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Methodological framework for the axiological paradigm in the learning environment

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Modern conditions of education require the development of new methodological approaches for the implementation of the educational process. The purpose of study is to analyze the axiological paradigm in the Kazakhstan's system of teacher training and determines experimentally the phases of its development in Kazakhstan in early 21st century. A total of 284 students participated in the experiment. The findings suggest that students in the control group repeated what was said during the lecture. Generally, they did not go beyond repetitions. Out of 142 students who were involved in the first phase of the experimental group, 80 students responded at the heuristic level, 12 students responded at the innovative level, and 8 students responded at the creative level. Students in the experimental group were capable of independent thinking beyond lectures. 8 students proved to be 40% capable of drawing conclusion to an unusual, phenomenally high degree. Practical implications and further research might focus on the special aspects of developing the axiological paradigm not only for students in Kazakhstan, but also in other countries in a comparative aspect. New research can also rely on the experiment's methodological framework.

KEYWORDS

axiological paradigm, axiology, Kazakhstan's education system, professional competence, value

Introduction

One of the important aspects of modern educational space is the formation of axiological competencies of students, which is interpreted as the ability to provide value characteristics not only of the educational process, represented by the acquisition of various skills and competencies required in the acquisition of the chosen specialty in the world. Ways to solve the socio-economic and political problems of the former education system of Kazakhstan are losing their relevance, and the current system of axiological values does not meet the needs of the current learning environment (Nabi et al., 2016). The ambiguity of ideas of the former education science, the importance of public funding of the facilities and resources, the implementation of absolutely

innovative technologies lead to a gap between supply and demand of educators (Kenzhebayev and Dalayeva, 2014).

It is now clear that contradictions are emerging between time-honored and traditional values and the conservative, one-dimensional expertise of instructors and scientific ideas that have no methodological basis. The axiology of domestic education should be addressed through the appropriate set-up of teacher training (Kiryakova et al., 2015). Since the mid-20th century, isolated scholarly perspectives on axiology have begun to emerge in the learning environment in need of some change.

The teacher's status is a barrier to improvements of professional competence of employees of gymnasiums, special schools for gifted children, lyceums, various private schools, etc. (Abdumannotova, 2021). Significant discrepancies between Kazakhstan's integration in the global learning environment and the need to harmonize the socio-economic situation with the axiologically sound paradigm of teacher training in the country (taking into account its ethnopsychological specific nature and meeting the government interests) were revealed (Duisenova et al., 2020). However, it is observed that the dominance of one or another value in the students' minds is unreasonable, because knowledge should be assimilated through the model of a spiritual personality (Axatova and Axatova, 2020). The training of a new personality in the new Kazakhstan should become a priority. Such a paradigmatic approach contributes to a philosophy of science in a broad sense, updating the content of education in general (Green et al., 2021).

Creating a new idea of humanity based on holistic value and market legitimacy of the institutions of social pedagogy and public opinion supporting it is one of the ways of transition to a new visionary ethics, spiritually humane paradigm in terms of a sound approach to improvement in Kazakhstani education system (Toybazarova and Nazarova, 2018). Despite the fact that the research did not focus directly on the axiological paradigm, it addressed the innovative technology-based approaches to the set-up of innovative training relying on the former algorithm and in a non-linear manner (Akulova, 2007). Innovative training has proven to be valuable. Innovative learning technology focuses on collective thinking and classification of approaches applied at different phases to promote thinking (Suyundikova et al., 2021). The contemporary problems of education science and the creation of a scientific version of information technology in the education system and its application were analyzed.

The concept of *value* includes the concept of *zone of proximal development*: a personality must develop the ability to control own transition from one mental state to another, i.e., to trace own development. The mental attitude of an individual reveals the techniques of achieving value, training the perception of the accumulated value for own learning (Vygotsky, 1993). Focus is also made on such subjective aspects of personality as mining of internal, hidden abilities of an individual in the process of communication, the wise promotion of own

capabilities in learning activities (Leontiev, 1975; Nemov, 1994; McGill, 2016; Zarudnaya et al., 2018).

The paper addresses the structure of psychology, the belonging of intuition to pressure points, types of feelings, and the consequences of the affective state in learning activities (Namazbaeva, 2014). The humanistic approach in contemporary axiology has also been developed (Swan-Foster, 2018). Furthermore, specific practical implications were formulated, pointing to the individual's ability to engage in dialogue with himself or herself in conjunction with a scientific worldview.

The spiritual component of the learning process takes into account the original attitudes of each learner and the ability to accurately find the key points, to interpret what the learner wanted to say (Vygotsky, 1993). When focus is made on this pillar, then every reading reflects the unification of the learner and the educator by the original's inferences.

The stated methodological foundations of psychological science for solving such problems as the set-up of activities addressing assimilation of knowledge, the consciousness of an individual, the individual's personal reference points are of particular value for an innovative learning (Leontiev, 1975).

The innovative learning process requires the development of new methodological approaches to learning (Zarudnaya et al., 2018). Furthermore, a sufficient level of technical competence is required, with reliance on pedagogical innovations that improve students' motivation and involvement in the learning process (Gordieiev et al., 2014; Seitenov et al., 2020). The indicators are as follows (Figure 1).

Based on the conclusion about the features of the psychological category of imagination, the following taxonomic classification was suggested: involuntary imagination is the emergence of imagination based on dreams and desires; if a child or an adult relies on own hands-on experience, then he or she can provide rationale for realization of own dreams and desires, that it is possible to achieve everything that one wishes and dreams about; the role of imagination in human life is specified; one way of imagining is through exposure to the sciences: literature, history, geography, natural science; play is one of the ways to develop a child's imagination.

Contemporary research papers and projects focus primarily on the study of spiritual values, i.e., the background causes of the axiological paradigm of building the image of a spiritual personality.

The three ways of developing the thought process shown in Figure 2 act as the core constituting the learner's spiritual foundations.

Ideas concerning the effect of child's internal changes on external factors:

1. In the current context, the magnitude of child's internal changes depends on his or her age. Five stages of change are distinguished: birth, 1 year of age, 3 years of age, 7 years of age, and 13 years of age;

Perception involves the energy of the soul and body											
Only the energy of the soul is involved in imagination											
Classification of imagination by association											
Proximity association	Likeness association	Resistance association	Attention span	Enhanced visual perception	Enhanced hearing	The need for common sense in order to exist	Ways to continuously develop memory	Impact force	Correlation of the external senses	Linking new knowledge to data	Changes in memory, associations with the age of the person

FIGURE 1
Classification of the description by association (according to M. Zhumabayev).

- Each child's dependence on own social context is the child's social reality and the main source of development;
- Child's maturity and development are predominantly determined by external signs, and the child's internal state is not taken into account;
- Researchers determine that a child who always performs tasks under someone else's guidance, who is used to working only in a team, becomes unfit for independent performance of knowledge-based operations;

- It is argued that imitation does not bring its benefits in most cases;
- It is argued that the approach in which a child's independent work is evaluated on the basis of past experience is incorrect;
- If proper attention is paid to the zone of proximal development, the performance will improve significantly, which will make it possible to effectively use the previously acquired skills, including independent performance of tasks, and will increase the child's motivation for development;
- Child's thinking skills are developed when interacting with the external environment, and on the basis of internal knowledge, which are influenced by: (1) teamwork; (2) community activities. Within these two zones, a psychologist should constantly motivate the child to internal development of interiorization (this problem was raised not only in the Gestalt theory, but also by L. S. Vygotsky);
- The current system of developmental teaching originates from the teaching approaches suggested by L. S. Vygotsky as part of collaboration in psychological science;
- The children's ability to perform the highest functions, the ability to observe that the functions in question

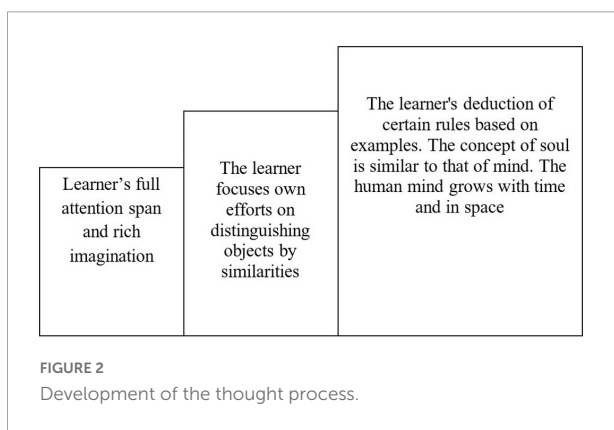


FIGURE 2
Development of the thought process.

address the personality's realities, the manifestations of interiorization of the social order should consider the individual capabilities of each individual in relation only to these realities;

11. The collisions of dialectical ideas, internal monolog, the diversity of dynamics, the constant variability of mental state, the variability of functions and intuition have been highlighted as a background cause for a person's appeal to the drama or tragedy;
12. Of special value is the fact that, when analyzing J. Bruner's idea of the *world of symbols*, L. S. Vygotsky considers it to be part of the cognitive process of interiorization. Emphasis is made on the feasibility of effective implementation of the progress of concepts, fields of the content system, specification of the need, the control of emotions, action, the rise of thinking pattern in the embodiment of personal reality (Vygotsky, 1993).

Social change generates a new system. A new set of mental functions affects the state of an individual, resulting in the internal manifestation of specific, previously unfamiliar patterns, interrelated phenomena, evolutionary continuity, which emerged as a result of learning. The uniqueness of Vygotsky's doctrine is that it is of particular value for the education system of Kazakhstan of the 21st century, arising from development of a new philosophical worldview of an instructor and a learner, in which the seeds of axiological paradigm undoubtedly germinate.

Vygotsky concluded that all higher functions of the nervous system should be always regarded as a pressing problem, or the problem of modernized society. Yet, the researcher pays attention to the fact that from infancy the child does not grow up with a sense of inferiority. The paper explains the need to monitor and control the development of the higher functions of the nervous system based on the principle of integrity. In this way, the importance of determining the individual actions of each specific activity of cross-functional relationships was also

explored. By correlating Vygotsky's worldview conclusion with the provisions of the axiological paradigm, the following matrix was constructed (Figure 3).

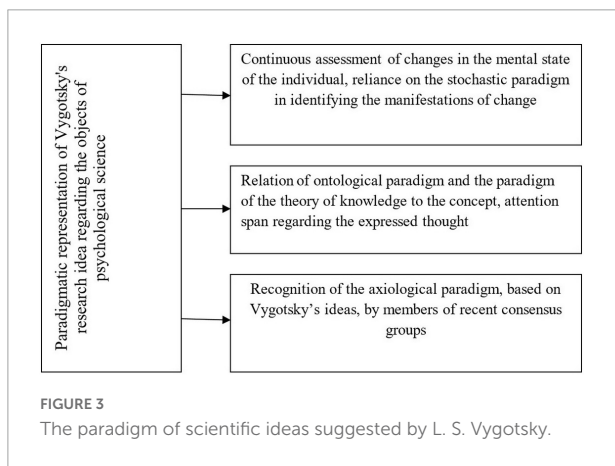
Analysis of Vygotsky's papers relying on scientific methods and the requirements of contemporary psychology reveals many phenomena and processes shown in Figure 3. This reveals the pattern of changes in the higher functions of the nervous system from a newborn child to maturity depending on changes in society, the environment, educational institutions, etc. Caring for a particular personality manifests itself in the realization of the stochastic paradigm, when an individual awakens own unknown abilities being motivated by necessity, acquiring undiscovered traits. Considering this doctrine from the perspective of new philosophical arguments suggests that it is a stochastic paradigm.

The second block of Figure 3 takes into account the impossibility of investigating the epistemological paradigm in applied research without studying the problem of personality. The concept of ontology is perceived as a background cause for the emergence of the concept of axiology. The priority is the study of being a person (Vygotsky, 2001). The ability to compose sentences, the content of each concept and features provides a consistent implementation of two paradigms: the age-related characteristics of the individual and the ability to wisely apply the accumulated education science concepts to own way of life, to determine practical implications therefrom and to stay in integration. The spiritual value of this personality will be differentiated from the ontological and epistemological paradigms. This implies that these two paradigms serve an axiological paradigm.

The paper also focused on improvement in national consciousness, which is necessary to overcome the psychological crisis that young people suffer these days (Namazbaeva, 2014). The importance of goal commitment for the development of students' inner qualities was explained. A methodological framework for education, with children's dreams and expectations in mind, has been developed.

Contemporary historical and cultural studies dedicated to spiritual values, reviewed from the newest philosophical positions, were analyzed in terms of their relevance to the Kazakhstan's education system. The research findings are presented in the form of a matrix, and suggestive evidence became the basis for constructing a taxonomy, determining the genesis of functional literacy, its semiotics and semantics. Broadly speaking, the study revealed that instructors deviate from the functional value field. Yet, it can be argued that suggestive thinking, which was considered not only in terms of Gestalt-theory, but was also addressed by L. S. Vygotsky and M. Zhumabayev, is one of the main pillars for building an axiological paradigm in the modern system of education.

However, previous writings have failed to explain the theory of the axiological paradigm. Therefore, the idea that the axiological paradigm means not only the concept of value, but is



a background cause of the axiological paradigm, was proposed. The research focus and scope were addressed in various publications from mid-19th century to early 21st century.

Table 1, which shows the chronological classification of education science writings in the early 21st century was developed when building a model of axiological paradigm in the teacher training system. The findings put forward in Zhumataeva's theory are presented in **Figure 4**.

In 2003 the researcher defines the essence of the paradigmatic approach to the preservation of the historical and logical system with a new worldview. The idea of the commitment to the result of the version-based construction of a new philosophical, sound position in phylogenetic disciplines is the spiritual wealth of today's Kazakhstan. The above paper outlines the importance of committing students to their individual capabilities. The level differentiation process can be traced to the following approaches:

1. Repetitive and reproductive level: building course content into an algorithm.

2. Empirical level: classification of the provided information based on the phenomena and processes, identifying the most important aspects.
3. Heuristic level: listing small issues and interpreting them on aggregated basis.
4. Finding contradictions in research of education and comprehending resolution thereof.
5. The innovative level: the ability to build a new worldview among students as to the national education standard.
6. Creative level: the phenomenon of a course, opinions, inferences beyond the national standard.

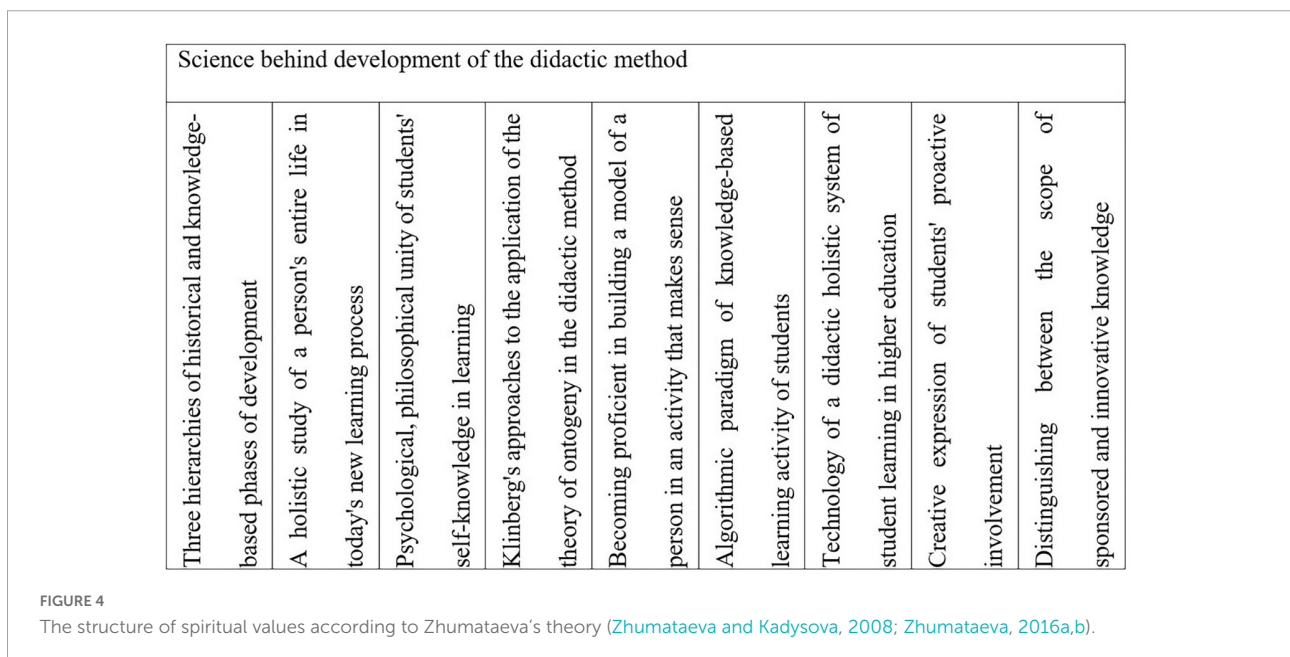
The research presents the axiological paradigm in the Kazakhstan's system of teacher training and determines experimentally the phases of its development in Kazakhstan in early 21st century.

Research objectives:

1. Studying the theoretical and methodological framework of the research;

TABLE 1 Performance measurement components and the challenges of understanding the axiological paradigm.

Indicators	Criteria	Indicators	Assessment
Vygotsky's doctrine of cultural and historical value (ontological)	Differentiation of the subject's intrinsic values received during education	Uptake by the students of spiritual values from the acquired knowledge	Expert's evaluation
Recognition of the authenticity of national education as a value (epistemological)	To the knowledge acquired through science	Learning-developing and improving thinking skills	Expert's evaluation
Truth	Value of the proposed task	Sermonizing in the completed tasks	Expert's evaluation
Education and science leading to success	Applying algorithmic, empirical, and stochastic paradigms to axiological search	A new philosophical worldview adapted to changes in society	Expert's evaluation
Application of innovative learning approaches	Consolidating the techniques and methods of developing thinking skills with the values of the subject being studied, comparing the acquired knowledge with previous knowledge	Personal development opportunities offered by student-centered education	Expert's evaluation



2. Specifying the chronological, periodic state of the research content, determining the educational role of the spiritual personality's model;
3. Determining the value-based parameters of arranging collaboration between the learners and instructors;
4. Analysis of the researchers' ideas on the topic;
5. Differentiation of technologies used to acquire traditional and innovative personal capabilities in the education system while resorting to stochastic, epistemological, and algorithmic paradigms;
6. Developing model of a spiritual personality;
7. Experimental examination of the spiritual personality's model.

The hypotheses of the study:

- Modern educational space should be personally and practically oriented, primarily based on tasks that promote the development of professional skills and competencies, provide opportunities for self-expression and practical application of acquired knowledge.
- The formation and development of axiological competence in the educational process contributes not only to increase students' knowledge of a particular subject, the ability to assess the educational system and understand the learning process in it, but also skills to adequately assess everything happening in the world.
- In the process of learning students form axiological ideas not only about the learning process but also about the world in general, which allows to form a comprehensively developed personality of the student who has a high level of knowledge of the profession and a set of relevant competencies.

Materials and methods

The research methodology is based on the methods of experiment, survey (testing) and design. The experiment was conducted among students of secondary schools No. 1, No. 2, Regional Special Boarding School for Gifted Children named after Y. Altynsarin, Lyceum No. 10 for gifted children named after Abay. These schools were chosen for the experiment because they specialize in educating gifted students. The first interview involved 284 students (control group of 142 young people). There were no specific selection criteria other than attending an educational institution for gifted students. The level of knowledge wasn't taken into account when selecting the participants of the experiment. Data were collected by testing students. The interview with 34 questions was designed to determine the essence of the research paper (see [Appendix 1](#)). The main criteria of the sample were schooling, teaching the necessary disciplines and belonging to the curriculum tasks for the formation and development of axiological competence. In

addition, one of the sampling criteria was that one selected school was for gifted children and the other a regular one, for the purpose of comparative analysis of the axiological paradigm in two different educational spaces. Next, in order for the students to achieve the worldview within the axiological paradigm, focus was made on the experimental group of observers, students from the above schools. 284 students were involved. Phases of the experiment:

1. Ascertaining;
2. Formalizing;
3. Controlling.

Following each of the mentioned phases, the findings of monitoring the students' proficiency in historical, cultural, educational, and scientific thesaurus structures of spiritual values, the ability to effectively use the axiological paradigm elements in order to improve their existing knowledge was to be summarized. The following aspects were taken into account when classifying levels (six):

1. Person's consciousness;
2. Needs;
3. Moral values;
4. Continuous improving own knowledge within the axiological paradigm's context.

The respondents' answers were processed using Statistica and Microsoft Excel, with relevant indicators arranged in the form of tables.

The limitations of the study arise from the small sample size, as only 284 students from four institutions were involved in the experiment. Other institutions were not taken into account.

The experiment was conducted in compliance with all ethical and anonymity standards. Disclosure of confidential information (name, surname, or place of residence, etc.) was not required. Participants' written consents to use and process the obtained data were also obtained.

Results

Students were interviewed during the experiment's control phase. The findings suggest that students in the control group repeated what was said during the lecture. Generally, they did not go beyond repetitions. Out of 142 students who were involved in the first phase of the experimental group, 80 students responded at the heuristic level, 12 students responded at the innovative level, and 8 students responded at the creative level. Students in the experimental group were capable of independent thinking beyond lectures. 8 students proved to be 40% capable of drawing conclusion to an unusual, phenomenally high degree.

Relevant criteria and indicators were developed to help analyze the consistency and readiness to understand the

axiological paradigm (Table 1 and Figure 5). In the experiment such indicators of axiological paradigm as Vygotsky’s doctrine of cultural and historical value (ontological), recognition of the authenticity of national education as a value (epistemological), truth, education, and science leading to success application of innovative learning approaches were determined. Table 1

also represents main criteria of the axiological paradigm: differentiation of the subject’s intrinsic values received during education, to the knowledge acquired through science, value of the proposed task, applying algorithmic, empirical, and stochastic paradigms to axiological search, consolidating the techniques and methods of developing thinking skills with the

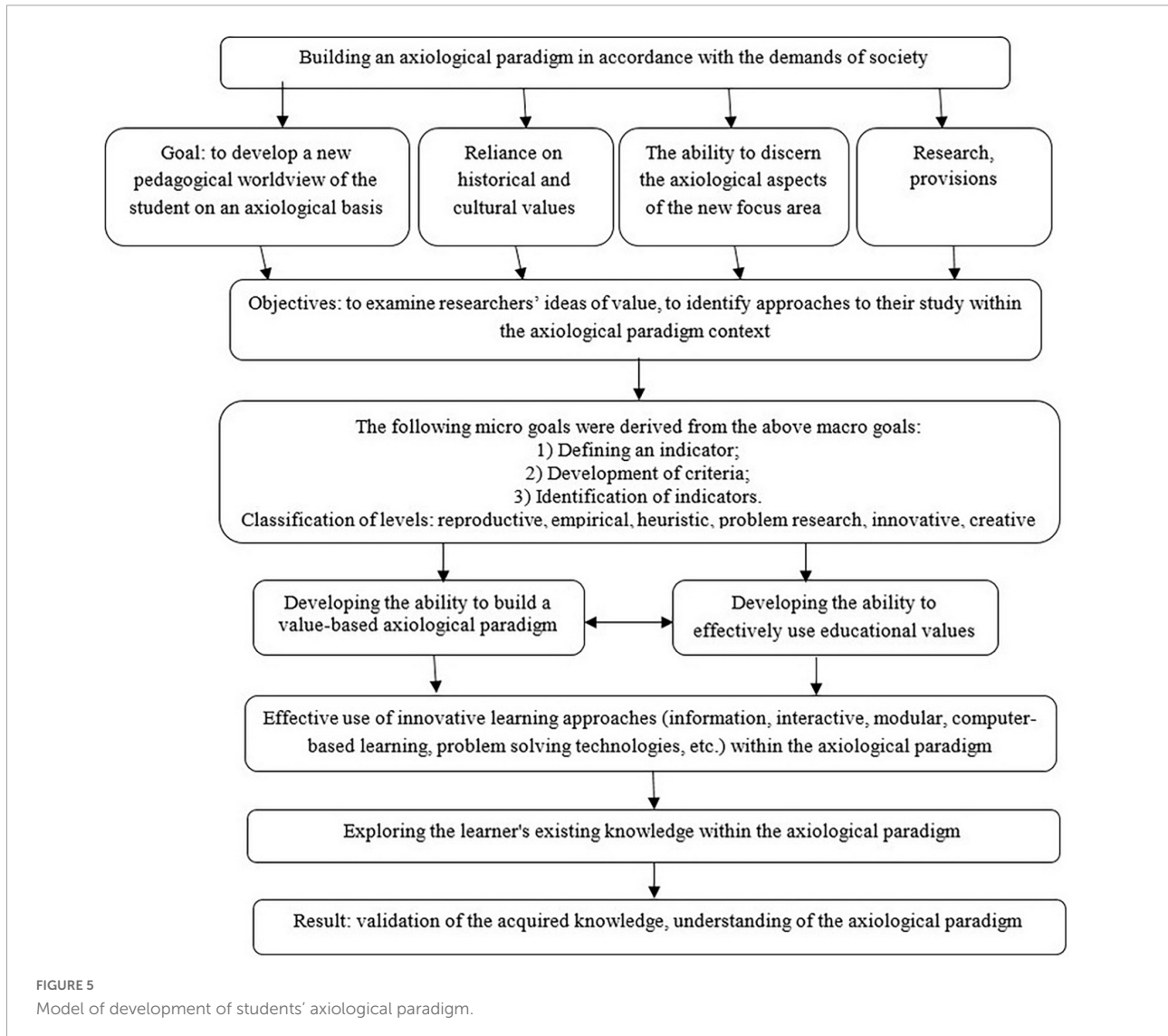


TABLE 2 Development of learners' axiological paradigm.

Levels	Reproductive experiment		Exploratory, innovative		Creative	
	Ascertaining	Experimental	Controlling	Experimental	Controlling	Experimental
Structure-parts	% of students	% of students	% of students	% of students	% of students	% of students
1. Ontological: personal consciousness	152/52.8	155/55	92/32	88/31	44/15.2	40/14
2. Required motive	162/56.3	158/55.7	84/29.2	78/27.5	42/14.2	48/16.8
3. Moral values	158/54.9	150/52.8	86/29.9	94/33.1	44/15.2	40/14.1
4. Developing an axiological paradigm to enhance cognitive skills	166/57.6	158/55.6	96/33.8	90/31.7	26/8.6	36/12.7

TABLE 3 Development of a value-based differentiated axiological paradigm of students.

Levels	Empirical, heuristic		Innovative		Creative	
	Controlling	Experimental	Controlling	Experimental	Controlling	Experimental
	% of students	% of students	% of students	% of students	% of students	% of students
1. Ontological: maturity	156/54.1	56/19.7	88/30.5	110/38.7	44/15.2	118/41.6
2. Development of the need-based motivation	160/55.5	62/21.8	88/30.5	112/39.4	40/14	110/38.8
3. Moral values	154/53.5	86/30.3	88/30.6	112/39.4	46/15.9	86/30.3
4. Developing an axiological paradigm to enhance cognitive skills	162/56.3	68/24	92/31.9	116/40.7	34/11.6	100/35.3

values of the subject being studied, comparing the acquired knowledge with previous knowledge.

The progress was presented first in the ascertaining and controlling experiments (Tables 2, 3). Development of learners' axiological paradigm is evaluated according to the following criteria and has the following indicators in reproductive experiment: ontological: personal consciousness (52.8%), required motive (56.3%), moral values (54.9%), and developing an axiological paradigm to enhance cognitive skills (57.6%). At the same time, the indicators in the experimental group differ and according to the defined criteria have the following percentages: ontological: personal consciousness (55%), required motive (55.7%), moral values (52.8%), and developing an axiological paradigm to enhance cognitive skills (55.6%).

Table 3 shows the findings of the control phase of the students' axiological development. In the middle of this period, since the formalizing phase is slightly higher than the ascertaining phase, innovative technologies were used in learning the axiological paradigm elements based on the resources of the elective course offered to the students before the control phase. Opportunities were created to bring thinking skills to a high, creative level for repetition of thought. At the end, the control phase is reflected on. At the innovative level of development of a value-based differentiated axiological paradigm of students according to certain criteria in the control and experimental groups differ significantly, indicating a higher level of development of axiological competence in the experimental group of students. Table 3 presents the indicators of the development of the axiological paradigm in the control and experimental groups of students: ontological: maturity (control group: 30.5%, experimental group: 38.7%), development of the need-based motivation (control group: 30.5%, experimental group: 39.4%), moral values (control group: 30.6%, experimental group: 39.4%), developing an axiological paradigm to enhance cognitive skills (control group: 31.9%, experimental group: 40.7%). At the creative level indicators of development of a value-based differentiated axiological paradigm of students in the control and experimental groups of students: ontological: maturity (control group: 15.2%, experimental group: 41.6%), development of the need-based motivation (control group: 14%, experimental group: 38.8%), moral values (control group:

15.9%, experimental group: 30.3%), developing an axiological paradigm to enhance cognitive skills (control group: 11.6%, experimental group: 35.3%).

The results indicate the need to develop curricula and plans taking into account the axiological paradigm and the use of methodological personality-oriented approach to learning, as well as attention to the development of axiological competence of students.

Discussion

The findings suggest that students in the control group repeated what was said during the lecture. Generally, they did not go beyond repetitions. Out of 142 students who were involved in the first phase of the experimental group, 80 students responded at the heuristic level, 12 students responded at the innovative level, and 8 students responded at the creative level. Students in the experimental group were capable of independent thinking beyond lectures. 8 students proved to be 40% capable of drawing conclusion to an unusual, phenomenally high degree.

The axiological paradigm is developed in the learning environment and is materialized through a system of professional skills and competencies (Kowalski, 2015; Anesova et al., 2018). In the axiological context, a professionally developed personality with a high level of skills and competencies necessary for work in a particular field is molded (Ignatenko et al., 2020). Based on a case study conducted in Russia, a conclusion was made about the influence of digital learning on the students' axiological worldviews (Gordienko et al., 2019). Spanish researchers have explored the axiological aspect of learning based on virtual reality technologies, which made it possible to assess the quality of learning and motivation of students (Ortega, 2021). Therefore, the research findings, based on the axiological approach, suggested that virtual reality technologies improve the quality of learning and motivation of students. A similar study was conducted in Russia, suggesting the dependence of motivation on axiological indicators (Kuznetsova, 2019).

The findings of this study, obtained at the experiment's control phase, suggest that development of the need-based motivation amounts to 55.5% at the empirical level, 30.6% at

the innovative level, and 15.9% at the creative level. Romanian researchers focused, in the context of the axiological paradigm, on students' moral behavior on the basis of axiological opposites, which is similar to the findings of this paper (Băbuț, 2020). At the control phase of the experiment, the moral values scored 53.5% at the empirical level, 30.6% at the innovative level, and 15.9% at the creative level. One experiment examined the impact of axiology on foreign language learning in the context of axiological linguistics and suggested that it is possible to adapt to other cultures through the study of universal values (Zerkina et al., 2015).

The role of the axiological approach in the study of various aspects of medical education has been studied by researchers from the United States (Zaidi and Larsen, 2018). The results of the study show that on the basis of axiology is the choice of methods for research. Based on the study, Romanian researchers conclude on the importance of the axiological aspect in education for the formation of the personality of the student-future teacher and his overall development (Mogonea and Mogonea, 2015).

Researchers from Uzbekistan have conducted a study of the role of using different methodological approaches in pedagogy (Jumanovich and Eshboevna, 2019). Based on the results, it was concluded that the axiological approach makes it possible to combine theory with practice, while actualizing interdisciplinary approaches in learning, as it actualizes the values not only of education but also of human life and education in society as a whole. In addition, the axiological approach allows the student to realize their own potential in society.

Conclusion

The experiment was conducted among students of secondary schools No. 1, No. 22, Regional Special Boarding School for Gifted Children named after Y. Altynsarin, Lyceum No. 10 for gifted children named after Abay (Pavlodar, Kazakhstan). The results show that students in the control group repeated what was said during the lecture. Generally, they did not go beyond repetitions. Out of 142 students who were involved in the first phase of the experimental group, 80 students responded at the heuristic level, 12 students responded at the innovative level, and 8 students responded at the creative level. Students in the experimental group were capable of independent thinking beyond lectures. 8 students proved to be 40% capable of drawing conclusion to an unusual, phenomenally high degree. In the experiment such indicators of axiological paradigm as Vygotsky's doctrine of cultural and historical value (ontological), recognition of the authenticity of national education as a value (epistemological), truth, education, and science leading to success application of innovative learning approaches were determined.

The implications of the research are represented by the fact that an algorithm for the theoretical background of the axiological paradigm application in the education system has been developed and its implementation in connection with the empirical and heuristic paradigms has been discussed. The results of the study show the need for the formation and development of axiological competence at all levels. Practical implications and further research might focus on the special aspects of developing the axiological paradigm not only for students in Kazakhstan, but also in other countries in a comparative aspect. New research can also rely on the experiment's methodological framework.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving human participants were reviewed and approved by Non-profit JSC "Toraighyrov University." The patients/participants provided their written informed consent to participate in this study.

Author contributions

YD wrote first draft of the manuscript. All authors contributed to the study conception and design, performed the material preparation, data collection, and analysis, read, and approved the final manuscript.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Appendix 1

1. What is the reason for the axiological paradigm to be based on the psychologists' writings?
2. How does L. S. Vygotsky approaches the issue of manifestation of the threshold of thinking activity?
3. How does L. S. Vygotsky define the thinking activity's zone of proximal development?
4. What is Leontiev's classification of learning activity by variant?
5. How would you rate Leontiev's statement about the development of personality's consciousness and spirit?
6. Name the psychologist who explored the concepts of depth, breadth, and height. What is your opinion on the function of these concepts?
7. Can you give examples of the overlap between the concepts of perceptive, apperceptive, and performance in research papers?
8. Do you compare the views of researchers focusing on the pronoun "I" as a personal consciousness value?
9. Did you come to the conclusion on what effect Nemov's psychological doctrine has on students?
10. In what way, according to R. S. Nemov, senses influence thinking?
11. How did L. S. Rubenstein investigate the influence on consciousness of such objects as flesh, soul, and power?
12. What thoughts would you have about Zh. Aymaulytov's writing on the expression in human nature of such concepts as Philosophical Consciousness, Treasure of Thought, Blind Sense, and Reasonable Sense?
13. How do you assess Zh. Aymaulytov's activity in becoming 70% proficient in English, Scots, and Turkic languages? What contribution to science does proficiency in these languages have?
14. How does M. Zhumabayev identify the benefits of a child's caution in his or her actions?
15. How does M. Zhumabayev define the form of the path to wisdom?
16. What is included in the concept of suggestiveness, according to M. Zhumabayev?
17. What is the effect of suggestiveness on association according to M. Zhumabayev?
18. Can you show, in the form of an algorithm, the specific features of the writings by M. Zhumabayev and Zh. Aymaulytov?
19. Can you classify the spiritual values in Zhumabayev's writings?
20. Can you make a list of papers written by researchers who study the identity of the concepts of thinking, deduction, and syllogism?
21. What are the distinctive features of the concept of hypothesis in the writings of M. Zhumabayev and contemporary researchers?
22. Describe the ways of developing the thought process outlined in the writings of M. Zhumabayev.
23. What would you say about criticism of Vygotsky's writings?
24. At what point should the problem of psychology begin?
25. Is functional literacy psychology necessary?
26. Does the concept of interiorization in the writings by L. S. Vygotsky and J. Bruner have an identity?
27. Does the axiological paradigm occur in the process of reasoning in the writings of L. S. Vygotsky, and if so, can you give a specific example?
28. Do Vygotsky's writings reflect an idea not outlined by the concept of the stochastic paradigm?
29. Based on the review of research papers, specify the identity of the concepts of ontology, theory of knowledge and axiology.
30. Can you provide insight into the writings of scholars who have studied the problem of overcoming the psychological crisis of modern youth?
31. Do you focus on the writings of researchers who have studied the opportunities offered by modern education in psychology?
32. Can you develop an individual understanding of the values of the early 21st century and the terms of the axiological paradigm based on the available studies?
33. Describe innovative technologies used in teacher training and the focus areas centered on productive outcomes.
34. Describe the functions of such concepts as criterion, index and indicator in education science.