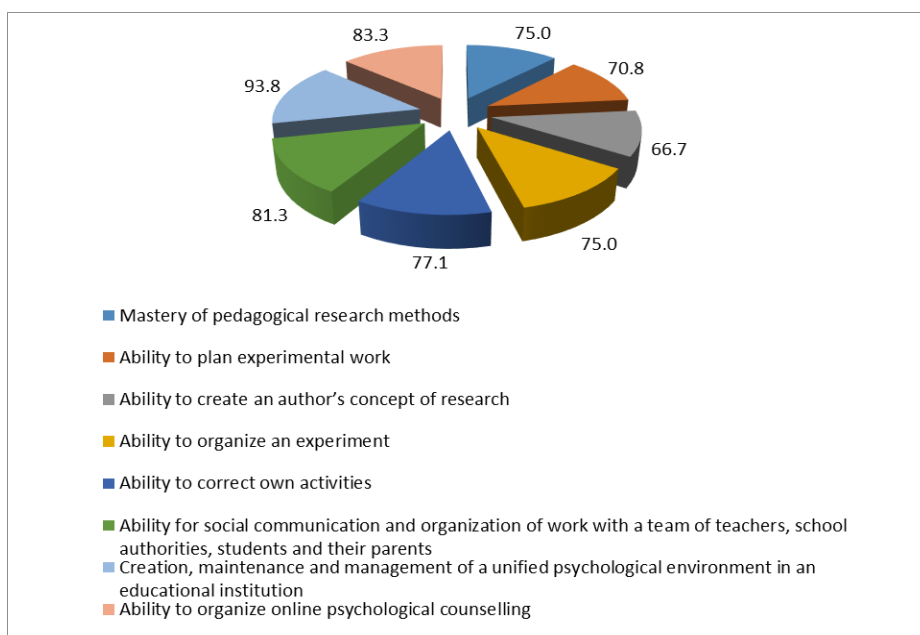


Figure 10

Expert assessment of the educational psychologists' professional abilities to implement innovative activities

According to the survey experts (based on the findings), managerial innovation skills available in future educational psychologists are the main sign of professional

qualifications. The summarized results of the experts' assessment show that the motivation of educational psychologists to innovative activities as a condition for the implementation of managerial decisions is one of the elements of the management system in a public educational institution. Thus, the success of future teacher-psychologist's success has a substantial part of their professional competence and is also conditioned by their personal and social peculiarities, which determine the social and moral aspect of professional interaction in the educational environment.

### **LIMITATIONS**

The scope of the research limitation on the quantitative survey of students concerned such basic characteristics of the respondents as:

- 4th-year students majoring in Pedagogy and Psychology
- Respondents should represent eight universities of the Republic of Kazakhstan included in the research sample.
- For the survey experts, the inadmissibility of working in one organization was an additional filtering limitation in the study.

### **CONCLUSION**

The transformational processes taking place around the globe today at all levels signify the innovative potential of institutions. The ability to think creatively, defend one's opinion, innovative motivational measures to develop competencies and yield learning outcomes. Moreover, the innovative management competencies are also proven significant in providing psychological as well as pedagogical support in the educational process. In general, the following relevant conclusions were formulated based on the results of empirical scientific research:

Educational psychologists' motivation to carry our innovation activities is the main condition for implementing managerial decisions in the educational environment.

According to the results of a comprehensive study, educational psychologists' "susceptibility to innovations" (Rogers, 2010) has a high level, which forms the readiness for professional activity in the context of managing the psychological educational environment which addresses the first objective of the study.

In the context of a teacher's activity, innovation management activity implies work in teams, groups, organizational solutions to pedagogical and psychological problems.

At the universities, individual and differentiated work with future educational psychologists should be strengthened deeper and in different directions through practical educational tasks, including functional interaction with school staff, students, and parents.

Expert analysis shows that a teacher-psychologist's professionally important personal qualities are the backbone elements of competence, and also the motivational factors,

and therefore an important condition for the formation of a future teacher's psychological and pedagogical competence.

As the results of the graduates' survey and experts' assessment show, the internal psychological factors of readiness for innovation activity among graduates are clearly expressed: proactiveness, teamwork, organizational qualities, and leadership. All these attributes serve as the motivational factor in the readiness to take creative initiatives in an educational context in Kazakhstan.

A high level of proactiveness and readiness for changes develops leadership qualities and creative self-actualization in graduates.

Because of the empirical research carried out by the authors, the readiness of psychology students was revealed concerning the following main indicators:

1. Interest in creative activity;
2. Striving for creative achievements;
3. Interest in the practical implementation of innovative psychological techniques and technologies;
4. Goal and action management;
5. Leadership;
6. Managerial abilities to guide learners.

All in all, the study contributed to the literature pertinent to the innovativeness in the context of educational sector. The study appears to be the first one to discuss the readiness for innovation management, particularly for the students and the professional of the educational psychology. None of the previous studies has attempted to delineate the innovation readiness of the educational psychologists, nor any study has studied this link in the context of Kazakhstan. Thus, the present study presents novel findings for the educational psychologists and for higher educational institutes of Kazakhstan.

## **IMPLICATIONS**

This research experimentally determined the effectiveness of the formed managerial competencies of future educational psychologists; it was proved by the results of a sociological survey of graduates and experts that managerial innovation abilities are a naturally determined, planned result of training. Nevertheless, the difficulty lies in mastering the psychologists' managerial competencies in the context of organizing and managing a unified psychological environment at school, forming social and psychological communications with school staff, students, and their parents.

Studying the future educational psychologists' readiness for innovative managerial competencies remains relevant for researchers. It is associated with the need for purposeful investigation and formation of professional competencies according to general patterns and alternations in vocational training in higher educational institutions. In this regard, educational psychologists' training with managerial competencies should

become one of the priority directions of practical psychology. Development in Kazakhstan will allow them to successfully carry out professional activities in educational institutions, including correctional ones. However, the prevalence and the attention to the development of innovative management competencies in Kazakhstan (the third research objective) are limited and not so far-reaching. However, it is also suggested that the education system of Kazakhstan can be evolved, and the problems associated with it can be solved by the development of a national qualifications network that operates on the principles of the European qualifications network, as suggested by authors Nabi et al. (2016).

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