

## Experimental study of psychological and pedagogical readiness of the future teachers for moral and spiritual development of senior school students

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### ABSTRACT

The problem of psychological and pedagogical readiness of the future teachers for moral and spiritual development of high-school students should be considered in the context of holistic manifestation of all aspects of personality. In this regard, one of the most urgent tasks is to identify the professional and personal characteristics that influence the readiness of the future teacher already at the stage of training at the Institution of Higher Education to teach "Self-cognition" discipline. At the same time, the basis of psychological and pedagogical training of the future teachers should be capability for conscious spiritual and professional growth, responsibility for activities in the formation of students' worldview and behavioral guidance through the prism of universal human values, development of their need for self-cognition and creative self-realization.

### KEYWORDS

Psychological and pedagogical readiness, structural components, levels and indicators, criteria, research methods, motivational and valuable component, cognitive component, professional and personal component, reflexive and active component

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## 1. Introduction

### 1.1 Introduce the Problem

Training of the future teacher of self-cognition under the conditions of higher education – is a complex process originating from qualitatively new idea about the mission of "Self-cognition" discipline as a meta-subject, which

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promotes the creation of holistic image of the world and provides a harmonious development of personality (Mukazhanova and Omarova, 2013; Mukazhanova et al., 2016). This process is characterized by the tendency of transition from the educational and disciplinary to the personal paradigm of educational activities focused on the development of the future teacher at the Institution of Higher Education as a discipline of spiritual and moral, professional and personal self-development, which will enable, in our view, to create the optimal conditions for the spiritual and moral development of students at school.

### 1.2 Explore Importance of the Problem

The new school "Self-cognition" discipline, that is extensively introduced into the practice of work of school educational institutions of the Republic of Kazakhstan in the last decade, is aimed primarily at the spiritual and moral development of high-school students, which is the actual problem of development of the young sovereign state of the Republic of Kazakhstan, and in particularly its educational system and challenges confronting it. In this regard, one of the most urgent tasks is to identify the professional and personal characteristics that influence the readiness of the future teacher already at the stage of training at the Institution of Higher Education to teach "Self-cognition" discipline. At the same time, the basis of psychological and pedagogical training of the future teachers should be capability for conscious spiritual and professional growth, responsibility for activities in the formation of students' worldview and behavioral guidance through the prism of universal human values, development of their need for self-cognition and creative self-realization.

### 1.3 Describe Relevant Scholarship

D.M.Uznadze considered the term "attitudes of the personality" as its overall readiness (1991). These studies were analyzed and developed by A.G.Asmolov. N.D.Levitov characterizes the "readiness" as "availability of certain capabilities by the discipline" (1984). V.A.Krutetsky and L.A.Kandybovich understand readiness as "synthesis of the properties of personality and its purposeful expression" (1996). The Kazakhstani scientist A.R.Yermentayeva (2012) considers the psychological readiness as the readiness for self-realization and self-actualization (2012).

M.I.Diyachenko (1976), R.D.Sanzhaeva (1997), D.N.Uznadze (1991) and other scientists consider the readiness for activity as "quality of the personality, which includes a set of special knowledge, skills, capabilities and attitude of mind for certain actions, and in the context of person-oriented paradigm as the most important educational competence".

N.D.Levitov, A.A.Ponukalin consider the readiness, depending on the activity of discipline, attitude towards the conditions of this activity, as multi-level formed and foreseeable personal education, which has a specified purpose for the targeted development of the individual (1994). N.D.Levitov, highlighting the understanding of motives and needs in specific activity, notes the relationship of readiness and positive attitude of the discipline towards the activity (1969).

Thus, the readiness for a certain type of activity can be considered as availability of personal qualities, theoretical knowledge, practical skills and

abilities by the future specialist which allow successfully perform the educational and professional tasks and functional responsibilities. Theoretical readiness for activity means a set of information about the profession, professional knowledge, motivation of the personality, knowledge of professionally important qualities, own fitness for a particular kind of activity. Theoretical and practical readiness for activity is interdependent, and their division is conditional.

We may identify the *value-motivational, cognitive, professional and personal, reflexive-activity components* as part of readiness of the future teacher of "Self-cognition" discipline for the spiritual and moral development of high-school students with due regard for the studies of scientists on the structure of the holistic personality (K.A. Abulkhanova-Slavskaya (1999), A.N. Leontiev (2005), S.L. Rubinstein (2003, 2012) and others), methodological versions of the composition and structure of readiness for professional activity (V.A. Slastenin (1997), V.V. Serikov (1998) and others).

Presented structure of psychological and pedagogical readiness of the future teacher for spiritual and moral development of high-school students is the result of professional pedagogical and special psychological training of the future teacher of "Self-cognition" discipline.

Summarizing the foregoing, we are presenting the two main components of the development of psychological and pedagogical readiness of the future teachers of "Self-cognition" discipline during the period of study at the Institution of Higher Education: personal and professional. When we consider the personal component of readiness, we are talking about the students' own activity in the spiritual and moral development of their personality. When we consider the professional (operational and technical) component of readiness of the future teacher, we are talking about the students' readiness for the formulation and solution of educational and professional tasks, i.e. the readiness for professional activity, namely the activity on spiritual and moral development of high-school students.

#### 1.4 State Hypotheses and Their Correspondence to Research Design

Theoretical analysis of various approaches to the interpretation of "readiness" concept has allowed us to single out the common in the characterization of this concept - it's the personal form of interpretation of the content of education, the system of integrative properties, qualities and experience of the person having the signs of general theoretical and methodological readiness, and personal readiness for professional work. At the same time, the readiness has a certain specific character - professional skills and abilities, and democratic style of their implementation, practice-oriented experience of activities, reflection of professional work.

*The process of training of the future teachers for spiritual and moral development of high-school students involves the creation of the following conditions in the educational-bringing-up process of Institution of Higher Education which are directly focused on its specificity:*

1. Disclosure of the essence of psychological and pedagogical readiness of the future teachers for spiritual and moral development of high-school students and definition of its structural components (through the example of training of "Self-cognition" discipline teachers).

2. Development of special course and training program on formation and development of psychological and pedagogical readiness of the future teachers for spiritual and moral development of high-school students.

**System approach** in considering the psychological and pedagogical readiness of the future teacher of "Self-cognition" discipline for spiritual and moral development of high-school students offers our orientation to the disclosure of its integrity and ensures this integrity of mechanisms and identification of the links between the components of this readiness and leads them into a single theoretical picture. This means that the psychological and pedagogical readiness of the future teacher for moral and spiritual development of high-school students has the features that characterize the integrity of the student personality contributing to the productivity of the future professional activity.

## 2 Method

Structure of psychological and pedagogical readiness of the future teacher and methods of research. **Psychological and pedagogical readiness of the future teachers** is a sophisticated system, including a great many different qualitative elements and links, which have a structure that provides the nature of links between its elements and their coordinated functioning.

Each component has a specific set of complementary associated indicators and own logic of development as a developing system.

Given the specific character of psychological and pedagogical readiness of the future teacher of "Self-cognition" discipline for spiritual and moral development of high-school students, we consider the following structural components (Table 1):

**Table 1.** Structural components, levels and indicators of psychological and pedagogical readiness of the future teacher

<b>Structure of psychological and pedagogical readiness of the future teacher</b>			
<b>Component</b>	<b>Criteria</b>	<b>Levels and indicators</b>	<b>Research methods</b>
<b>Motivational and</b>	<b>Aspiration for spiritual and moral, and</b>	<p><b>High level - availability of aspiration for the personal (spiritual and moral) and professional self-cognition and self-improvement:</b></p> <ul style="list-style-type: none"> <li>- Availability of the need to follow the universal spiritual human values and self-cognition;</li> <li>- Availability of the motive for improvement of own moral character, spiritual world, development of moral qualities, performance of conscious moral choice;</li> <li>- Availability of the motive for professional and personal improvement;</li> <li>- Availability of the motive for acquisition of special knowledge, perception of the content of activity of the teacher of "Self-cognition" discipline.</li> </ul>	<p>1. Methodology to determine the main motives for selection of profession developed by E.M. Pavlyutenkov</p>

		<p><b>Average level - insufficient awareness of the motives for aspiration for self-cognition and self-improvement:</b></p> <ul style="list-style-type: none"> <li>- Insufficient formedness of the need to follow the universal spiritual human values and self-cognition;</li> <li>- Insufficient development of the motive for improvement of own moral character, spiritual world, development of moral qualities, performance of conscious moral choice;</li> <li>- Insufficient development of interest in professional and personal self-improvement;</li> <li>- Availability of the motive for acquisition of special knowledge, perception of the content of activity of the teacher of "Self-cognition" discipline.</li> </ul> <p><b>Low level – absence of the motives for aspiration for self-cognition and self-improvement:</b></p> <ul style="list-style-type: none"> <li>- Non-formedness of the need to follow the universal spiritual human values and self-cognition;</li> <li>- Lack of development for improvement of own moral character, spiritual world, development of moral qualities, performance of conscious moral choice;</li> <li>- Lack of the interest in professional and personal self-improvement;</li> <li>- Lack of the motive for acquisition of special knowledge, perception of the content of activity of the teacher of "Self-cognition" discipline.</li> </ul>	2. Questionnaire for students on understanding of the essence of universal human values developed by R.A. Mukazhanov a, G.A. Omarova
Cognitive component	Understanding of spiritual and moral depth of the content of “Self-cognition” NDO Program	<p><b>High level of understanding of the meta-subject role and spiritual and moral depth of the content of "Self-cognition" NDO (Moral and Spiritual Education) Program:</b></p> <ul style="list-style-type: none"> <li>- Availability of knowledge on psychological and pedagogical bases of teaching of "Self-cognition" discipline and its meta-subject role in education;</li> <li>- Availability of knowledge on in structural technique for development of positive thinking at the lessons of "Self-cognition" discipline;</li> <li>- Availability of knowledge on development of the need of high-school students for self-cognition;</li> <li>- Availability of knowledge on creation of single moral and spiritual space for overall holistic development of high-school student's personality, based on universal human values;</li> <li>- Availability of knowledge on formation of spiritual and moral outlook and behavioral orientations of high-school students through the prism of universal human values (formation of holistic view of the world by high-school students).</li> </ul> <p><b>Average level of understanding of the meta-subject role and spiritual and moral depth of the content of "Self-cognition" NDO (Moral and Spiritual Education) Program:</b></p> <ul style="list-style-type: none"> <li>- Insufficient knowledge of psychological and pedagogical bases of teaching of "Self-cognition" discipline and its meta-subject role in education;</li> <li>- Insufficient knowledge of in structural technique for development of positive thinking at the lessons of "Self-cognition" discipline;</li> <li>- Insufficient knowledge on development of the need of high-school students for self-cognition;</li> <li>- Insufficient knowledge on creation of single moral and spiritual space for overall holistic development of high-school student's personality, based on universal human values;</li> <li>- Insufficient knowledge on formation of spiritual and moral outlook and behavioral orientations of high-school students through the prism of universal human values (formation of holistic view of the world by the high-school students).</li> </ul>	Test to determine understanding of spiritual and moral depth of the content of “Self-cognition” Moral and Spiritual Education Program



		<p><b>Low level of understanding of the meta-subject role and spiritual and moral depth of the content of "Self-cognition" NDO (Moral and Spiritual Education) Program:</b></p> <ul style="list-style-type: none"> <li>- Lack of knowledge on psychological and pedagogical bases of teaching of "Self-cognition" discipline and its meta-subject role in education;</li> <li>- Lack of knowledge on the use of instructional technique for development of positive thinking at the lessons of "Self-cognition" discipline;</li> <li>- Non-formation of knowledge on development of the need of high-school students for self-cognition;</li> <li>- Non-formation of knowledge on creation of a single moral and spiritual space for overall holistic development of high-school student's personality, based on universal human values;</li> <li>- Non-formation of worldview knowledge in spiritual and moral aspect and behavioral orientations of high-school students through the prism of universal human values (formation of holistic view of the world by high-school students).</li> </ul>	
<b>Professional and personal component</b>	<b>Development of professionally important personal qualities</b>	<p><b>High level of development of professionally important and personal qualities:</b></p> <ul style="list-style-type: none"> <li>- Availability of empathic capabilities;</li> <li>- Availability of penetration capability in empathy as the communicative property of the person, allowing creating the atmosphere of openness, confidence and sincerity;</li> <li>- Availability of qualities to create the atmosphere for positive information and energy exchange;</li> <li>- Availability of capability to orientate in time facilitating the understanding of existential value of life "here and now", and importance of the feeling of the present moment;</li> <li>- Availability of capability to orientate in life by the values of self-actualizing personality (according to Maslow - truth, goodness, integrity, uniqueness, perfection, justice, order, beauty, and others);</li> <li>- Availability of in-touch capabilities as the property of the person to establish sincere and harmonious interpersonal relationships (trust in people, honesty, kindness, commitment to harmonious existence);</li> <li>- Availability of commitment to the principles of non-judgment;</li> <li>- Availability of qualities of self-actualizing personality (creativity, spontaneity, autonomy, self-understanding, auto-sympathy, flexibility).</li> </ul>	<ol style="list-style-type: none"> <li>1. Methodology of diagnostics of the level of empathic capabilities by V.V.Boyko (2001);</li> <li>2. SAMOAL by Maslow.</li> </ol>

		<p><b>Average level of development of professionally important and personal qualities:</b></p> <ul style="list-style-type: none"> <li>- Insufficient development of empathic capabilities;</li> <li>- Insufficient development of penetration capability in empathy as the communicative property of the person, allowing creating the atmosphere of openness, confidence and sincerity;</li> <li>- Insufficient development of qualities to create the atmosphere for positive information and energy exchange;</li> <li>- Insufficient development of capability to orientate in time facilitating the understanding of existential value of life "here and now", and importance of the feeling of the present moment;</li> <li>- Insufficient development of capability to orientate in life by the values of self-actualizing personality (according to Maslow - truth, goodness, integrity, uniqueness, perfection, justice, order, beauty, and others);</li> <li>- Insufficient development of in-touch capabilities as the property of the person to establish sincere and harmonious interpersonal relationships (trust in people, honesty, kindness, commitment to harmonious existence);</li> <li>- Insufficient formation of commitment to the principles of non-judgment;</li> <li>- Insufficient development of qualities of self-actualizing personality (creativity, spontaneity, autonomy, self-understanding, auto-sympathy, flexibility).</li> </ul> <hr/> <p><b>Low level of development of professionally important and personal qualities:</b></p> <ul style="list-style-type: none"> <li>- Lack of development of empathic capabilities;</li> <li>- Lack of development of penetration capability in empathy as the communicative property of the person, allowing creating the atmosphere of openness, confidence and sincerity;</li> <li>- Lack of development of qualities to create the atmosphere for positive information and energy exchange;</li> <li>- Lack of development of capability to orientate in time facilitating the understanding of existential value of life "here and now", and importance of the feeling of the present moment;</li> <li>- Lack of development of capability to orientate in life by the values of self-actualizing personality (according to Maslow - truth, goodness, integrity, uniqueness, perfection, justice, order, beauty, and others);</li> <li>- Lack of development of in-touch capabilities as the property of the person to establish sincere and harmonious interpersonal relationships (trust in people, honesty, kindness, commitment to harmonious existence);</li> <li>- Non-formation of commitment to the principles of non-judgment;</li> <li>- Lack of development of qualities of self-actualizing personality (creativity, spontaneity, autonomy, self-understanding, auto-sympathy, flexibility).</li> </ul>	
<p style="text-align: center;"><b>Reflexive and active</b></p>	<p style="text-align: center;"><b>Development of reflexive skills and abilities of organization activity on</b></p>	<p><b>High level of development of reflexive skills for organization of activity on spiritual and moral development of the personality:</b></p> <ul style="list-style-type: none"> <li>- Availability of self-reflection, skills for independent analysis and evaluation of activity on spiritual and moral development of high-school students;</li> <li>- Availability of skills for making adjustments into the further activity on spiritual and moral development of high-school students;</li> <li>- Formation of skills to implement a set of duties, moral norms, experience, regulating the implementation of professional duty;</li> <li>- Formation of skills to develop spiritual and moral qualities of high-school students, recognize the motives of their behavior and actions (skills to solve pedagogical problems, for example, to create a positive emotional spirit of goodwill);</li> <li>- Formation of skills to plan and determine the content of educational work on spiritual and moral development of high-school students.</li> </ul>	<p>1.Methodology of diagnostics of the level of reflexivity, questionnaire by A.V.Karpov;</p> <p>2.Methodology to determine the readiness of the future teachers to organization of spiritual and moral</p>



	<p><b>Average level of development of reflexive skills for organization of activity on spiritual and moral development of the personality:</b></p> <ul style="list-style-type: none"> <li>- Insufficient development of self-reflection, skills for independent analysis and evaluation of activity on spiritual and moral development of high-school students;</li> <li>- Insufficient development of skills for making adjustments into the further activity on spiritual and moral development of high-school students;</li> <li>- Insufficient formation of skills to implement a set of duties, moral norms, experience, regulating the implementation of professional duty;</li> <li>- Insufficient formation of skills to develop spiritual and moral qualities of high-school students, recognize the motives of their behavior and actions (skills to solve pedagogical problems, for example, to create a positive emotional spirit of goodwill);</li> <li>- Insufficient formation of skills to plan and determine the content of educational work on spiritual and moral development of high-school students.</li> </ul> <p><b>Low level of development of reflexive skills for organization of activity on spiritual and moral development of the personality:</b></p> <ul style="list-style-type: none"> <li>- Lack of development of self-reflection, skills for independent analysis and evaluation of activity on spiritual and moral development of high-school students;</li> <li>- Lack of development of skills for making adjustments into the further activity on spiritual and moral development of high-school students;</li> <li>- Non-formation of skills to implement a set of duties, moral norms, experience, regulating the implementation of professional duty;</li> <li>- Non-formation of skills to develop spiritual and moral qualities of high-school students, recognize the motives of their behavior and actions (skills to solve pedagogical problems, for example, to create a positive emotional spirit of goodwill);</li> <li>- Non-formation of skills to plan and determine the content of educational work on spiritual and moral development of high-school students.</li> </ul>	<p>development of high-school students</p> <p>3.Methodology "Reflexive essay".</p>
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### 3. Results

#### 3.1. Diagnostic card of motivational and valuable component in the structure of readiness of the future teacher of "Self-cognition" discipline

**Motivational-valuable component** represents a system of interests, motives, needs, attitudes towards the spiritual and moral, professional and personal self-cognition and self-improvement, and also includes a commitment of the personality to the universal human values. Let's summarize the most common answers of the respondents to the questionnaire developed by R.A.Mukazhanova, G.A.Omarova in order to identify the understanding of the essence of the universal human values.

When asked, "**What do you mean, what is your opinion of KNOW YOURSELF**", the following answers were received with a deep understanding of the value of the "process of knowing yourself":

- 1) "Know yourself –it's to look into your soul";
- 2) "Know yourself as a human being";
- 3) "Know yourself - go all the way to the truth";
- 4) "Realize who you really are! Find harmony with the world";
- 5) "Know yourself –it's to know all the spiritual, universal human values within yourself!";

6) "Know yourself is necessary for each person, it's to know real and true yourself".

We can say that these answers confirm our assumption that the respondents have learned the main idea of the Program of moral and spiritual "Self-cognition" education - knowledge of "spirituality" in every person, identification of the universal human values inherent in us.

The answers to the question **"What do you think whether a person should follow the voice of conscience in his life or not? Explain your answer"** were positive and meaningful, and they were all related to the fact that it is necessary to live according to the conscience, that is, sincere life. Although there was such an answer as well **"Live according to the conscience means to live restrictedly"**.

Answers to the question: **"Is it always necessary to tell the truth? Why?"** have disquieted us. The fact is that here were the answers of such a nature: **"Lie may be for the good"**. It is necessary to explain to the students about the consequences of lies and conduct a qualitative analysis of the answers with the understanding that **"Sometimes people do not tell the truth for the good, but that does not mean you have to lie"**.

Answers to the question #4 **"Your understanding of the universal human values: TRUE, RIGHTEOUS BEHAVIOR, QUIETUDE, LOVE, NON-VIOLENCE"** allowed us to clarify the understanding of the essence of these categories by the respondents, as well as the importance of their practicing in everyone's life.

Interpretation of answers to the question#5 **"Whether anything has changed in your life after the introduction of "Self-cognition" discipline? If so, then what?"** has allowed to identify that 95% of the respondents consider this discipline as timely, important in understanding the meaning of life and question of spiritual and moral improvement of a man for the qualitative life in society.

General result of diagnostics of the level of development of motivational and valuable component in the structure of psychological and pedagogical readiness of the future teachers can be traced in the diagnostic card (Table 2).

**Table 2.** Diagnostic card of motivational and valuable component in the structure of readiness of the future teacher of "Self-cognition" discipline

Component s	Criteria	Before experiment		After experiment		Methodologies
		CG	EG	CG	EG	

Motivational and valuable component	Aspiration for spiritual and moral, and professional self-improvement	1. Methodology to determine the main motives for selection of profession developed by E.M. Pavlyutenkov <b>k = 5,1</b> 2. Questionnaire <b>k = 4,6</b>	1. Methodology to determine the main motives for selection of profession developed by E.M. Pavlyutenkov <b>k = 4,8</b> 2. Questionnaire <b>k = 5,3</b>	1. Methodology to determine the main motives for selection of profession developed by E.M. Pavlyutenkov <b>k = 5,5</b> 2. Questionnaire <b>k = 5,8</b>	1. Methodology to determine the main motives for selection of profession developed by E.M. Pavlyutenkov <b>k = 8,6</b> 2. Questionnaire <b>k = 8,3</b>	1. Methodology to determine the main motives for selection of profession developed by E.M. Pavlyutenkov  2. Questionnaire for students on understanding of the essence of universal human values developed by R.A. Mukazhanova, G.A. Omarova
	<b>Mean value of index (k)</b>	<b>k = 4,9</b> average level	<b>k = 5</b> average level	<b>k = 5,7</b> average level	<b>k = 8,5</b> high level	
	<b>Percent of low, average and high indexes</b>	Low level - 33% (35 students) Average level - 67% (70 students) High level - 0%	Low level - 24% (25 students) Average level - 76% (80 students) High level - 0%	Low level - 0% Average level - 100% (105 students) High level - 0%	Low level - 0% Average level - 33% (35 students) High level - 67% (70 students)	

### 3.2. Diagnostic card of cognitive component in the structure of readiness of the future teacher of "Self-cognition" discipline

**Cognitive component** of psychological and pedagogical readiness of the future teacher is the formation of the system of integrated knowledge and skills necessary for his professional activity as a teacher of "Self-cognition" discipline.

Cognitive component of psychological and pedagogical readiness comes down to the ability of mastering of the knowledge by the future teacher in the field of pedagogy, psychology, methodology and methods of teaching of "Self-cognition" discipline, knowledge in the field of discipline study, understanding of the principles and conceptual ideas by the future teacher which are considered in the Program of moral and spiritual "Self-cognition" education.

General result of diagnostics of the level of development of motivational and valuable component in the structure of psychological and pedagogical readiness of the future teachers can be traced in the diagnostic card (Table 3).

**Table 3.** Diagnostic card of cognitive component in the structure of readiness of the future teacher of "Self-cognition" discipline

Component s	Criteria	Ascertaining stage		Control stage		Methodologi es
		CG	EG	CG	EG	
Cognitive component	Understanding of spiritual and moral depth of the content of "Self-cognition" NDO Program	TEST k = 5,1	TEST k= 4,7	TEST k= 6,3	TEST k=8,5	Test to determine understandin g of spiritual and moral depth of the content of "Self-cognition" NDO Program
<b>Mean value of index (k)</b>		<b>k = 5,1</b>	<b>k = 4,7</b>	<b>k= 6,3</b>	<b>k= 8,5</b>	
<b>Percent of low, average and high indexes</b>		Low level - 15% (15 students ) Average level -85% (90 students) High level - 0%	Low level - 29% (30 students ) Average level -71% (75 students ) High level - 0%	Low level -0% Average level -100% (105 students) High level -0%	Low level - 0% Average level -33 % (35 students ) High level - 67% (70 students)	

### 3.3. Diagnostic card of professional and personal component in the structure of readiness of the future teacher of "Self-cognition" discipline

*Professional-personal component of psychological and pedagogical readiness of the future teachers of "Self-cognition" discipline* is considered as a system of professionally important and personal qualities necessary for the performance of future professional activities.

General result of diagnostics of the level of development of professional and personal component in the structure of psychological and pedagogical readiness of the future teachers can be traced in the diagnostic card (Table 4).

**Table 4.** Diagnostic card of professional and personal component in the structure of readiness of the future teacher of "Self-cognition" discipline

Components	Criteria	Ascertaining stage		Control stage		Methodologies
		CG	EG	CG	EG	



Professional and personal component	Development of professionally important personal qualities	1. Empathetic abilities <b>k = 4</b> 2. SAMOAL by Maslow. <b>k = 6,1</b>	1. Empathetic abilities <b>k = 4,1</b> 2. SAMOAL by Maslow. <b>k = 5,7</b>	1. Empathetic abilities <b>k = 5,9</b> 2. SAMOAL by Maslow. <b>k = 6,5</b>	1. Empathetic abilities <b>k = 8</b> 2. SAMOAL by Maslow. <b>k = 9,1</b>	1. Methodology of diagnostics of the level of empathetic abilities by V.V.Boyko; 2. SAMOAL by Maslow.
	Mean value of index (k)	<b>k=5,5</b>	<b>k=4,9</b>	<b>k=6,2</b>	<b>k=8,6</b>	
	Percent of low, average and high indexes	Low level -2% (2 students) Average level -71% (103 students) High level -0%	Low level -33% (35 students) Average level -67% (70 students) High level -0%	Low level -0% Average level -100% (105 students) High level -0%	Low level -0% Average level -33% (35 students) High level -67% (70 students)	

**Reflexive and activity component of psychological and pedagogical readiness of the future teacher** is investigated by the following methods:

1. Method of diagnostic of the level of reflexivity development, questionnaire by A.V.Karpov (2003).

2. "Reflexive essay" method developed by I.N. Soldatova (2013);

3. Reflexive report to diagnose the readiness of the future teacher to the spiritual and moral development of high-school students.

According to the approach of A.V. Karpov (we conducted our study as per the method which is based on his teaching), reflexivity acts as meta-capability, included into the cognitive substructure of psyche, performing a regulatory function for the entire system (2003).

**Table 5** Wall indicators of reflexivity by the respondents of experimental groups at the stage of ascertaining and control study

Walls	Number of people in experimental group at ascertaining stage of study	Levels of development	Number of people (in %)	Walls	Number of people in experimental group at control stage of study	Levels of development	Number of people (in %)
0	0		0%	0	0		0%
1	0		0%	1	0		0%
2	0	low	0%	2	0	low	0%
3	10	low	10,00%	3	0	low	0%
4	20	low	19%	4	0	average	0%
5	35	average	33%	5	0	average	0%

6	30	average	28,00%	6	0	average	0%
7	10	average	10,00%	7	35	average	33%
8	0	high	0%	8	5	high	4,8%
9	0	high	0%	9	20	high	19%
10	0	high	0%	10	45	high	43%
	Total - 105		100%		Total - 105		100%

Table 5 shows that 29% of respondents have a low level of reflection in the experimental group at the stage of ascertaining study, that means the occurrence of difficulties in communicating with other people because of inability always accurately to understand another, and predict his reaction. These people to a lesser extent think about what is happening, about its reasons, as well as about the reasons of a particular conduct. Such people do not always plan their activities, and they are impulsive and restricted by considering a fewer details in decision making.

And 67% of the respondents of experimental group at the stage of control study are more likely to turn to the analysis of their activity and actions of other people, identify the causes and consequences of their actions both in the past, present and future. They tend to think about their activity in great details, carefully plan it and predict all possible consequences. It is also likely that for such people, it is easy to understand the other person, put them selves in his place, predict his behavior, and understand what other people think about them.

In recognition of own spiritual and moral nature - the object of knowledge is the knowing personality itself, its properties and qualities, behavioral characteristics, system of relationships with others, that is, analysis, internal discussion on the basis of own actions, behavior and definition of the level of development of reflexive abilities.

Reflection of own personal (spiritual) and professional appearance contributes to the spiritual and moral self-improvement, intellectual growth, that, first of all, reveals the meaning of the chosen profession, development of self-image as a discipline of the professional activity (the image "I –am the teacher of "Self-cognition" discipline), as well as establishment of the spiritual and moral foundation of disciplineive execution of the professional activity.

***Readiness of the future teachers to the organization of the spiritual and moral development of high-school students*** has been identified through the reflexive report, which includes 10 items of the task performance (Table 6).

**Table 6.** Readiness of the future teachers for organization of the spiritual and moral development of high-school students

No	Indicator	Estimation of abilities and skills (mean value of readiness)			
		Before experiment		After experiment	
		KG	EG	KG	EK

1	To develop a planned schedule of "Self-cognition" lesson and conduct a lesson in the senior classes of comprehensive school	6	6	7	9
2	To develop and conduct an integrated lesson on "Self-cognition" discipline	6	6	6	8
3	To develop and organize a social-pedagogical project, and charity event	6	6	8	10
4	To develop and organize a club class on development of spiritual and moral qualities of senior high school students	6	6	8	10
5	To develop and provide training on development of spiritual and moral qualities of pupils of the children's village and orphanage	5	5	7	9
6	To develop a scenario of preparation for Academic Olympics on "Self-cognition" discipline (preparation of each stage of Academic Olympics on "Self-cognition" discipline and take active part in these Academic Olympics)	3	3	5	7
7	To participate in the scientific and methodical seminars organized by "Bobek" Center and carry out the analysis of open lessons and actions within the "Self-cognition" NDO Program	0	0	0	10
8	To take part in diagnostics of complete development of the identity of the senior, a level of development of spiritual and moral qualities of senior high school students	2	3	3	10
9	To carry out promotion of spiritual and moral education among the population	0	0	0	8
10	To prepare the reflexive essay "A portrait of the teacher of "Self-cognition" discipline and reflexive report on planning and organization of spiritual and moral education of senior high school students	5	5	7	9
<b>Mean value of readiness</b>		<b>3,9</b>	<b>4</b>	<b>5,1</b>	<b>9</b>

Each completed task is estimated as one point. And 100% qualitative completion of all 10 tasks is considered as a high rate of the readiness of the respondent to the spiritual and moral development of high-school students.

The methodology "Reflexive essay" has been used during the study of reflexive-activity component of psychological and pedagogical readiness of the future teachers of "Self-cognition" discipline to the spiritual and moral development of high-school students. The following tasks and topics for reflection were proposed to the students:

- «What do you mean by spiritual and moral development of a man? Expand the essence of this concept from your point of view?»;
- «Describe the "portrait, profile" of the teacher of "Self-cognition" discipline. What kind of a person is he in your understanding?»;

Among the students, there were also those who have given deep and detailed answers in understanding the problems of the development of spirituality. These students show a high empathy towards the other people and surrounding world, and in the period of study in the Institution of Higher

Education they already have a high level of spiritual and moral development. They possess a tendency to spiritual and moral perfection of their personality, understanding of harmony in the human relationships, and in everyday life they feel the value of self-cognition. During the ascertaining experiment, such students actively participated in writing essays as they considered this process of the experiment as an opportunity for spiritual and moral self-improvement and professional growth.

Thus, let's formulate the following conclusions:

➤ The students - future teachers of "Self-cognition" discipline with a deep understanding of the problems of the spiritual and moral development of the personality realize, perceive the process of human development in general, so their professional credo is the "development of the integrity of the personality", and development they understand as restoration of the harmony of human being;

➤ The students - future teachers of "Self-cognition" discipline see the main task of the professional activity in the harmonization of the spiritual world of students.

General result of diagnostics of the level of development of professional and personal component in the structure of psychological and pedagogical readiness of the future teachers can be traced in the diagnostic card (Table 7).

Table 7. Diagnostic card of reflexive-activity component in the structure of readiness of the future teacher of "Self-cognition" discipline

Component s of psychology- pedagogical	Criteria	Ascertaining stage		Control stage		Methodologie s
		CG	EG	CG	EG	
Reflexive and active component	<i>Development of reflexive skills and abilities of organization activity on spiritual and moral development of the students</i>	1. Detection of reflexivity <b>k =5,4</b>	1. Detection of reflexivity <b>k =5</b>	1. Detection of reflexivity <b>k =5,6</b>	1. Detection of reflexivity <b>k =8,6</b>	1. Methodology of detection of reflexivity level, questionnaire by A.V.Karpov; 2. Methodology to determine the readiness of the future teachers to organization of spiritual and moral development of high-school students
		2. Readiness of future teachers to organization of spiritually-moral development of senior pupils <b>k = 4</b>	2. Readiness of future teachers to organization of spiritually-moral development of senior pupils <b>k = 3,9</b>	2. Readiness of future teachers to organization of spiritually-moral development of senior pupils <b>k = 5,1</b>	2. Readiness of future teachers to organization of spiritually-moral development of senior pupils <b>k = 8</b>	
<b>Mean value of index (k)</b>		<b>k = 4,7</b>	<b>k = 4,5</b>	<b>k = 5,4</b>	<b>k = 8,3</b>	



105	9,7	9,5	8,6	1,1	8,6	0,9	0,99	1,21	0,81
	900,5	907					170,82	200,61	150,32
	8,6	8,6							

$$r_{xy} = \frac{\sum(x_i - \bar{x}) \times (y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \times \sum(y_i - \bar{y})^2}}$$

$$\sigma_x = \sqrt{\frac{200,61}{104}} = 1,4$$

$$\sigma_y = \sqrt{\frac{150,32}{104}} = 1,2$$

$$r_{xy} = \frac{170,82}{104 \cdot 1,4 \cdot 1,2} = \frac{170,82}{174,72} = 0,97$$

Thus, a positive correlation coefficient,  $r_{xy} = 0.97$ . This proves the regular connection between the parameters of the motives for selection of profession and parameters of self-actualization test (SAMOAL Maslow).

Table #9 shows the test parameters to determine the understanding of the spiritual and moral depth of the content of "Self-cognition" NDO Program (X) and parameters of self-actualization of the personality (Y).

**Table 9.** Test parameters to determine the understanding of the spiritual and moral depth of the content of "Self-cognition" NDO Program (X) and self-actualization test (Y), required to calculate the correlation dependence

No.	X <sub>i</sub>	Y <sub>i</sub>	$\bar{M}_x$	X <sub>i</sub> - $\bar{M}_x$	$\bar{M}_y$	Y <sub>i</sub> - $\bar{M}_y$	(X <sub>i</sub> - $\bar{M}_x$ ) x (Y <sub>i</sub> - $\bar{M}_y$ )	(X <sub>i</sub> - $\bar{M}_x$ ) <sup>2</sup>	(Y <sub>i</sub> - $\bar{M}_y$ ) <sup>2</sup>
1	7	7,3	8,4	-1,4	8,6	- 1,3	1,82	1,96	1,69
..	...	...	...	...	...	...	...	...	...
105	9,5	9,5	8,4	1,1	8,6	0,9	0,99	1,21	0,81
	886,5	907					142,35	151,55	149,6
	8,4	8,6							

$$r_{xy} = \frac{\sum(x_i - \bar{x}) \times (y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \times \sum(y_i - \bar{y})^2}}$$

$$\sigma_x = \sqrt{\frac{151,55}{104}} = 1,2$$

$$\sigma_y = \sqrt{\frac{149,6}{104}} = 1,2$$

$$r_{xy} = \frac{142,35}{104 \cdot 1,2 \cdot 1,2} = \frac{142,35}{149,76} = 0,95$$

Thus, a positive correlation coefficient,  $r_{xy} = 0.95$ . This proves the regular connection between the test parameters to determine the understanding of the spiritual and moral depth of the content of "Self-cognition" NDO (Moral and Spiritual Education) Program (X) and parameters of self-actualization test (Y).

Table 10 shows the reflexivity test parameters (X) and self-actualization test parameters (Y), required to calculate the correlation dependence

**Table 10.** Reflexivity test parameters (X) and self-actualization test parameters (Y), required to calculate the correlation dependence

No.	$X_i$	$Y_i$	$\bar{M}_x$	$X_i - \bar{M}_x$	$\bar{M}_y$	$Y_i - \bar{M}_y$	$(X_i - \bar{M}_x) \times (Y_i - \bar{M}_y)$	$(X_i - \bar{M}_x)^2$	$(Y_i - \bar{M}_y)^2$
1	7	7,3	8,6	-1,6	8,6	- 1,3	2,08	2,56	1,69
...	...	...	...	...	...	...	...	...	...
105	9,1	9,5	8,6	0,5	8,6	0,9	0,45	0,25	0,81
	901,5	907					143,8	164,27	149,6
	8,6	8,6					$R \approx 0,96$		

$$r_{xy} = \frac{\sum(x_i - \bar{x}) \times (y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \times \sum(y_i - \bar{y})^2}}$$

$$\epsilon_x = \sqrt{\frac{164,27}{104}} = 1,3$$

$$\epsilon_y = \sqrt{\frac{149,6}{104}} = 1,2$$

$$r_{xy} = \frac{143,8}{104 \cdot 1,3 \cdot 1,2} = \frac{143,8}{162,24} = 0,88$$

Positive correlation coefficient,  $r_{xy} = 0.88$ . This proves the regular connection between the reflexivity test parameters and self-actualization test parameters (SAMOAL Maslow).

Analyzing quantitative and qualitative interpretation of the process of formation and development of psychological and pedagogical readiness of the future teachers of "Self-cognition" discipline, we have identified the dynamics of the results of this process. If, at the beginning of the experiment, the coefficient of psychological and pedagogical readiness by experimental group was equal to 4.9, then at the end of the experiment it was equal to 8.3 (Table 11-12, Diagram 1).

**Table 11.** Indicators of psychological and pedagogical readiness of the respondents of control and experimental groups at the beginning of the experiment



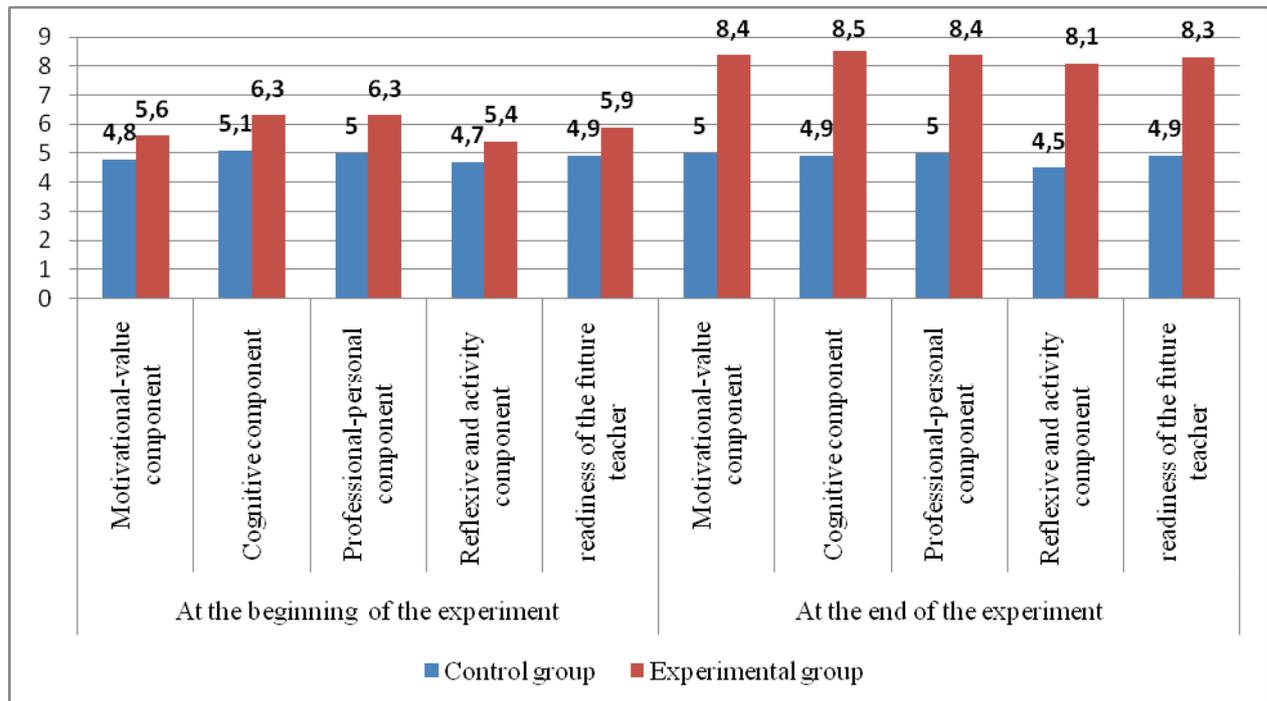


Diagram 1. Indicators of psychological and pedagogical readiness of respondents control and experimental groups at the beginning and end of the experiment

#### 4. Discussion

We suggest using the following indicators of time series according to the formula of G.A.Nasedkina (2007) to trace the dynamics of the process of formation and development of psychological and pedagogical readiness of the future teachers of "Self-cognition" discipline before and after formative experiment:

$$C_{\text{eff}} = (1a + 2b + 3c) : 100 \quad (1)$$

where: Avg.–is the average indicator, reflecting a quantitative estimate of the growth of the level of formation and development of psychological and pedagogical readiness of the future teachers;

a, b, c –is the number of the respondents expressed as a percentage, who are at low, medium, and high levels of formation and development of psychological and pedagogical readiness;

figures "1", "2", "3" – are the level weight coefficients.

Thus, we have determined the average indicators, reflecting the quantitative evaluation of the growth of the level of formation and development of psychological and pedagogical readiness of the respondents of the experimental group at the beginning of the formative experiment and at the end of the formative experiment.

At the beginning of the formative experiment Avg. =  $(1 \cdot 0\% + 2 \cdot 72\% + 3 \cdot 28\%) : 100 = 2.28$ .

At the end of the formative experiment =  $(1 \cdot 0\% + 2 \cdot 40\% + 3 \cdot 60\%) : 100 = (0 + 80 + 180) : 100 = 260 : 100 = 2.6$ .

Further, the coefficient of efficiency is calculated as per the formula (2):

$$C_{\text{eff}} = \text{Avg. (b.f.e.)} : \text{Avg. (e.f.e.)} \quad (2)$$

where, Avg. (b.f.e.) - the value of the average indicator of the level of formation of psychological and pedagogical readiness at the beginning of the formative experiment;

Avg. (e.f.e.) - the value of the average indicator of the level of formation of psychological and pedagogical readiness at the end of the formative experiment.

Then,

$$C_{\text{eff}} = 2.28 : 2.6 = 0.87.$$

In conclusion, it should be noted that the coefficient of efficiency of psychological and pedagogical training of the future teachers of "Self-cognition" discipline for spiritual and moral development of high-school students as per module is close to 1 - this corresponds to the high level of relation between the variables and demonstrates the effectiveness of the process of training of the future teachers for spiritual and moral development of high-school students.

## 5. Conclusion

Prospects of this research as a multi-aspect phenomenon are seen in the further development of the system to train the future teachers for moral and spiritual development of students in the course of implementation of "Self-cognition" Moral and Spiritual Education Program. In order this system could promote the formation and development of readiness of the future teachers of "Self-cognition" discipline for implementation of meta-subject role of "Self-cognition" discipline in educational organizations and institutions of the Republic of Kazakhstan.

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