

## Preparing pedagogue-psychologists for innovative activities in the entrepreneurial educational environment of the university

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### Abstract

It is emphasized that an entrepreneurial university creates new conditions and opportunities for training personnel capable of performing their basic professional functions with a focus on innovative entrepreneurial activity in educational organizations. The study examines the approaches and methods of preparing future school psychologists for the psychological and pedagogical support of innovative and educational entrepreneurial activities in organizations of general and additional general education. Using the methods of scientific and pedagogical research in an experiment, the possibilities of an entrepreneurial university in the formation of the readiness of future pedagogues-psychologists to perform professional functions in an entrepreneurial innovative, and educational environment are analyzed. There were 132 participants, consisting of 64 students in the control group and 68 participants in the experimental group. The experience of the work of school psychologists in the psychological and pedagogical support of innovative and educational entrepreneurial activities is analyzed, the modeling of which reflects the content and preparation process of students - future pedagogues-psychologists.

**Keywords:** Entrepreneurial university; innovative activity; pedagogue-psychologist; training centers.

## 1. Introduction

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Entrepreneurial universities are higher education institutions of an innovative type. In addition to their role in strengthening market mechanisms in higher education, the development of a competitive science of production, the effective orientation of personnel, material, technical and financial resources, they play an important role in training specialists with a new type of thinking - entrepreneurial, innovative (Musselin, 2018). Students combine education with entrepreneurial activity and master professional competencies in a business environment. Moreover, this applies to both future engineers and economists, as well as students of humanitarian specialties, in our example, future pedagogues-psychologists. An analysis of the practice of organizations for general and additional secondary education shows that the need for school psychologists is increasing.

One of the leading factors in the growing need for school psychological services is the strengthening of market mechanisms in the activities of organizations of general secondary education, the transition to an innovative development model, and the intensification of entrepreneurial activity (Benko, 2021). This means that the school psychologist works in an educational environment, a characteristic feature of which is the continuous introduction of innovations and entrepreneurial principles. In non-state schools, in educational centers of additional general education - in reality, managers and teachers are entrepreneurs. Every day they feel in themselves influenced by market conditions, looking for the most effective approaches and methods from both the pedagogical and economic points of view.

Public schools are switching to per capita financing. They are increasingly feeling competition in the educational services market (Miller, 2018). Almost all areas of activity and state schools (strengthening the material and technical base, financing, staffing, etc.) directly or indirectly affect market mechanisms. Therefore, the modern school psychologist, fulfilling his professional functions, interacts with the subjects of the educational process that carry out their life cycles (training, education, management, etc.) in the innovative and educational business environment. In this regard, the preparation of future pedagogues-psychologists at the university, who are professionally prepared for the psychological and pedagogical support of innovative and educational entrepreneurial activity in organizations of general secondary education, is relevant.

Modernization of the system of higher professional education in Kazakhstan increasingly strengthens the requirements for the competitiveness of higher education institutions, and their compliance with new challenges and requirements (State program, 2016). In post-Soviet Kazakhstan, market mechanisms have firmly entered the life of higher education institutions. The private sector in higher education has been created and strengthened. Currently, 125 universities operate in Kazakhstan, in which 477 thousand students are studying. Kursiv Research compiled a ranking of universities. At the same time, many mechanisms of a market economy have taken shape and are successfully operating in state universities - universities are endowed with the rights of economic activity, and joint-stock companies are being formed.

### **1.1. Literature review**

In modern conditions, the innovative development of organizations of general secondary and additional education is enhanced by psychological factors that determine the effectiveness of innovative and educational activities of teachers. Psychological readiness for innovations in professional-pedagogical activity has become a prerequisite for successful pedagogical work, the effectiveness of the introduction of pedagogical innovations, prevention of professional deformation, and creative growth of teachers. The problem of the psychological support of pedagogical innovations, and the willingness of teachers to innovate have been the subject of numerous research works by foreign and Kazakhstani (Masyrova 2008; Mukhametzhanova 2010; Darybaeva 2015; Yasyukevich 2010; scientists. The works reveal the essence, indicators, and psychological tools for studying the psychological readiness for innovation in pedagogical activity among students of a pedagogical university. Various models of preparing future teachers and educators for innovative activities are

proposed, programs for preparing students of a pedagogical university for innovative activities, and the conditions for their implementation are developed and tested.

However, existing studies have not yet considered such an important aspect of preparing students of a pedagogical university for innovative activity at school - the formation of the readiness of a future pedagogue-psychologist for the psychological and pedagogical support of innovative and educational activities, in particular in the business environment of non-state schools and educational centers for additional education. The literature analysis shows that the key guideline for the design and implementation of the formation system of the future pedagogue-psychologist's readiness for innovative professional activity is the activity of the school psychologist in the psychological and pedagogical support of innovations.

Two key tasks can be distinguished for preparing students of the specialty "Pedagogy and Psychology" for innovative activity in the entrepreneurial educational environment of non-state schools and organizations of additional education:

- 1) the formation of students' psychological readiness for innovation;
- 2) the formation of students' readiness for psychological and pedagogical support (provision) of innovative and educational activities.

According to Frantseva (2003), "psychological readiness for innovative activity is an integral psychological phenomenon that represents the unity of cognitive (knowledge of innovations, methods of their application, etc.), affective (positive attitude to pedagogical innovations, empathy, the prevalence of positive emotions in professional activity, etc.) and cognitive (activity) components. The author notes that "the development of psychological readiness for innovation will be effective in creating a developing environment in which a subjective-subjective approach to the organization of pedagogical interaction is implemented, dialogue is established, an atmosphere of goodwill and trust is created, the uniqueness and singularity of each student's life is taken into account, organized, directed and the process of self-knowledge and self-development is stimulated"

An interesting point of view of our research is the definition of Yasyukevich (2010), which very successfully defines the concept of "psychological and pedagogical support of the innovative activity of pedagogical workers", which is understood as the "professional activity of a pedagogue-psychologist, aimed at developing the psychological and pedagogical competence of pedagogical workers, their motivation for creative, active work in the innovative model of development of an educational institution, carried out in collaboration with participants of the management process"

The foundation of the readiness of the pedagogue-psychologist for innovative activity is laid in the process of training students-future pedagogues-psychologists at the university. Currently, some factors and conditions determine the relevance of scientific development of the problem of preparing a future pedagogue-psychologist for the psychological and pedagogical support of innovative activities in an entrepreneurial innovative, and educational environment, namely:

- strengthening the influence of market mechanisms on the vital processes of modern state comprehensive schools (for example, the transition to per capita financing);
- the growing growth in Kazakhstan of a network of non-state (private) comprehensive schools in which entrepreneurial principles are most ideally manifested in almost all areas of activity;
- the rapid growth in the demand of schoolchildren and parents for additional education due to increased competition in the educational services market, a pronounced increase in the number of training centers for additional secondary education;
- modernization of university education, the intensive introduction of innovations in university practice, the preparation of future specialists for entrepreneurial activity, and the formation of an entrepreneurial university.

Thus, the future pedagogue-psychologist will be ready for a full-fledged, high-quality professional activity, not only owning the professional and personal competencies of the school psychologist, focused on the traditional areas of work (diagnostic, correctional, developmental, consultative, and educational). He/she should be psychologically prepared for innovation, and ready for the psychological support of the innovative activity of all subjects of the educational process. In an entrepreneurial innovative and educational environment, the work of a school psychologist also requires specific professional and personal competencies that ensure effective interaction with market mechanisms in the process of performing professional functions. New conditions and requirements of innovative activity in organizations of general secondary education should be reflected in the professional competencies of the school psychologist, he should have the following competencies:

- be able to diagnose the mental well-being of students and teachers in innovative information and educational environment;
- the ability to form a positive attitude of teachers, students, their parents to educational innovations;
- be able to choose methods and means of psychological support for students and teachers in overcoming difficulties and adapting to pedagogical innovations;
- the ability to create a motivating psychological climate for the effective promotion of innovation in the school (training center);
- psychological support for education managers, management cycle in the organization of education.

Preparation of future pedagogues-psychologists for innovation in the conditions of an entrepreneurial innovative and educational environment includes the following areas:

- preparation for the fulfillment of the functions of a psychologist at school focused on the tasks of psychological and pedagogical support of innovative and educational entrepreneurial activity at school, a training center;
- professionally oriented economic education of future pedagogues-psychologists;
- inclusion of students in various types of entrepreneurial activities (start-up projects, participation in funded research projects, etc.);
- expanding the range of educational research and scientific-research tasks to study the experience of entrepreneurial innovation and educational activities in organizations of general secondary education;
- the use of various types of practices for the formation of professional experience in an entrepreneurial educational environment.

We proceed from the fact that the content of the preparation of the future pedagogue-psychologist for innovative and educational entrepreneurial activity models the activities of the school psychologist - a professional who traditionally performs the following functions: gnostic; constructive and educational; consulting; educational; psychoprophylactic and psychotherapeutic; methodical (Handbook, p.8-9). Following the above functions, the following areas of a psychologist's work in high school are distinguished: diagnostic, correctional, and educational; advisory and educational (Handbook, p.10).

For greater clarity, we consider the work of a pedagogue-psychologist as an example of the work of a psychologist at a private school or training center, which performs its professional functions in a real innovative and educational business environment. The success of a private school or training center depends on the level of client service - the consumers of educational services, which are our students and their parents (Chairunnisa, 2018). The successful work of teachers in a private school or training center for additional education depends not only on the level of their methodological skills but also on many psychological factors. Every day in their work they feel the influence of both

innovation and market conditions. They need the help of a psychologist and psychological and pedagogical support from a specialist.

*Diagnostic work in the innovative and educational business environment of the organization of general secondary education* involves an in-depth psychological and pedagogical study of the subjects of the educational process receiving education in an innovative environment. By the subjects of the educational process, we mean both the employees of the training center involved in the provision of educational services, and students who are their consumers. A school psychologist, first of all, studies individual characteristics, abilities, educational needs of students, desires, and expectations of their parents. School (training center) managers and teachers should be well informed about their students. The diagnostic work of a psychologist at a private school is somewhat different from that of a specialist in budgetary organizations of general secondary education.

The diagnostic work of a school psychologist, first of all, implies the readiness of the teaching staff of the school for innovative activities. According to Yasyukevich (2010), monitoring is carried out by the school psychological service, the content of which includes the study of the school's psychological climate; the degree of emotional burnout of teaching staff; readiness of teaching staff for experimental research activities; the creative potential of teaching staff; knowledge of the age characteristics of students by teaching staff; introspection of professional difficulties in the activities of teaching staff.

*Correctional and educational work* of the school psychologist in the innovative and educational environment of the school is carried out in the following areas:

- *psychological correction*: the choice and use of means and methods of changing the mental state of the subjects of the educational process in the environment of the active introduction of pedagogical innovations. In the innovative and educational environment, the school psychologist is engaged in the correction of intellectual development, and the development of various areas of the personality (emotional, behavioral, etc.) of students to raise them to the level of new requirements of innovative education. She/he also works to prevent didactic neurosis and neurotic conditions while increasing the educational and psychological burden/stress for both students and teachers in the process of introducing innovations.
- *psychological prevention*. The pedagogue-psychologist carries out purposeful work to prevent the disadaptation of students to new requirements and conditions of the educational process; creates a favorable psychological climate for the promotion of innovation; based on the results of diagnostic work, develops recommendations for teachers to overcome difficulties associated with innovation; provides psychological assistance to parents of students in the organization of family education and upbringing following the innovations in the school. He also works to overcome intrapersonal contradictions and low self-esteem.
- *correctional development work* involves the work of a school psychologist in the formation and development of students and teachers of individual psychological qualities and properties that contribute to successful adaptation and self-education, self-cultivation, and self-development in conditions of pedagogical innovations. The school psychologist uses modern psychotechnologies for the development of intellectual abilities, critical thinking skills, educational motivation, emotional intelligence, didactic and interpersonal communication skills, and teamwork.

*Advisory and educational work of a school psychologist in an innovative and educational environment*. In Kazakhstan, comprehensive schools are completing the transition to updated educational content. The introduction of the new content of education (educational programs), new teaching methods, and an innovative system for monitoring and evaluating the results of the educational process naturally intensifies the work of the school psychological service, pedagogue-psychologist in the psychological and pedagogical support of the innovative and educational process. With the introduction of innovations, the need for teachers, school leaders, and parents to study for psychological knowledge is growing. Teachers feel the need for self-development following the ever-

growing requirements for their professional level and personal development, which increases their need for psychological knowledge (Mominovna, 2019). In non-governmental organizations of general secondary education, it is important to be able to work with consumers of educational services - teachers and parents. With a change in the paradigms of education, students become full-fledged subjects of the pedagogical process, they “acquire” knowledge with the leading and guiding role of the teacher. Parents should be ready for family education and upbringing, and their support in the face of innovations in education. School managers are faced with new organizational and managerial problems, the solution of which also requires psychological knowledge.

For effective advisory and educational activities, a school psychologist must be able to:

- study the needs of teachers, students, and their parents, school managers in psychological knowledge;
- present the psychological problems of the subjects of the pedagogical process related to the implementation of innovations;
- stimulate the interest of teachers, students and their parents, school managers in the assimilation and application of psychological knowledge and skills;
- reasonably and creatively choose the forms and methods of individual and group counseling.

The above areas of work of a psychologist in high school are accepted by us as basic guidelines for modeling the preparation of a future pedagogue-psychologist for innovative activities in a business environment.

***1.2. Our proposed model of preparing a future pedagogue-psychologist for the psychological and pedagogical support of innovative and educational activities in the business environment includes:***

I. Substantive block

Objective: designing the content of the educational program of the specialty “Pedagogy and Psychology” of a bachelor's degree on the tasks of preparing a future pedagogue-psychologist for innovative activity in an innovative and educational business environment. When developing modular educational programs for the specialty “Pedagogy and Psychology”, it is envisaged:

- profile orientation of general professional courses on the tasks of preparing a future pedagogue-psychologist for innovative activities (for example, the content of the courses “Professional Kazakh language”, “Professional Russian language”, “Professional English language” includes texts and assignments related to pedagogical innovations and innovative activities of the school psychologist. The course "History of Kazakhstan" reveals the problems of innovative development of education. The course "Economics" reveals market mechanisms in education, features of the organization of a commercial psychological service, and the organization of private schools).
- the study of pedagogical innovations in the basic courses “Pedagogy”, “Theory and Methodology of Educational Work”, the content of the innovative activities of a school psychologist in the framework of the courses “Psychology”, “Pedagogical Psychology”, “Organization of Psychological Service at School”; in the course “Pedagogical Management” issues of promoting school innovations and their psychological support are considered.
- the inclusion of elective courses "Pedagogical Innovation studies", and "Innovation in the psychological service", which are aimed at the formation of special knowledge and competencies of students in the field of innovative and educational activities of a school psychologist.
- for independent educational work and in the program of pedagogical practice, tasks for developing a project of a school psychological service are included; studying regulatory documents on the organization of innovative activity in schools; planning psychological research on the impact of pedagogical innovations on the psychological well-being of teachers and students; the study of psychological difficulties associated with the introduction of innovations; study of the needs of teachers, students and parents in psychological knowledge and, on this basis, the development of innovative psychological education and psychological counseling programs.

## II. Pragmatic (procedural) block.

Objective: the formation of professional competencies related to the performance of the functions of a school psychologist with a focus on the innovative and educational process of organizations of general secondary education.

- classroom lessons in basic and special courses are conducted using innovative forms and methods of teaching and organization of educational activities of students. Students should have a good understanding of the innovative nature of the classes. Students are involved in the process of preparing and conducting classes using various (even elementary) pedagogical innovations. The “innovativeness” of each lesson is collectively discussed. Students share their impressions of the used pedagogical innovations, psychological well-being, and perception of innovations.
- extracurricular forms of formation of students' psychological readiness for innovation: participation in scientific and methodological seminars, exhibitions, coaching, online conferences, public knowledge reviews, visits to scientific laboratories, a business incubator; meetings and conversations with leading experts, scientists;
- students study the innovative activities of the university from a psychological point of view (study and analysis of the psychological aspects of innovation) and present them in the classroom.
- during the organization of various types of pedagogical practice, students - future pedagogues-psychologists are deliberately included in various types of innovative activities in organizations of general secondary education that are part of the school psychological service: monitoring the readiness of teaching staff and managers of the school to innovative activities; diagnostics of students' adaptation to innovations; correctional and developmental work on the intellectual development of students, on the construction of effective interpersonal communication, on the prevention of professional deformation of teachers, on the formation of a positive attitude of parents to innovations; psychological education of teachers, parents, and students in various aspects of training, education and development in the innovative and educational environment.

The results of the preparation of the future pedagogue-psychologist for innovative and educational activities in organizations of general secondary education are expressed in his readiness for psychological and pedagogical support of pedagogical innovations, which is expressed in the following professional and personal competencies:

### *1.2.1. Assessment competencies*

This includes the following:

- The ability to timely identify and assess the psychological problems of introducing innovations;
- The ability to give an objective and reasonable assessment of the progress and effectiveness of the introduction of pedagogical innovations in the organization of general secondary education;
- The ability to interpret the data of psychological and pedagogical diagnostics of the process and the results of the introduction of pedagogical innovations, identify constructive and destructive changes, and propose appropriate organizational and managerial, and pedagogical actions.

### *1.3. Purpose of study*

In Kazakhstan, the number of private comprehensive schools is increasing, and training centers for further education have already firmly entered the market of educational services. State comprehensive schools, traditionally “far” from entrepreneurial activity, already noticeably feel the influence of market relations, especially in connection with innovations in education, in particular with the transition to per capita financing. The article discusses the problem of preparing students - future pedagogues-psychologists for innovative and educational activities in the entrepreneurial educational environment of non-state schools and training centers for further education. It is noted that today the training of school psychologists should be aimed at developing entrepreneurial qualities, on the one

hand, and at the psychological and pedagogical support of innovative educational, entrepreneurial activity at school, in training centers.

## **2. Materials and Methods**

### **2.1. Data collection**

As noted above, the preparation of a future pedagogue-psychologist for innovative and educational activities in organizations of general secondary education is expressed in his readiness for psychological and pedagogical support of pedagogical innovations.

Pilot testing to verify the effectiveness of the developed pedagogical measures on the formation of the readiness of the future pedagogue-psychologist for psychological and pedagogical support from the Peoples' Friendship University named after academician A. Kuatbekov. Students were tested, including test cases, including questions that allow diagnosing knowledge and skills in the three competencies of professional readiness for innovative and educational activities at school. Approximately the same starting level of student training is provided.

To solve the tasks, the following research methods were used:

- the study and analysis of conceptual, regulatory provisions on the organization of the activities of the school psychologist and the training of future pedagogues-psychologists at the university;
- analysis of the modern practice of training future pedagogues-psychologists in universities, in particular in entrepreneurial universities;
- study and analysis of university and school documentation;
- survey methods, pedagogical observation, and method of expert assessments.

### **2.2. Participants**

At various stages of the pilot testing, 132 students of the specialty "Pedagogy and Psychology" took part, the choice of which was made by random selection. Two samples were compiled - control and experimental groups (in the control group - 64, in the experimental group - 68 students).

### **2.3. Procedure**

The experiment consisted of two stages. At the stage of the ascertaining experiment, the initial state of the readiness formation of students - future pedagogues-psychologists for innovative activity was determined. Diagnostic tools have been developed for the pedagogical measurement and assessment of the readiness of students - future pedagogues-psychologists for the psychological and pedagogical support of innovative activities (criteria and indicators are defined, and on their basis the levels of professional competencies formation; expert sheets, self-assessment sheets, pedagogical observation protocols, conversation plan). The steps in the research included the following:

- designing the content of preparing a future pedagogue-psychologist for innovative and educational activities in the conditions of private schools and training centers;
- modeling of the structure and the process of forming the readiness of the future pedagogue-psychologist in the conditions of an entrepreneurial university for innovative and educational activities in non-governmental organizations of general secondary and additional education.

The methods were implemented based on the following, (Yusufbekova, 2013);

- theories of psychological readiness for innovations in professional-pedagogical activity (Frantseva, 2003);
- models of teacher readiness for innovative activities (Afanasyeva, 2016), (Tyunnikov, 2016), (Slastenin, 2015), etc .;
- theories of preparing the future pedagogue-psychologist for professional activities (indicate the

authors and years, and then indicate them in the literature).

### 3. Results

The diagnostic competencies of students are determined by the control method, which included tasks to perform the diagnostic functions of the school psychologist. Students needed to solve situational problems, which required knowledge of regulatory documents, regulations, and theoretical materials in the field of pedagogical innovation studies, and demonstrate diagnostic skills in conditions that simulate the diagnostic activities of a practical psychologist. The results were evaluated by experts among experienced teachers in the department of "Psychology" and school psychologists from basic schools in Shymkent. The results of determining students' possession of diagnostic competencies are shown in table 1.

**Table 1**  
*The results of determining students' possession of diagnostic competencies at the stage of the ascertaining experiment\**

Diagnostic competencies	% of students who showed the severity of these indicators					
	underdeveloped		normal		pronounced	
	CG	EG	CG	EG	CG	EG
1 Knows and understands the substantive legal framework for innovative activities at school	58	61	35	33	7	6
2 Knows and understands the functions of the school psychologist in the psychological and pedagogical support of innovative activities	59	58	40	38	11	4
3 Knows methods of psychological and pedagogical diagnostics	32	31	55	58	13	11
4 Able to plan diagnostic work in an innovative and educational environment	85	87	15	13	0	0
5 Able to develop diagnostic materials	53	50	31	33	16	17
6 Able to diagnose innovative and educational environment at school	72	74	18	16	0	0
7 Able to study the moods, needs, desires, and expectations of students and their parents, as clients, consumers of educational services	69	70	25	25	6	5
8. The ability to determine the nature of the impact of various pedagogical innovations on the psychology of students, teaching staff, psychological difficulties associated with adaptation to innovations	77	80	23	19	0	1
9 Able to process and interpret the results of diagnostics of innovative activity at school, to develop conclusions and recommendations for its improvement	75	77	25	22	0	1

\* Note - CG - control groups, EG - experimental groups.

To determine the formation of corrective and developing competencies, we used control tasks for students to choose psychotechnologies and their use in specific situations of adaptation of the subjects of the pedagogical process to the conditions of the innovative and educational environment of the school. Students had to determine ways of motivating participants in the pedagogical process to productive, creative activities in the environment of introducing pedagogical innovations. Also, the tasks proposed to identify methods of correction of intellectual development, personality development, prevention of neurotic conditions, and emotional burnout of teachers.

**Table 2**

*Shows the percentage of students who showed the severity of corrective and developing competencies.*

№	Students' corrective and developing competencies	% of students who showed the severity of competency					
		underdeveloped		medium		pronounced	
		CG	EG	CG	EG	CG	EG
1	Ability to make a choice and use developmental psychotechnologies for successful adaptation in the conditions of pedagogical innovations	60	58	35	39	5	3
2	The ability to motivate students, teaching staff to productive, creative activities in the environment of introducing pedagogical innovations	49	53	42	40	9	7
3	The ability to organize corrective and developmental work on the correction of intellectual development, personality development	61	60	33	35	6	5
4	The ability to use measures to prevent neurotic conditions, emotional burnout of teachers	69	66	29	32	2	2

To determine the level of formation of the advisory and preventive competencies of students, they were offered a package of control tasks: 1) training situations indicating possible options for important, strategic areas of correctional development work, according to which they had to determine and substantiate their answers; 2) the compilation of the algorithm of psychological education of students in the environment of the introduction of innovation; 3) the used forms and methods of psychological education and counseling for students, teachers and school managers for specific situations; 4) solve organizational issues of psychological counseling and education and make their self-assessment according to the selected criteria.

The results of the assessment of student advisory and educational competencies at the beginning of the experiment are presented in table 3.

**Table 3**

*The results of the assessment of students' counseling and educational competencies at the stage of determining the experiment*

№	advisory and educational competencies of students	% of students who showed the severity of competency					
		underdeveloped		medium		pronounced	
		CG	EG	CG	EG	CG	EG
1	the ability to find the most important, core areas of advisory and educational work	59	61	37	35	4	4
2	ability to construct content (develop programs) of psychological education knowledge of forms and methods of psychological education and counseling for students, teachers, and school managers	55	56	43	41	2	3
3	ability to plan, organize and assess the effectiveness of counseling and education of participants in the pedagogical process	41	40	51	54	8	6

The student's assessment competencies, demonstrating their readiness for psychological and pedagogical support of innovative activities at school, were determined by us with the help of tasks: 1) to identify and assess psychological problems associated with the introduction of pedagogical innovations; 2) to assess the progress and effectiveness of the introduction of pedagogical innovations in the practice of organizing general (additional) secondary education; 3) the ability to interpret the data of psychological and pedagogical diagnostics and the results of the introduction of innovation; 4) the determination of constructive and destructive changes as a result of the introduction of innovations and the proposal of specific organizational and managerial and pedagogical actions (ideas). The control tasks reflected the real practice of organizations of general secondary and additional education, compiled based on the experience of pedagogues-psychologists.

The results of the control tasks are presented in table 4.

**Table 4**

*The results of the control tasks for the diagnosis of student assessment competencies*

№	Criteria for the formation of student assessment competencies	% of students who showed the severity of competency					
		underdeveloped		medium		pronounced	
		CG	EG	CG	EG	CG	EG
1	identification and assessment of psychological problems associated with the introduction of pedagogical innovations	39	42	50	49	11	9
2	assessment of the progress and effectiveness of the introduction of pedagogical innovations in the practice of organizing general (additional) secondary education; the ability to interpret the data of psychological and pedagogical diagnostics and the results of the introduction of innovation	45	48	48	47	7	5
3	determination of constructive and destructive changes as a result of the introduction of innovations and the proposal of specific organizational and managerial and pedagogical actions (ideas)	52	47	40	46	8	7
4		59	53	37	41	4	6

The results of the study of the level of formation of professional competencies of the future pedagogue-psychologist on the psychological and pedagogical support of innovative and educational activities in the organization of general secondary education at the beginning of the experiment are presented in the table

**Table 5**

*The levels of formation of professional competencies of the future pedagogue-psychologist on the psychological and pedagogical support of innovative and educational activities in the organization of general secondary education at the beginning and end of the experiment*

The levels of formation of professional competencies of the future pedagogue-psychologist on the psychological and pedagogical support of innovative and educational activities		% of students who are characterized by this level of development			
		at the beginning of the experiment		at the end of the experiment	
		CG	EG	CG	EG
I - low	Students are able, according to the options presented to them, to recognize the forms and methods of psychological and pedagogical support of innovations in the organization of general secondary and additional education. They demonstrate the ability to perform only certain elements of the diagnostic, correctional and developmental, consultative and educational and assessment activities of the pedagogue-psychologist, as a whole they are not able to put theoretical knowledge into practice. Tasks are performed only with the help of a teacher.	54,9	54,6	48,5	4,4
II - medium	Students will be able to reproduce the studied types of activities and methods of psychological and pedagogical support of the innovative and educational environment of the school and make minor mistakes. Inadequate independence in work and the ability to perform tasks to fulfill the functions of a pedagogue-psychologist in the conditions of organizations of general secondary education modeling innovative practice are manifested.	38,8	39,8	43,1	63,1
III -high	Students can independently determine, plan and organize the types of activities and methods of psychological and pedagogical support of innovative and educational activities. There is a creative application of knowledge and skills. Tasks are carried out completely and independently. There is a willingness to rationally act in various situations as school psychologists in the context of the introduction of innovation.	6,3	5,6	8,4	32,5

In general, an analysis of the results of the ascertaining experiment shows that by the beginning of the experiment, students in the control and experimental groups had approximately the same level of formation of professional competencies in the psychological and pedagogical support of innovative and educational activities. By all the criteria of professional readiness of a student - a future pedagogue-psychologist for innovative activity, there is an advantage in the percentage of students with low and medium levels of professional competencies. Students who have shown a high level of formation of professional competencies make up only a small part of them.

An analysis of the results of the ascertaining experiment showed that the lack of focused and systematic work on the formation of innovative readiness of the future pedagogue-psychologist for the psychological and pedagogical support of the innovative and educational business environment in

the school and the system of additional education is the main reason for the poor preparation of students in this direction. At the stage of the formative experiment in the experimental groups, the methodology for forming professional competencies of students was used, based on our model of preparing the future pedagogue-psychologist for the psychological and pedagogical support of innovative and educational activities in the business environment.

The distribution of students in control and experimental groups by the levels of formation of professional competencies in the psychological and pedagogical support of innovative and educational activities is presented in Table 6

**Table 6**

*Distribution of students in control and experimental groups according to the levels of formation of professional competencies in psychological and pedagogical support of innovative and educational activities*

Levels of formation of professional competencies of the future pedagogue-psychologist in the psychological and pedagogical support of innovative and educational activities	% of students who are characterized by this level of development			
	at the beginning of the experiment		at the end of the experiment	
	CG	EG	CG	EG
I - low	59,4	54,6	50,5	4,4
II -medium	38,8	39,8	44,1	63,1
III - high	6,3	5,6	7,3	32,5

The results of the formative experiment showed that in the experimental groups there is a positive dynamic in the formation of professional competencies of students - future pedagogues-psychologists for the psychological and pedagogical support of innovative activities in the entrepreneurial educational environment. So, if by the beginning of the experiment the percentage of students who showed a high level of professional competencies was only 5.6%, then by the end of the formative experiment, it increased to 32.5%. There is also an increase in the percentage of students who have shown a medium level of formation of professional competencies (from 39.8% at the beginning of the experiment to 63.1% by the end). At the same time, in the experimental groups, we observe a noticeable decrease in the percentage of students with a low level of professional competence formation (from 54.6% at the beginning of the experiment to 4.4% at the end of the experiment).

Meanwhile, in the control groups, there are no significant changes in the growth in the number of students with medium and high levels of professional competencies. So, if by the beginning of the experiment the percentage of students with a high level of formation in the control groups was 6.3%, then by the end it had not changed and amounted to 7.3%). The medium level in the formation of professional competencies was observed in 38.8% of students at the beginning of the experiment and 44.1% at the end of the experiment. The percentage of students with a low level of formation of professional competencies decreased slightly (from 59.4% to 50.4%). If we take into account that, except for the experimental factor, the learning conditions in the control and experimental groups were practically the same, then it can be argued that the positive dynamics in the development of professional competence of students of experimental groups in the psychological and pedagogical support of innovative activity was ensured by the methodology developed and used by us.

Thus, the conducted pilot testing confirms the effectiveness of the developed methodology for preparing the future pedagogue-psychologist for the psychological and pedagogical support of innovative and educational activities in the business environment.

#### **4. Discussion**

Analysis of the problem allowed us to formulate the following conclusions:

- Two main areas of preparation of the future pedagogue-psychologist for innovative activity are distinguished: psychological readiness of the student - the future pedagogue-psychologist to innovations; the formation of the readiness of the future pedagogue-psychologist for the psychological and pedagogical support of innovative activities.
- Preparation of the future pedagogue-psychologist for innovative activities in the pedagogical process of the university simulates the professional activities of the school psychologist in the psychological and pedagogical support of innovative and educational activities in organizations of general secondary and additional education.

The process of preparing a future pedagogue-psychologist for innovative activity consists of two blocks: substantive and pragmatic (procedural). The substantive block reflects the construction of the content of the educational program of the specialty "Pedagogy and Psychology" of the bachelor's degree on the tasks of preparing the future pedagogue-psychologist for innovative activities in the innovative and educational business environment. The pragmatic block is aimed at the formation of professional competencies related to the performance of the functions of a school psychologist with an orientation toward the innovative and educational process of organizations of general secondary education.

The content of the preparation of the future pedagogue-psychologist for innovative activities is designed with the increased innovative orientation of general professionals, basic courses and programs of pedagogical practice, the introduction of elective disciplines on pedagogical innovation studies, and the work of the school psychologist in the innovative environment. The process of preparing a future pedagogue-psychologist for innovation activities includes forms of organization of training, tools, and methods that introduce students to innovation activities, provide their psychological readiness for innovations, and perform the functions of a school psychologist in the innovative and educational environment of secondary schools and training centers.

#### **5. Conclusion**

The activity of the pedagogue-psychologist in private schools or training centers of additional education is more related to the influence of market mechanisms on the innovative and educational process, in connection with which it is important to develop students' entrepreneurial skills, business qualities, and include them in various forms of communication in the business environment at the university. The results of the preparation of the future pedagogue-psychologist for innovative activity are expressed in the diagnostic, correctional, developmental, and assessment competencies of the graduate of the specialty "Pedagogy and Psychology".

Disclosure of the features of the preparation of the future pedagogue-psychologist in the conditions of an entrepreneurial university for the psychological and pedagogical support of innovative and educational activities at school; substantiation of the content, approaches, methods,

and means of forming the readiness of the future pedagogue-psychologist for the psychological and pedagogical support of innovative activities; a description of the competencies of the future pedagogue-psychologist for the psychological and pedagogical support of innovative activities.

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