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Gender approach to the education of primary school students

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Abstract

Under the conditions of the liberalization of sexual morality, social and cultural stereotypes of female and male behavior are changing, and gender roles are becoming mixed, which in turn leads to changes in children's behavior. These trends contribute to various personality deformations, emotional instability, and a lack of behavioral guidelines for children. This makes the research on gender education for primary school students relevant. The development and testing of an original variant of the content of gender education in primary school were conducted based on mixed methods: surveys, observations, conversations, S. Bem's Sex and Gender Questionnaire, the Methodology of Gender and Age Identification (L.N. Belopolskaya), and the methodology 'Draw Yourself' (A.M. Prikhodzhan and Z. Vasiliauskaite). Research Results: Based on the conducted analysis, an original variant of the content of gender education was developed. The criteria, indicators, and levels of gender maturity of primary school students were determined. A differentiated approach to the upbringing of boys and girls is necessary, taking into account gender characteristics. The proposed innovative approach, including forms and methods of education such as training sessions, case analysis, and role-playing games, enhances the effectiveness of the gender education program for students.

Keywords: Educational work, gender education, gender, primary school students, primary school.

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1. Introduction

The world is undergoing significant socio-economic and cultural transformations. Stereotypes of masculinity and femininity are evolving. The value orientations coming from the West, emphasizing individuality and the freedom to choose paths of self-realization regardless of gender, are new and, to some extent, unacceptable for us. Firstly, they contradict our

national values, traditions, and customs. Secondly, due to well-known historical events, our country faces a shortage of human resources. At the same time, the "Kazakhstan-2050" strategy outlines the country's modernization path, including improving human capital, and implies the integration of gender components into all spheres of public life politics, economy, culture, and education [1].

During the socialization process, children internalize norms and gender behavior patterns that they observe within the family and society. However, statistical data indicate a growing number of divorces and children born out of wedlock. Nearly every third family falls apart. The proportion of divorces among couples with minor children has also increased. In 2011, 44.9 thousand couples divorced out of 160.5 thousand marriages (28%), while in 2015, 53.3 thousand out of 148.7 thousand marriages ended in divorce (35%). In 2018, the total number of registered marriages in Kazakhstan was 137.8 thousand, with 54.8 thousand divorces. By 2023, 120.9 thousand marriages were registered, while the number of divorces reached 16.8 thousand. According to Petrelli Previtera, Kazakhstan ranked second in the world in divorce rates, with a coefficient of 4.6 [2].

In recent years, the number of single-parent families has increased by nearly 6.8%. Around 400 thousand single mothers are raising more than 700 thousand children, while approximately 60 thousand single fathers are responsible for 300 thousand children. According to statistics, every fifth child grows up in a single-parent household.

The issue of reproductive health among men and women has become increasingly relevant. About 16% of marriages are infertile, with both men and women equally responsible [2]. Additionally, the number of abortions is rising. Statistics show that artificial termination of pregnancy accounts for one-fifth of all pregnancies. According to MIKO, contraceptive coverage among women is around 50% [3].

Currently, early pregnancy, child marriages, and abortions remain pressing issues, particularly in rural areas, where sexual education and knowledge about contraception are insufficient.

Therefore, the role of educational institutions in addressing gender education is growing. Key questions arise: Should the content of educational programs be differentiated based on gender? If so, how should the gender approach be considered in the upbringing of boys and girls in primary school? This work complements the world's scientific knowledge and practice, presenting a new approach to the implementation of gender education in primary schools.

Most often, society defines gender differences based on prejudice and divides the world into two types – male and female. These two principles interact and contrast, creating and balancing the world, exerting a great influence on society, culture, and morality.

Gender issues are becoming very relevant and popular in the research of all anthropological sciences today. Of course, there are still differences in approaches and subjects of different sciences. For example, psychology considers sexual characteristics and properties, sociology studies gender stratification, and pedagogy offers ways of gender education and socialization.

The problem of gender education began to be widely discussed abroad in the middle of the 20th century. For the CIS countries and Kazakhstan in particular, gender education is a relatively new area of educational work and a young field of pedagogical research. Among foreign scholars who have studied gender education, the following stand out: [4-8].

American psychologist J. Gottman studied interpersonal relationships and the influence of gender stereotypes on child upbringing [4].

American psychologist and feminist C. Gilligan conducted research on the moral development of boys and girls, identifying gender differences not only in moral values but also in interpersonal relationships, expressions of care, and situational assessments [5].

M. Kimmel focused on the sociological aspects of gender education, specializing in gender inequalities and masculinity studies. He argued that gender differences are a product of societal gender inequality. According to Kimmel [7], it is possible to create a genderless society—a process he called "degenderization." Its essence is not to make men and women identical but to make them equal, allowing both to experience the same emotions and possess the same qualities, as these are human traits rather than gendered characteristics [7].

C. Higgins approached the issue from a social perspective, considering gender as a system of social relationships that develops based on various contextual factors [8].

Among Russian scholars, significant contributions to the theoretical study of gender education were made by Zagainov and Blinova [9], Kuindzhi [10], and Mudrik [11]. These researchers focused on the gender approach in teaching and education.

Kazakhstani gender researchers include Akbaeva [12], Begalieva [13], Sarbaeva [14], and S.V. [15]. Their works emphasize the social status of women in the labor market, employment, unemployment, and professional segregation.

Family-related issues, such as the division of roles between homemakers and professionals, are discussed in the works of Zhanazarova [16], Kylyshbaeva [17], Mekebaeva [18], and Kodar and Aliev [19].

These studies have contributed to the development of gender education in schools. However, most of them have been conducted within sociology and psychology, while pedagogical research has been predominantly carried out in Russia and Belarus. Kazakhstan also needs studies specifically addressing gender education among younger schoolchildren.

1.1. Key Contradictions in Gender Education

The analysis reveals the following contradictions:

- Between the objective societal need for gender-based education in primary school and the current practice of teaching and upbringing in general education institutions, which largely ignore gender differences.

- Between the practical demand for scientific and methodological support in this field and the lack of developed practical aspects of gender education of younger schoolchildren.

Based on the analysis of scientific literature, the problem of our research was identified and formulated: what are the pedagogical conditions for effective gender education of younger schoolchildren?

The purpose of the article is to develop an author's version of the content of gender education in primary schools based on the identified features, criteria, indicators and levels of formation of gender education in younger schoolchildren. Research objectives:

1. Define the essence of the concepts of "gender" and "gender education".
2. To identify the features of gender education of primary school students.
3. To develop criteria, indicators and levels of formation of gender education of primary school students.
4. Develop and test a gender education program for primary school students.

The following assumptions were used as hypotheses:

1) The process of forming the gender education of elementary school students occurs in stages through the assimilation of its content of cognitive, emotional, motivational, value, and behavioral components during the implementation of gender education.

2) The process of gender education will proceed more effectively if the holistic pedagogical process of primary schools implements gender-role socialization of younger students.

2. Literature Review

To identify the characteristics of gender education in primary school children, it is essential to define the concepts of "gender" and "gender education."

The term "gender" originated in linguistics. In V. Müller's dictionary, "gender" is used in two meanings:

1. Grammatical gender
2. Sex, in a humorous sense [20].

John Money borrowed the term from grammar and introduced it into behavioral science in 1968 to distinguish between biological sex and gender as a sociocultural construct [21].

According to A. Giddens and S. Griffiths, the concepts of "sex" and "gender" are entirely different, as the differences between men and women are determined not only by biological factors [22].

I.S. Kon argues that gender is a social category, and the roles men and women perform depend not on innate biological differences but on the structure of society [23, 24].

The analysis of these studies has guided us in choosing an appropriate definition of gender. From our perspective, Chekalina's [24] definition is the most relevant for our research. She proposes considering gender as a socio-psychological category, which includes personality traits and behavioral characteristics in communication and interaction [14, 24].

For our study, it is also crucial to define "sex education" and "gender education."

Sex education involves informing children about sexual health and hygiene. It is closely linked to medical education.

Kon [23] views the child as an active participant in gender socialization and emphasizes that children have the right to choose their own behavioral models and stereotypes [23, 25].

Repina [26] notes that gender education is based on the laws of social gender development. Understanding and accepting one's social gender involves forming gender-specific qualities associated with men or women, preparing for future gender roles, and developing social interaction skills [26, 27]. In their view, gender education aims to instill in children idealized masculine and feminine images and encourage them to fulfill their corresponding gender roles in accordance with these ideals.

Radzivilova [28] supports this perspective but continues to reject the biological aspect in gender education. Instead, she advocates creating favorable conditions for individuality development. She emphasizes the need for adequate gender socialization, aimed at fostering a flexible system of gender-role behavior [28].

An interesting perspective on gender education is offered by Perlova [29], who views it through the lens of gender culture, as a technological system of teacher-student interaction that facilitates gender socialization while considering age and school curriculum [27, 29].

It is important to note that every ethnic group has historically considered both age and gender in the upbringing and education of children.

Among the Kazakh people, child-rearing begins from the moment of conception. Ethnopedagogical studies conducted by Kazakhstani scholars highlight a multifaceted approach to upbringing, touching upon various aspects of family education, including prenatal upbringing, infant care, the upbringing of boys and girls, the education of brides, and the formation of a man's character. Boys were raised to become future warriors (zhigits)—they were taught hand-to-hand combat, horseback riding, public speaking, and ball games. Girls, on the other hand, were educated in maintaining household warmth and comfort, managing domestic affairs, and upholding family traditions [18]. Over time, child-rearing practices have evolved. Today, women are active members of society, and the upbringing of girls is no longer solely focused on becoming good homemakers. Instead, it emphasizes self-realization in professional fields and the pursuit of higher education.

According to Yaroshenko [30], the structure of gender upbringing consists of three interconnected components:

- Cognitive (knowledge-based) component – responsible for the epistemological function (understanding gender roles and identities).
- Emotional component – associated with the axiological function (adopting values and attitudes towards one's gender).

- Behavioral component – linked to the reflexive function (evaluating and regulating one's actions based on gender norms) [15, 30].

Dresvyanina [31] further clarifies these structural components: cognitive, a set of associations about gender and self-perception regarding masculinity and femininity. Emotional-evaluative: an alignment between one's gender identity and the gender norms accepted by society. Behavioral: the ability to assess and regulate one's actions based on internalized gender schemas [12, 13, 31].

The analysis of research on gender education allows us to draw the following conclusions:

1. Historical gender ideals embedded in cultural traditions must be considered when designing and implementing gender education.
2. Individual differences among children must be acknowledged. A flexible and tactful approach should be used to avoid rigid enforcement of gender stereotypes.
3. Children's social experiences—gained through interactions with both peers and adults—should form the foundation of gender education.
4. Gender socialization should be carried out holistically, incorporating all structural components of gender upbringing, while creating conditions for children to perform gender roles in a way that aligns with their personal identity.

Considering the culture, traditions, and customs of Kazakhstani society, we propose the following definition of "gender education": gender education is a targeted and holistic pedagogical process that organizes and facilitates gender-role socialization in children, enabling them to acquire social experience in gender behavior while taking into account the historically established sociocultural traditions of society.

3. Materials and Methods

The primary objective of this study was to develop an authorial model of gender education content for primary schools, based on identified characteristics, criteria, indicators, and levels of gender upbringing formation in younger students.

The research methodology was grounded in the activity-based, gender, systemic, integrative, and value-oriented approaches to organizing gender education. These approaches aimed to ensure flexibility, dynamism, and differentiation of gender education content based on sex-specific characteristics.

The development of the authorial model of gender education was carried out in three stages:

1. Stage One: Determining the role of schools in gender education through two surveys conducted across three regions of Kazakhstani general education schools.
2. Stage Two: Identifying specific features of gender education in primary schools and assessing the level of gender upbringing formation in younger students based on developed criteria, indicators, and levels of gender upbringing formation.
3. Stage Three: Developing and piloting a gender education program based on the results of theoretical and practical research.

For the literature review, we utilized Scopus, Web of Science, RSCI (Russian Science Citation Index), Google Scholar, eLIBRARY, KazNEB, and other databases from 2014 onward, using key search terms such as gender, gender education, sex education, characteristics of boys' and girls' upbringing, and educational work in primary school.

3.1. At Stage One, Two Experiments Were Conducted

The first experiment (November 2023) involved a survey of school administrators and teachers to examine the role of schools and educators in gender education, as well as to identify challenges in this area of educational work. Respondents also answered the question: "Should gender education be implemented in primary school?" The survey was conducted anonymously via Google Forms.

The second experiment focused exclusively on students and employed various research methods, including: Bem [32], Belopolskaya [33], and Modification of the Technique [34], observations and interviews. These methods helped us test our hypotheses, particularly regarding the step-by-step formation of gender upbringing in younger students through the assimilation of its components during gender education. Additionally, we examined whether gender education effectiveness increases when gender-role socialization is integrated into the overall pedagogical process of primary schools.

A total of 202 participants took part in the two experiments, including 102 primary school students and 100 primary school teachers. The study was conducted in fourth-grade classes in primary schools located in the East Kazakhstan Region, Kostanay Region, and the city of Astana.

3.2. Stage Two

At the second stage, we conducted a comparative analysis of the survey results, examined modern approaches to understanding and implementing gender education, studied the psychological characteristics of primary school children, and identified the specific features of gender education in primary schools. Additionally, we assessed the level of gender upbringing formation in younger students.

It is important to note that there are multiple approaches to gender education today. For our study, we adopted the perspective of Sadvakasova [35] who emphasizes that gender education involves raising a child in accordance with societal perceptions of male and female roles. In this process, schools play a crucial role, as they provide children not only with knowledge but also with social skills [35]. Based on the findings of this stage, we established criteria, indicators, and levels of gender upbringing formation. Additionally, we determined the gender upbringing level of fourth-grade students, using the sample from the first stage, through an analysis of the collected survey data.

3.3. Stage Three

As a result of synthesizing theoretical and practical data, we developed an authorial model of gender education content. At this stage, the proposed gender education program was implemented. The key priorities of this program included differentiated education for boys and girls, consideration of the ethnic characteristics of primary school students, organization of interpersonal interaction and communication, development of awareness and appreciation of one's own gender and the opposite gender, and enhancement of empathy and kindness toward others.

4. Results and Discussion

The development of the authorial model for gender education content in primary schools was carried out in three stages. In the first stage, two experiments were conducted to determine the role of schools in the processes of gender education through two surveys. In the course of the first experiment, it was essential for us to understand how teachers perceive gender education and how educational work in this area is conducted in schools. To this end, we developed an original questionnaire titled "Gender Education in Primary School," which was administered among primary school teachers in several regions of Kazakhstan – Astana, East Kazakhstan Region, and Kostanay Region. The selection of regions was random, and a total of 100 primary school teachers participated in the survey. The processing of the results was done through Google Forms. The results of the questionnaire are presented below.

100 responses

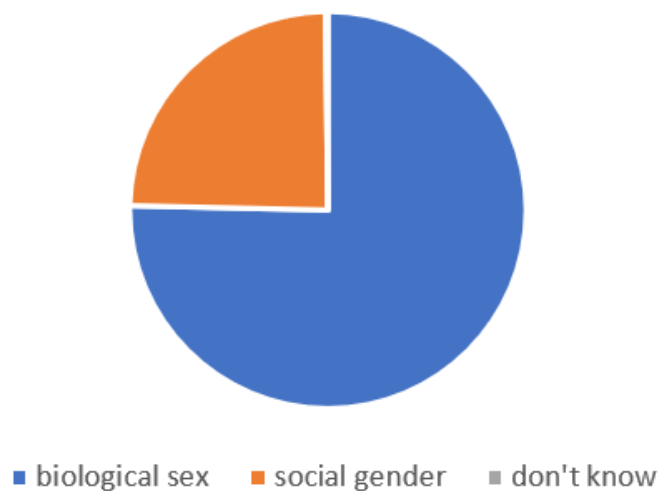


Figure 1.
How do you understand the word "gender"?

As the diagram shows, 74% of teachers believe that the concept of "gender" refers to biological sex, 24% see it as a social construct, and 2% of the teachers are unaware of its meaning. Thus, less than a quarter of the surveyed teachers correctly understand the concept of "gender." This is concerning, as the primary educators themselves do not grasp the essence of this fundamental concept.

100 responses

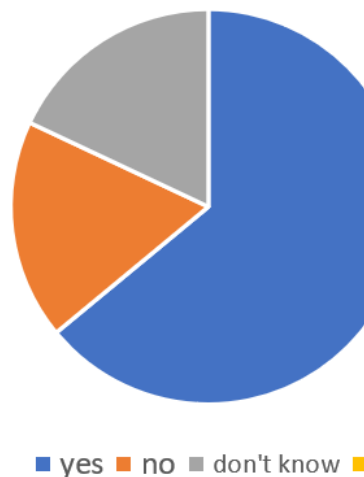


Figure 2.
Do you think it is necessary to implement gender education in schools?

At the same time, 64% of teachers recognize the importance of gender education and believe that it should be implemented in primary schools. Meanwhile, 18% of teachers are uncertain about its necessity, and another 18% are opposed to it.

100 responses

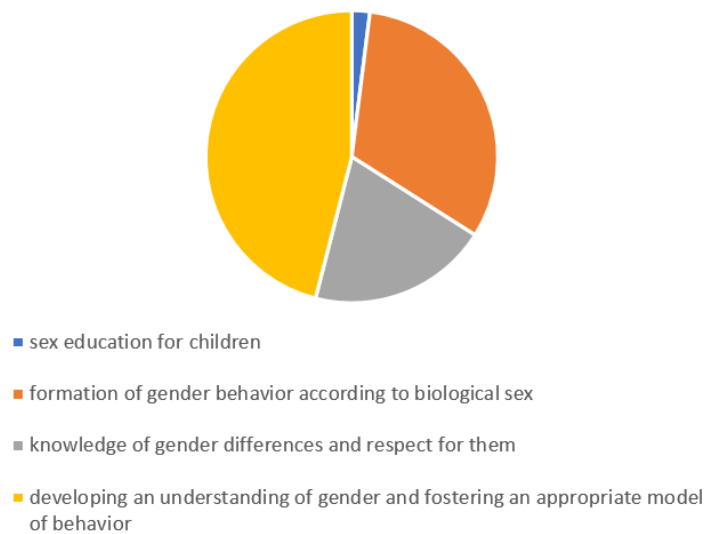


Figure 3.

How do you understand the essence of gender education?

The question regarding the essence of gender education did not stump the teachers, as two correct answer options were provided, and the majority of respondents chose these: 46% believe that gender education is about forming an understanding of gender identity and cultivating an appropriate behavioral model, while 32% see it as the formation of gender behavior in accordance with biological sex. Twenty percent of teachers understand gender education only partially, merely as knowledge of the differences between the sexes and respect for them, and only 2% of respondents associated gender education with sex education, which is incorrect.

The next question is very significant in the context of our study.

100 responses

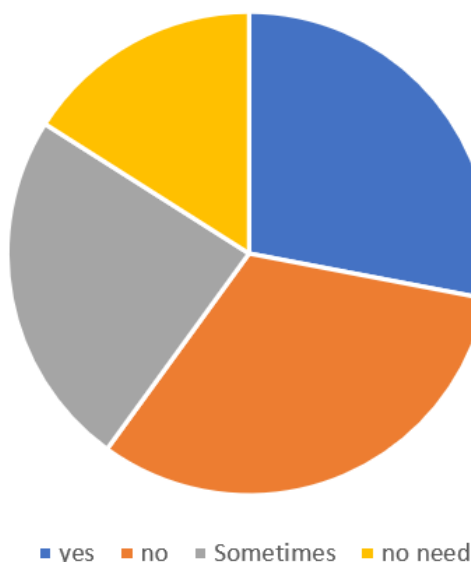


Figure 4.

Does your school provide gender education to children?

As shown in the diagram, only 28% of teachers reported that gender education is conducted in their schools, 32% said no, 24% responded "sometimes," and 16% believe that gender education should not be implemented in primary schools.

Another issue that concerned us was the topics discussed with children. A portion of the teachers 18%, do not discuss gender education issues, while the remaining 82% address various topics related to the characteristics of the sexes, their behavior in society, mutual respect, social roles, and the life purpose of men and women.

As a result of the survey, we found that teachers employ a variety of forms and methods of gender education, including class discussions, consultations, role-playing games, and others, as more clearly illustrated in the diagram below.

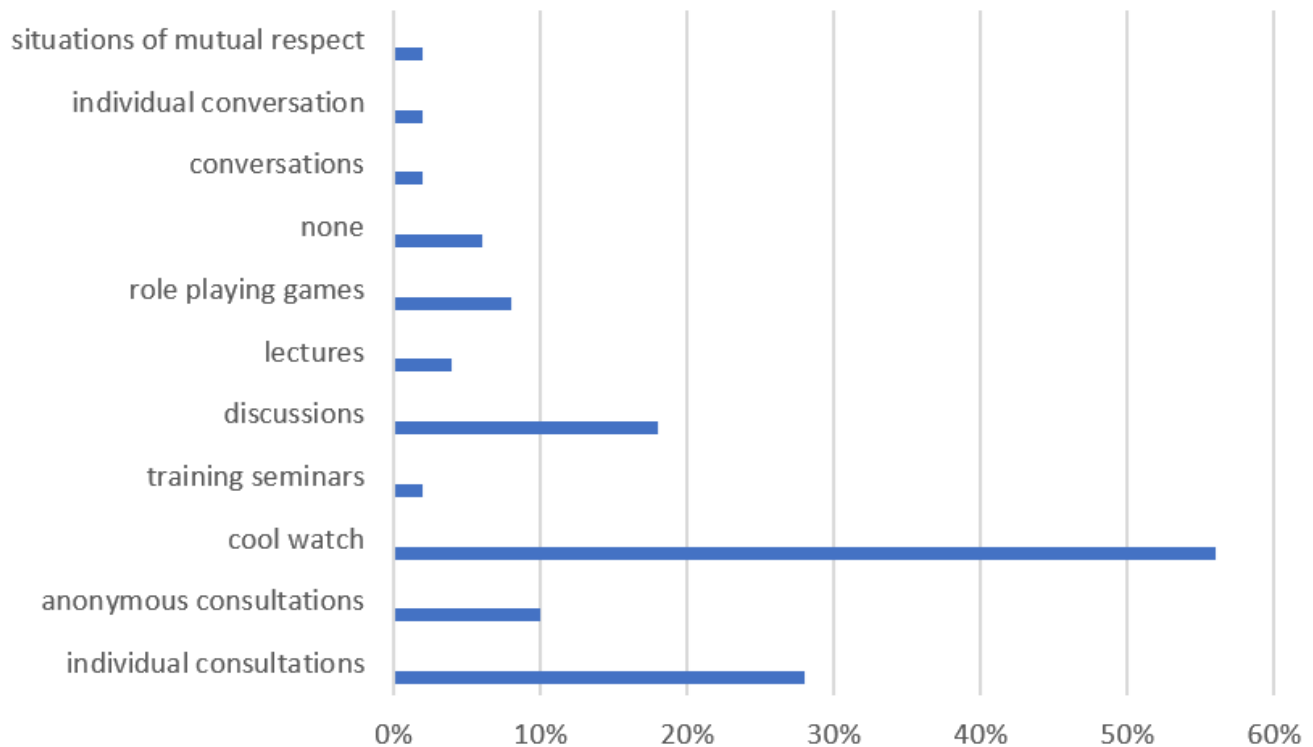


Figure 5.
What forms and methods do you use in the process of gender?

The final question focused on the recommendations proposed by the teachers for improving gender education. They suggested developing a Concept and Program of Gender Education, holding special lessons on gender education, organizing clubs, implementing innovative pedagogical technologies, arranging meetings, and creating guidelines for the behavior of boys and girls.

Thus, the survey revealed that there is no systematic approach to gender education in schools. Instead, this aspect of educational work is carried out sporadically and on the initiative of individual teachers who believe it is important and necessary. Some respondents felt that gender education should be limited to higher grades, but the majority of teachers agree that gender education is an essential part of educational work that should begin in early childhood and be pursued systematically and continuously.

The second experiment was conducted with fourth-grade students, using the following methodologies: [32] Gender Role Questionnaire, Belopolskaya [33] Gender Identity Method, and the “Draw Yourself” technique.

According to Bem [32] Gender Role Questionnaire, among the 102 students (55 girls and 47 boys), 3 gender role types were identified:

Masculine type: 25 boys and 14 girls demonstrated high levels of masculinity and low levels of femininity.

Feminine type: 3 boys and 26 girls.

Androgynous type: 19 boys and 15 girls.

Belopolskaya [33] Gender Identity Method revealed that all children identified themselves in accordance with their biological sex. An attractive image for girls was represented by a female figure, whereas for boys it was a male figure. Among girls, 34 chose an infant and 21 chose a grandmother as unattractive images, while among boys, 24 selected an infant and 23 selected a grandfather.

The “Draw Yourself” method was conducted in a simplified format, as our primary interest was in determining the gender with which children identify and the positive or negative characteristics they attribute to each gender. According to this method, all children drew themselves in accordance with their biological sex. All the girls identified themselves as “good children,” while among the boys, 4 depicted features of a “bad” child. Girls predominantly favored the color red, whereas boys preferred green.

At the *second stage*, criteria, indicators, and levels of gender upbringing in primary school students were developed based on an extensive analysis of the relevant scientific literature and the identified features of gender education in primary schools. Additionally, the level of gender upbringing among fourth-grade students was determined.

Social factors significantly influence the phenomenon of “gender,” which, unlike “sex,” categorizes people as men and women based on social, rather than purely biological, characteristics.

There is a clear distinction between gender education and sex education. Sex education focuses on providing sexual health knowledge and promoting hygiene practices, closely linked to medical education. We maintain that gender education

in primary schools is a deliberately organized, purposeful process through which young students acquire and accumulate social experience in gender-related behavior, based on historically established cultural traditions, and implemented under a set of specific organizational and pedagogical conditions.

Let us now consider the features of gender education in primary schools. Drawing on the definition provided earlier, we have examined its distinctive characteristics by studying the psycho-physiological traits of primary school children.

Psychologists assert that early school age is a period of intense personality formation. This is evident in the development of new relationships with adults and peers, integration into group systems, engagement in a new type of activity learning, and the emergence of new roles, including gender roles. At this age, a new system of attitudes towards people, groups, and academic responsibilities is formed; character and will are developed, interests expand, and abilities are enhanced. Moreover, the foundation of moral behavior is laid, with the internalization of moral norms and rules and the development of a socially oriented personality.

Therefore, it is essential that gender education encompasses not only traditional relationships between men and women, such as marital relationships, but also other interactions that occur in various spheres of life, social, cultural, political, economic, and more. In the process of gender education at school, the basis for future harmonious traditional marital relationships is established as a vital factor for a well-functioning family, high work efficiency, social activity, and overall well-being. Students should develop an understanding of the physiological differences between their own and the opposite sex and be able to respond appropriately to the anatomical and physiological changes that occur during puberty. Consequently, the first feature of gender education in primary school should be acquainting students with the specifics of sexual differences.

The structure of the brain and hormonal systems in children differs depending on sex, which undoubtedly influences their behavior, abilities, relationships, interests, and perception of people and the surrounding world. Cognitive abilities also vary, both in nature and structure.

Research indicates that boys tend to excel in exact sciences and have better-developed visual-spatial intelligence. In contrast, girls demonstrate stronger verbal skills, more flexible thinking, and develop more quickly in early childhood compared to boys.

Boys have greater development in the right hemisphere of the brain, making them more inclined toward concrete and figurative cognitive processes, creativity, abstract thinking, and spatial orientation. They also tend to be more emotionally reserved, and their relationships are often more direct and superficial.

Girls, on the other hand, have greater left-hemisphere development, which enhances their ability to abstract and generalize. Their cognitive processes are characterized by verbal-logical thinking, meaning they rely more on words, symbols, and signs. In interpersonal relationships, they focus on understanding the inner world of others and building emotional connections. Competitive mechanisms in girls are activated through social interactions and self-comparison with others [29].

There are also gender differences in expressions of aggression and hostility. While psychologists note that boys and girls have nearly equal levels of aggression, girls exhibit a higher level of hostility than boys. They also experience a greater intensity of emotional hurt and have higher levels of anxiety, empathy, and emotional sensitivity.

Of particular interest are the studies by Voronko [36], which explore gender differences in communication. Her findings suggest that:

Boys have a larger vocabulary and better reading comprehension skills.

Girls excel in word formation, recognizing hidden words, and understanding spoken language. They also tend to use nouns more frequently in speech.

In the process of communication, girls are oriented towards emotional empathy with their partners, while boys are oriented towards providing help and practical advice. Girls read non-verbal signals better than boys. When presenting information, girls rely more on the visual channel, and boys on the verbal channel. Bendas [37] believes that gender differences in the communicative sphere are not due to a genetically laid program, but rather to social factors and are formed in the process of upbringing, in connection with which they can be corrected in the process of socio-pedagogical work [37].

Thus, the social and psychological development of junior schoolchildren is greatly influenced by gender characteristics, and the content of education affects the formation of gender identity.

By the end of the 4th grade, junior schoolchildren begin to understand and accept the peculiarities of the opposite sex, they learn to respect differences. In the process of education, it is important to teach them to accept physiological changes in themselves and others, to understand the beauty of the body and the inner world of a person. Younger schoolchildren begin to show interest in the opposite sex.

In this regard, the second feature of gender education in primary school is the emphasis on helping junior schoolchildren understand the nature of the opposite sex and develop respect for them. In our opinion, gender identity and gender-role socialization will play an important role in this process.

Given modern societal trends, psychologists suggest that children should also receive gender education through non-family programs for several reasons:

1. Lack of open discussions at home – Many parents and children struggle to freely discuss topics related to sexuality and gender differences, often avoiding important conversations due to embarrassment.
2. Passive parental approach – Some parents wait for their children to ask questions, but children rarely do so. Instead, they prefer discussing these topics with older peers or searching for information online.
3. Parental lack of knowledge – Many parents lack the necessary expertise in gender and sexuality, making them unable to properly educate their children on these matters.

4. Professional competence – It is believed that trained educators can provide more accurate and appropriate information compared to parents.

5. Safe learning environment – Schools can offer a secure space where children feel comfortable discussing and learning about gender-related issues.

However, not all parents support the idea of gender education in schools, citing the following concerns:

1. Gender education is a private matter that should only be addressed within the family.

2. Discussions on sexuality and gender differences might spark children's curiosity and encourage early sexual activity.

3. Uneven quality of teaching materials – The level of instruction and the quality of educational resources vary across schools, often being insufficient.

Many parents fear that gender education programs might include early sexual education, which they find inappropriate. Religious communities have also expressed strong resistance to gender education initiatives. Therefore, we consider the *third* feature of gender education to be the observance of tactfulness and compliance with traditional values and age specifics of children.

To evaluate gender education effectiveness, we have identified 3 key criteria that correspond to components of gender awareness:

1. Cognitive Criterion – Assesses the level of gender-related knowledge.

2. Motivational- Criterion – Measures their desire for self-education, interest in gender issues, and willingness to adopt appropriate behavior.

3. Behavioral Criterion – Examines students' attitudes toward themselves and the opposite sex and their ability to perform gender roles.

Based on these criteria, we developed a structured framework with specific components and indicators for assessing gender awareness in primary school students.

1. Motivational Component. This component reflects students' motivation and interest in gender-related topics: desire to interact with people regardless of gender, curiosity about gender differences, gender identity, and gender roles, acceptance of one's own gender identity, willingness to adopt socially accepted gender norms, and awareness of moral values in gender interactions. Assessment Methods: Age and Gender Identity Test (L.N. Belopolskaya), Discussion: "Values of Boys and Girls".

2. Cognitive Component. This component includes the following indicators: understanding the nature and distinguishing characteristics of both sexes, awareness of gender roles and social behavior, recognizing one's own gender identity and that of others, knowledge of puberty-related physiological changes, appreciation of one's own gender identity and respect for the opposite sex, familiarity with social norms and appropriate gender interactions, assessment Methods: Bem Sex Role Inventory [32] Age and Gender Identity Test [33] "Draw Yourself" Test [34].

3. Behavioral Component. This component evaluates how students demonstrate gender-related behaviors: adherence to social norms based on gender identity, ability to organize and participate in gender-typical activities, understanding of gender roles, and ability to compare them with biological sex, selecting appropriate interaction styles with peers and adults based on gender. Assessment Methods: observation of role-playing activities, monitoring peer and adult interactions.

Based on the established criteria, components, and indicators, we have identified three levels of gender awareness: high, medium, and low.

High Level: A child understands the characteristics of people of different genders, recognizes and accepts their own gender identity, has a clear understanding of family roles within their national gender culture, identifies and aligns typical masculine and feminine behaviors when evaluating personal actions, accepts their biological sex, understands its advantages, and expresses confidence in their gender identity, actively interacts with others, considering gender-specific traits and showing interest in peers of the opposite sex, associates achievements of men and women with their respective masculine and feminine traits, can define their own development prospects within family and gender relations, chooses behavior patterns that align with their gender identity and consciously applies their knowledge in real-life situations.

Medium Level: A child understands gender differences but explains them only in terms of individual characteristics, recognizes and accepts their own gender identity, but does not fully understand its advantages, has only general knowledge of family roles, struggles to consistently choose gender-appropriate behaviors, engages in communication and interaction but does not always consider gender differences, shows little interest in the opposite sex, finds it difficult to define their own future development within family and gender relations, does not consistently associate men's and women's achievements with their respective masculine and feminine qualities.

Low Level: The child does not know the peculiarities of people of different sexes, does not pay attention to gender differences, is not guided by the gender peculiarities of male and female behavior in assessing his/her own actions, is not satisfied with his/her own gender identity; does not accept arguments regarding the advantages of his/her own sex, has difficulties in defining family roles accepted in the national gender culture; shows an aspiration for behavioral reactions of the opposite sex; communicates with children without taking into account gender differences; has difficulties in defining the role of the opposite sex.

Having conducted a survey, questionnaires and observation, we have distributed children by levels of gender education. The data are presented in Table 1 and Figure 6. To determine the motivational, cognitive and behavioral level of nurturance, we used the calculated ratio of percentages. To calculate gender nurturance, we used the values of average indicators according to the formula:

$$x = \frac{x_1 + x_2 + x_3 + x_n}{n} = \frac{\sum x_i}{n}$$

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x - Arithmetic mean
 x_1 - Results of motivational component
 x_2 - Results of cognitive component
 x_3 - Results of behavioral component
 x_p - Specific value
n - Number of values
 $\sum x_i$ - Sum of values

Table 1.

The results of gender education at the establishing stage of the experiment.

Group	Levels and criteria of gender education formation											
	Motivational (%)			Cognitive (%)			Behavioral (%)			Level of gender education (%)		
	High	Medium	Low	High	Medium	Low	High	Medium	Low	High	Medium	Low
Formative group	52	40	8	28	60	12	18	40	42	32.6	46.7	20.7
Control group	51.9	40.4	7.7	28.8	51.9	19.3	15.3	46.1	38.6	32	46.1	21.9

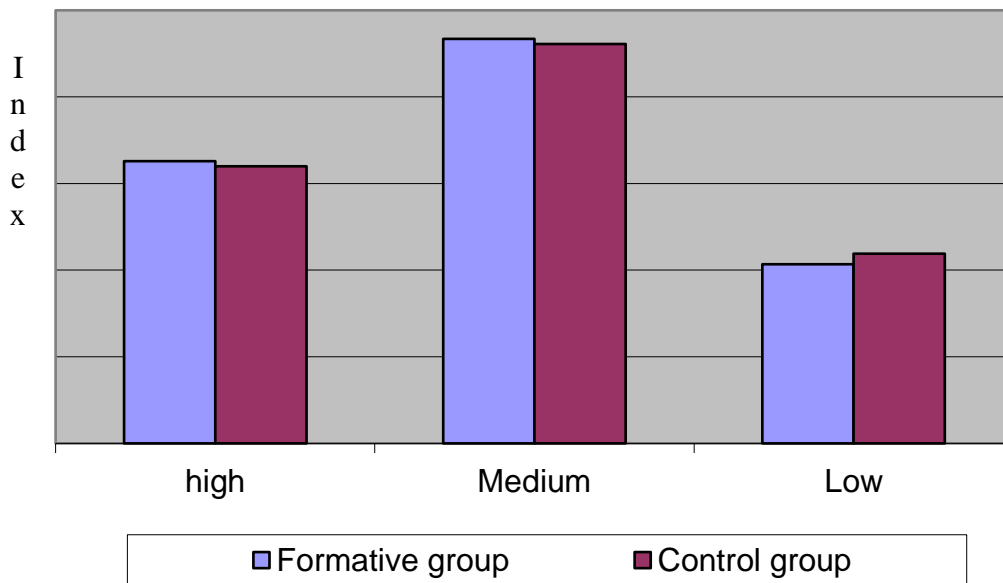


Figure 6.
Gender Education Levels and Experimental Program for Primary School Students

Let us analyze the obtained results. The table and figure show that the majority of 4th grade pupils have an average level of gender education (about 46%). Children have an idea of their gender identity, know about the gender peculiarities of people around them (children, adults, relatives), but do not indicate all signs of gender differences. They accept their gender identity but find it difficult to identify its advantages, have general ideas about family roles, choose their behavior situationally, not always coordinating with the peculiarities of their own gender, are not interested in the opposite sex, and find it difficult to determine their further development.

Children with a high level of gender education (about 32%) are characterized by a clear understanding of people's gender differences, indicate male and female characteristics, know and relate their forms of behavior to the proposed situations, accept their own gender identity, list the advantages of their own gender, know the social roles accepted in the national gender culture, assess people's behavior from the perspective of typical ways of behavior of men and women, actively communicate with people around them taking into account their gender, determine the prospects of coexistence with men and women, determine the gender of the child, and identify the gender of the child.

Children with a low level of gender education (approximately 21%) are characterized by a low level of knowledge of gender differences, do not take into account gender differences in the process of interaction and communication, are not guided by typical features of male and female behavior in assessing their own actions, are not satisfied with their own gender identity, do not know and do not accept the advantages of their gender, have difficulty in defining family roles accepted in the national gender culture, and show an aspiration for behavioral reactions of the opposite sex.

The results indicate the need for a specialized gender education program to enhance gender awareness levels in children.

4.1. Development of a Gender Education Program

At the third stage, based on criteria, indicators, and levels of gender awareness, as well as an analysis of gender education practices in primary schools, we developed a customized gender education curriculum.

4.2. Key Objectives

1. Define the role of classroom teachers in gender education.
2. Organize collaboration between psychologists and educators.
3. Develop and implement a structured gender education program.
4. Conduct classroom and extracurricular activities focused on gender awareness.
5. Implement the gender education program in primary school settings.

Program Structure:

To achieve these goals, we developed an educational program that includes the following activities:

1. Assessing students' gender awareness levels.
2. Individual counseling for primary school students.
3. Educational sessions and extracurricular activities.
4. Parent-teacher discussions on children's gender education.
5. Workshops and training for students.

4.3. Research Hypothesis

A targeted gender education program in primary school will have a positive impact on children's personality development and interpersonal relationships with peers of different genders.

Expected Outcome:

In the Formative group, gender awareness levels will improve, making it easier for students to develop interpersonal relationships.

Table 2.

Gender Education Program in Primary School

Stage	Educational activity	Content of the activity
September		
1 Week	Consultation	Testing or questionnaires to determine the level of gender education of junior schoolchildren and familiarize pupils with the plan of the forthcoming work.
2 Week	Class hour «Friendship of girls and boys».	Education of the right attitude to the problem of sex education. The difference between boys and girls, peculiarities of building interpersonal relationships. Analysis of situational tasks, viewing the presentation on the topic of the class hour.
3 Week	Class hour «Sex education of junior schoolchildren».	Discussion of sexual characteristics. Solving situational tasks about sexual relations of younger pupils, discussing friendship and love at a young age.
	Training (separate) for boys and girls on «Girl's Hygiene», «Boy's Hygiene»	Lecture to junior schoolchildren on the necessity of personal hygiene, including the peculiarities of male and female hygiene.
4 Week	Video lecture on sex education «When a girl grows up», «When a boy grows up».	Watch a video lecture on the specifics of growing up for girls and boys. Separate viewing. Discussion of the video lecture with the class teacher and psychologist.
October		
1 Week	Training «Boys' world, girls, world»	The difference in the upbringing of boys and girls, the difference in their worldview, perception of reality, social functions, etc. This will help younger pupils to understand each other better and adjust communication between boys and girls.
2 Week	Class hour «Me+You=Friendship»	Peculiarities of communication between pupils of different genders, friendship between boys and girls.
3 Week	Educational activity «Ethical behavior of boys and girls»	Rules of behavior in the society of boys and girls. Social functions of boys and girls, different roles of boys and girls. Educational and professional ethics of pupils. Communication with parents and elders, peers
4 Week	Lecture «Early sexual intercourse and its consequences».	Discussion with junior schoolchildren about early sexual intercourse and its negative consequences. Harm of abortion and early labor for a woman's organism. Contraception.
	Training to relieve anxiety, stress resistance, increase self-esteem of students	Work with anxiety states of adolescents, relieve anxiety, increase self-esteem. Training of teenagers in stress resistance and reflection.
November		
3 Week	Talking with teachers and psychologists, possibly inviting a specialist from outside. «We want to know, but we are afraid to ask».	Pupils ask in writing or orally questions that concern them and receive a detailed answer. An exchange of opinions and discussion is possible.
4 Week	Round table «What we have learnt».	Pupils discuss new knowledge and skills they have acquired during the implementation of the gender education program. They exchange opinions about what pupils liked or disliked and what they felt was lacking.
December		
1 week	Counselling.	Testing or questionnaires to determine the final level of gender education of junior schoolchildren, summarizing the results of the experiment.

We carried out special work on the gender education of junior schoolchildren according to the developed program detailed above.

To check the effectiveness of the Gender Education Program in primary schools, we conducted a control experiment. The results are presented in Table 3 and Figure 7.

Table 3.

Results of gender education at the control stage of the experiment.

Group	Levels and criteria of gender education formation											
	Motivational (%)			Cognitive (%)			Behavioral (%)			Level of gender education (%)		
	High	Medium	Low	High	Medium	Low	High	Medium	Low	High	Medium	Low
Formative group	56	42	2	32	60	8	20	42	38	36	48	16
Control group	51.9	40.4	7.7	30.8	53.8	15.4	15.4	48.1	36.5	32.7	47.4	19.9

The table and figure show that in the forming group, the number of children with a high level of gender awareness increased by 3.3% compared to the control group and by 3.4% compared to the founding experiment. The number of children with an average level of gender identity, in comparison with the control group, increased by 0.6% and increased by 1.3% compared to the control experiment. The number of children with a low level decreased by 3.9% compared to the experiment and by 4.7% compared to the control group. Thus, we can say that the program of gender education for children that we are implementing is effective.

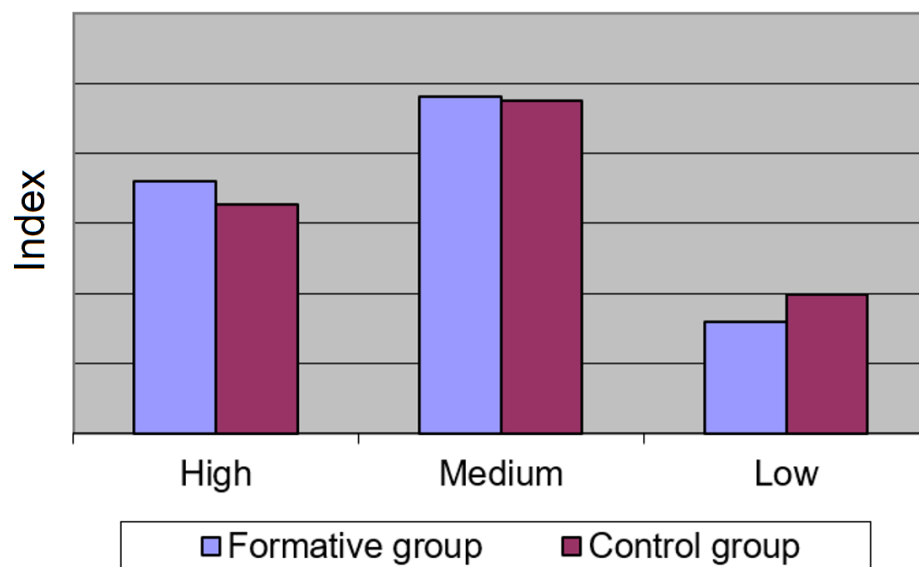


Figure 7.

Levels of gender education of junior schoolchildren according to the results of the interim experiment.

The relevance of this article highlights the problem of gender education of the younger generation. According to experts, the importance of the activities of educational organizations and the adjustment of the content of this direction of educational work is increasing. Such statements are found in the works on the need to form gender identity by Pozdnyakova [38]. Pozdnyakova [38] speaking about the need for close cooperation between school and family in the process of gender education, Pozdnyakova [38] notes the need to form a positive gender identity of children from single-parent families on the basis of gender values, sexual norms, creating special pedagogical conditions for self-realization of all subjects in the process of interaction.

Speaking about gender education of pupils, Ganieva [39] believes that this process should be carried out on the basis of a pedagogical system presented in an integrated manner, taking into account the gender approach [39].

But at the same time, the authors note that pedagogical science lags far behind other humanities in the analysis and study of gender approaches, and the education system needs models of gender education of the younger generation.

In our opinion, an important task of the modern education system should be the formation of a socially developed, gender-adequate personality. In the course of the study, the recommendations of experts in the implementation of gender approaches to the education of younger schoolchildren were taken into account. In particular, in the scientific works of Repina [26], Kolesov [27], Radzivilova [28], Perlova [29], Ganieva [39], and Pozdnyakova [38] noted the importance of organizing purposeful gender education in school education is noted. In accordance with these ideas, this paper demonstrates the author's version of the content of gender education of junior schoolchildren.

5. Conclusions

The study has shown that the successful implementation of gender education in primary schools depends on the improvement of educational work and the implementation of gender approaches to this process. In the course of scientific work, criteria, indicators, and levels of gender education for junior schoolchildren were developed.

To develop and approve the author's version of the content of gender education, a three-stage experiment was conducted, consisting of:

- 1) Determining the role of the school in gender education.
- 2) Identification of the peculiarities of gender education in primary school and determination of the levels of gender education of 4th-grade pupils;
- 3) Approbation of the gender education program for junior schoolchildren.

The author's program of gender education has been tested since 2022 in three regions of Kazakhstan: Astana City, East Kazakhstan, and Kostanay regions.

In the process of the research, we came to certain conclusions. Firstly, in primary school, it is very important to implement gender education, as there is an intensive formation of the personality of a junior schoolboy. Here, more than ever, it is important to promote understanding of gender differences, identification of oneself with one's gender, acceptance, and the formation of behavioral patterns and qualities according to one's gender.

Secondly, systematic, purposeful, and continuous educational work on the gender education of junior schoolchildren is required. For this purpose, it is necessary to implement a special program for the gender education of junior schoolchildren.

Thirdly, the gender education program for boys and girls should be different. Each gender has its own specific features and nature of manifestation, so the content of educational work should also be different.

It should be noted that the problem under consideration is very delicate, diverse, and broad. We assume that in the future it can be studied in the aspect of gender education in a single-parent family, as well as the peculiarities of the organization of gender education for home-schooled children.

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