



## CRITERION-LEVEL ASSESSMENT OF THE DEVELOPMENT OF ENTREPRENEURIAL THINKING AMONG HIGH SCHOOL STUDENTS

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**Abstract.** Introduction. The present study addresses the issue of entrepreneurial thinking among high school students as a psychological construct. The development of psychological readiness for independent decision-making, initiative, and responsibility for the outcomes of one's actions represents a key priority of modern education. However, the level of development of entrepreneurial thinking among high school students remains insufficiently explored within empirical psychological and pedagogical research. This underscores the need to develop diagnostic criteria and level-based indicators that enable an objective assessment of its formation within the educational process.

Methodology and Methods. The study employed a combination of research methods, including a psychological and pedagogical experiment, diagnostic techniques for assessing indicators of entrepreneurial thinking, methods of quantitative and qualitative analysis, as well as statistical methods for processing empirical data.

Results. The study identifies key indicators and levels of entrepreneurial thinking among high school students and reveals differences in the degree of development of its structural components. In addition, the specific characteristics of the initial level of entrepreneurial thinking among students are described.

Scientific novelty. The study provides, for the first time, empirical evidence based on a criterion-level assessment of the structure and levels of entrepreneurial thinking among high school students, encompassing motivational, reflexive-value, and personal components.

Practical significance. The findings can be applied in the design of educational programs and diagnostic tools aimed at fostering entrepreneurial thinking and developing entrepreneurial competencies within the system of general secondary education.

**Keywords:** entrepreneurial thinking, high school students, motivational components, personal and reflective components.

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## Introduction

According to the State Compulsory Standard of general secondary education of the Republic of Kazakhstan (Order of the Minister of Education of the Republic of Kazakhstan dated August 3, 2022, No. 348), one of the key components of the educational process is the subject "Fundamentals of Entrepreneurship and Business" (Minister of Education of the Republic of Kazakhstan, 2022). This subject is included in the standard curriculum of general secondary education in the social and humanitarian direction with the Kazakh language of instruction for grades 10–11. It is also integrated into the curricula of gymnasium and lyceum classes with the Russian language of instruction through the subjects "Man and Society" and "Technology and Art" (Order of the Minister of Education and Science of the Republic of Kazakhstan dated November 8, 2012, No. 500) (Ministry of Education and Science of the Republic of Kazakhstan, 2012). The subject is aimed at studying the fundamental concepts and principles of entrepreneurship, taking into account both Kazakhstani and international practices. It is implemented using a practice-oriented learning model that fosters the development of entrepreneurial thinking and skills of the 21st century.

The subject program has been developed in response to the priorities outlined in the Presidential Message, "The Third Modernization of Kazakhstan: Global Competitiveness," including the objectives of fundamentally improving and expanding the business environment through the implementation of the Program of Productive Employment and the Development of Mass Entrepreneurship (President of the Republic of Kazakhstan, 2017).

The content of the course integrates knowledge of entrepreneurship and ensures the development of students' active life position, responsibility for their own decisions, entrepreneurial thinking, and practical skills necessary for future independent activity in modern market conditions.

However, it should be noted that the existing experience of Kazakhstani schools in fostering entrepreneurial thinking remains unsystematic and insufficiently studied. The majority of funded projects in the field of entrepreneurship are focused on higher education, while general secondary education receives comparatively limited attention, despite the fact that the foundations of entrepreneurial thinking are formed during school years. In school practice, the psychological mechanisms for developing entrepreneurial skills and initiative are implemented in a fragmented manner and are not integrated into the educational process as a necessity.

To address this issue, it is necessary to study not only existing educational practices, but also the level of formation of entrepreneurial thinking among general secondary school students. Since there is currently no unified approach to entrepreneurial thinking and a universal methodology for evaluating it, this study attempts to develop an original diagnostic toolkit that takes into account the key components of the concept of "entrepreneurial thinking." This approach will enable an objective assessment of the initial level of entrepreneurial thinking among high school students and help identify directions for its further development within the educational process.

## Main part

Modern conditions of socio-economic development are characterized by high dynamism and the permanent renewal of knowledge and technology, which actualizes the need to develop students' ability to make independent decisions, demonstrate cognitive flexibility, and adapt to situations of uncertainty.

In this context, entrepreneurial thinking of high school students is considered as a universal psychological resource that is significant for their successful social and educational self-realiza-

tion. Entrepreneurial thinking is widely recognized as a valuable asset, characterized by a focus on identifying new opportunities and the capacity for creative initiative across various domains of life (Zhienbaeva, 2008).

In scientific research, entrepreneurial thinking is interpreted as an integrative education, including motivational orientations, cognitive strategies, and behavioral patterns that ensure the effectiveness of entrepreneurial activity. Entrepreneurial thinking is defined as a set of motives, skills and cognitive processes that distinguish entrepreneurs from non-entrepreneurs and contribute to the achievement of professional success (Davis and Dean, 2016). Entrepreneurial skills are predominantly developed in the process of learning and accumulating practical experience, whereas personal qualities reflect relatively stable individual psychological characteristics. In turn, entrepreneurial thinking is conceptualized as a specific style of thinking and behavior that ensures informed decision-making under conditions of uncertainty and risk (Neneh, 2012). Furthermore, determination, self-confidence, and perseverance are singled out as significant skills; among the personal traits are creativity, organization, diplomacy, and the ability to convince (Stogdill, 1974). At the same time, the close relationship between entrepreneurial thinking and an individual's social activity is emphasized, which confirms its multi-level nature.

Recent studies further emphasize that entrepreneurial thinking should be considered as a multidimensional construct that combines motivational, cognitive and behavioral characteristics. Contemporary research indicates that entrepreneurship education can contribute not only to the development of entrepreneurial intentions but also to entrepreneurial self-efficacy, entrepreneurial alertness and opportunity recognition, which represent important psychological mechanisms underlying entrepreneurial behavior (Otache et al., 2024). In addition, recent research demonstrates that entrepreneurial mindset and learning motivation play an important role in translating entrepreneurship education into entrepreneurial intentions (Sun et al., 2023).

For high school students, the development of these characteristics is particularly important because adolescence represents a period of active educational and professional self-determination. Recent empirical research indicates that entrepreneurial intentions and related psychological resources are already relevant during adolescence and are influenced by individual and contextual factors (Salavou et al., 2023). Experimental evidence also demonstrates that structured and practice-oriented entrepreneurship education can increase high school students' engagement in entrepreneurial activities and encourage them to act on entrepreneurial ideas (Lafortune et al., 2024). These findings support the view that entrepreneurial thinking should be developed systematically within the educational environment rather than treated exclusively as a set of economic knowledge and skills.

The delimitation of entrepreneurial thinking into cognitive, motivational, and personality-regulatory components is methodologically justified in relation to a sample of high school students who are at the stage of active professional self-determination.

At this stage, the development of entrepreneurial thinking occurs within the educational environment, while personal qualities are interiorized under the influence of sociocultural factors, including through the assimilation of behavioral models associated with entrepreneurial activity.

Thus, contemporary research supports an integrated understanding of entrepreneurial thinking in which opportunity recognition, initiative, self-efficacy, decision-making and responsibility are interconnected. Such an approach is particularly relevant to the present study, since the proposed criterion-level assessment considers entrepreneurial thinking through motivational-activity, activity-implementation and reflexive-value components.

In accordance with the focus of the present study, it is necessary to clarify the essential characteristics of the concept of "criterion-level assessment".

Thus, "criterion-level assessment" is understood as a diagnostic approach based on the identification of a set of criteria and indicators of the phenomenon under study, enabling the determination of its level of development through the differentiation of corresponding levels

of manifestation across motivational, reflexive-value, and personal dimensions. The author's interpretation of "criterion-level assessment" proposed in this study allows for a more comprehensive understanding of the substantive nature of the phenomenon of entrepreneurial thinking among high school students.

Accordingly, entrepreneurial thinking among high school students is defined as an integrative personal quality manifested in the ability to identify new opportunities and generate ideas (activity-implementation component), demonstrate initiative and achievement motivation (motivational-activity component), and make informed decisions while assuming responsibility for the outcomes of one's actions (reflexive-value component) within the educational environment.

## Research Methods and Materials

A set of psychodiagnostic methods was employed to assess the motivational-activity, activity-implementation, and reflexive-value components of entrepreneurial thinking:

1. Initiative (motivational-activity component) was diagnosed using the Personal Competitiveness Inventory, which makes it possible to identify proactivity, goal orientation, and readiness to independently initiate entrepreneurial actions (Fetiskin et al., 2002).

2. Efficiency (activity-implementation component) was measured using the method "Communicative and Organizational Inclinations" (Sinyavsky and Fedoroshin, 2002).

3. Responsibility (reflexive-value component) was diagnosed using the methodology of scenarios of economic behavior (N. M. Lebedeva, A. N. Tatarko), which assesses awareness of choice, responsibility for decision-making, and the value-semantic orientation of entrepreneurial activity (Tatarko and Lebedeva, 2011).

Research base:

The study was conducted in three secondary schools in Turkestan. A total of 148 students from grades 9-11 participated in the research.

## Results

The formation of entrepreneurial thinking among high school students is achieved through the development of its key components (initiative, efficiency, responsibility). The integrated development of these components contributes to the formation of entrepreneurial thinking as a professionally significant personal competence, manifested in the ability to initiate responsible and effective activity.

**Table 1. Content characterization of the components of entrepreneurial thinking among high school students**

| Component                                       | Essential characteristics                                                                                                                                 | Indicators                                                                                                                                                                                             |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Initiative<br>(motivational-activity component) | The individual's ability to independently identify significant tasks, formulate goals and ideas, propose ways to implement them, and take responsibility. | 1. Motivational level of initiative.<br>2. Quality, value and direction of ideas<br>3. Stability and frequency of initiative manifestations.<br>4. Acceptance of responsibility for initiative actions |

|                                                |                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                 |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Efficiency (activity-implementation component) | The individual's ability to plan and consistently implement actions aimed at achieving goals, adhere to established standards, and ensure the effectiveness and quality of performance.                                                    | 1. Consistency and coherence of actions<br>2. Responsibility for implementation<br>3. Selection of appropriate methods for implementation<br>4. Intensity and effectiveness of execution                                        |
| Responsibility (reflexive-value component)     | The individual's ability to recognize the consequences of their actions, make informed decisions, assume responsibility for outcomes, and comply with social and ethical norms while maintaining stable motivation to fulfill obligations. | 1. Awareness of the consequences of one's actions<br>2. Decision-making and willingness to assume responsibility for outcomes<br>3. Adherence to social and ethical standards<br>4. Sustained motivation to fulfill obligations |

The results of the criterion-level assessment indicate that the majority of high school students demonstrate a low level of entrepreneurial thinking (Fig. 2). This is reflected in the insufficient development of motivational-activity, activity-implementation, and reflexive-value components.

**Table 2. Distribution of initiative levels (motivational-activity component)**

| Indicators of Initiative                             | Levels       | Number of participants, % |
|------------------------------------------------------|--------------|---------------------------|
| Motivational expression of initiative                | reproductive | 22 (30%)                  |
| Quality, value, and orientation of ideas             | reproductive | 34 (30%)                  |
| Stability and frequency of initiative manifestations | reproductive | 19 (22%)                  |
| Acceptance of responsibility for initiative actions  | reproductive | 25 (18%)                  |

The data obtained indicate the predominance of a low level of initiative among the majority of participants (56%), which indicates an insufficient development of the motivational- activity component of entrepreneurial thinking of high school students.

**Table 3. Mean values of initiative indicators (motivational-activity component)**

| Indicators of Initiative                             | Mean value (M) | Standard deviation (SD) |
|------------------------------------------------------|----------------|-------------------------|
| Motivational expression of initiative                | 3.2            | 0.7                     |
| Quality, value, and orientation of ideas             | 3.2            | 0.7                     |
| Stability and frequency of initiative manifestations | 3.6            | 0.5                     |
| Acceptance of responsibility for initiative actions  | 3.8            | 0.6                     |

At the same time, the proportion of respondents with a medium level of initiative (44%) demonstrates their readiness to independently identify relevant tasks, formulate goals and ideas, propose ways to implement them, and assume responsibility for their realization. The prevalence of the low-level group highlights the need for targeted interventions aimed at developing initiative as a key indicator of entrepreneurial thinking among high school students.

**Table 4. Mean value of the components of entrepreneurial thinking among high school students (N = 60)**

| Component               | Indicators     | Mean value (M) | Standard deviation (SD) |
|-------------------------|----------------|----------------|-------------------------|
| Motivational-activity   | Initiative     | 3.4            | 0.4                     |
| Activity-implementation | Efficiency     | 3.8            | 0.6                     |
| Reflexive-value         | Responsibility | 3.3            | 0.3                     |

For the criterion-level assessment of the development of entrepreneurial thinking among high school students, a set of psychodiagnostic methods was employed to examine its motivational-activity, activity-implementation, and reflexive-value components.

**Table 5. Level distribution of key components of entrepreneurial thinking among high school students (%)**

| Levels       | Motivational-activity | Activity-implementation | Reflexive-value |
|--------------|-----------------------|-------------------------|-----------------|
| Reproductive | 55                    | 55                      | 55              |
| Productive   | 27                    | 27                      | 30              |
| Creative     | 18                    | 18                      | 15              |

The predominance of the reproductive level across the motivational-activity, activity-realization, and reflexive-value components indicates that entrepreneurial thinking among high school students is at an early stage of development. The productive level in the reflexive-value component suggests the formation of a value-semantic basis of activity accompanied by a relatively lower level of its motivational realization. Comparison of mean values (Student's t-test) revealed statistically significant differences between motivational-activity and reflexive-value components.

**Table 6. Results of Student's t-test analysis**

| Components compared   | t-value | p - significance level |
|-----------------------|---------|------------------------|
| Motivational-Activity | 2.45    | $\leq 0.05$            |
| Reflexive-Value       | 2.12    | $\leq 0.05$            |

The reflexive-value component demonstrates a statistically significantly higher level of development, confirming the predominance of reproductive performance in comparison with the motivational-activity component of entrepreneurial behavior.

**Table 7. Correlation analysis (r-Pearson) \*  $p \leq 0.05$** 

| Criteria       | 1     | 2     | 3     |
|----------------|-------|-------|-------|
| Initiative     | 0.55* | 0.52* | 0.48* |
| Implementation | 0.42* | 0.38* | 0.45* |
| Responsibility | 0.23* | 0     | 0     |

Statistically significant positive correlations were identified among all criteria of motivational-activity, activity-implementation and reflexive-value components, confirming their inter-related nature. A moderate positive correlation ( $r = 0.55^*$ ) was observed between performance and initiative.

The obtained results indicate that entrepreneurial thinking among high school students is predominantly at a reproductive level of development and highlight the need for targeted support aimed at fostering initiative, particularly responsibility.

In order to determine the contribution of the individual components to the overall level of entrepreneurial thinking, a multiple linear regression analysis was conducted. The dependent variable (Y) was the overall level of entrepreneurial thinking, while the independent variables (X) included:  $X_1$ - initiative (motivational-activity component);  $X_2$ - efficiency (activity-implementation component);  $X_3$  - responsibility (reflexive-value component).

**Table 8. Results of multiple linear regression analysis**

| Variable                             | $\beta$ (standardiz.) | t    | p           |
|--------------------------------------|-----------------------|------|-------------|
| Initiative ( $X_1$ )                 | 0.31                  | 2.28 | $\leq 0.05$ |
| Efficiency ( $X_2$ )                 | 0.42                  | 4.05 | $\leq 0.05$ |
| Responsibility ( $X_3$ )             | 0.10                  | 1.12 | $\leq 0.01$ |
| $R^2 = 0.58$ $F = 18.6, p \leq 0.01$ |                       |      |             |

The criterion-level assessment of the motivational-activity component revealed a generally low level of initiative: students rarely demonstrate proactivity and experience difficulties in independent choice of strategies and decision-making. The activity-implementation component is characterized by inconsistency in execution: there are difficulties in the implementation of ideas and limited ability to consistently perform tasks in collaborative activities.

The reflexive-value component demonstrates a contradictory orientation: the coexistence of a desire for rapid results with a low level of readiness to assume social responsibility indicates insufficient development of personal maturity in the entrepreneurial domain.

Overall, the findings suggest that entrepreneurial thinking among high school students is fragmented and situational in nature, rather than functioning as an integrated system of knowledge, attitudes, and behavioral strategies.

The relatively low levels identified in the present study may be associated with limited opportunities for practical entrepreneurial experience, insufficient exposure to opportunity-recognition activities, and underdeveloped entrepreneurial self-efficacy. Recent research indicates that entrepreneurship education can strengthen students' entrepreneurial self-efficacy, alertness and opportunity-recognition capabilities (Otache et al., 2024). Moreover, experimental evidence among high school students demonstrates that practical and gamified entrepreneurship training can increase students' engagement in entrepreneurial activities and encourage them to act on business ideas (Lafortune et al., 2024). Therefore, the predominance of reproductive and productive levels identified in the present study may reflect not only insufficient knowledge but also limited opportunities for students to transform entrepreneurial ideas into independent action.

At the same time, the observed relatively high level of communicative and cooperative competencies may represent an important psychological and social prerequisite for the further development of entrepreneurial thinking. Recent research suggests that entrepreneurial development is influenced by the interaction of educational experiences, individual psychological resources and contextual factors rather than by knowledge acquisition alone (Gao and Lu, 2024). Accordingly, the development of entrepreneurial thinking among high school students requires educational conditions that combine knowledge, practical experience, autonomy, reflection and opportunities for responsible decision-making.

## **Discussion**

The results of the study demonstrate a differentiated development of entrepreneurial thinking among high school students, encompassing such components as initiative, efficiency, and responsibility. The analysis of criterion-level indicators revealed that initiative and responsibility for decision-making largely remain at the reproductive level. This finding is consistent with the studies by foreign authors (Fayolle and Gailly, 2015; Neck and Greene, 2011). These studies indicate that younger age groups tend to rely on external regulation of behavior and demonstrate limited readiness for risk, which corresponds with the observed tendency of high school students to focus on rapid results and external confirmation of success.

Recent studies further support the importance of entrepreneurial self-efficacy in the development of entrepreneurial characteristics among younger learners. Saptono et al. (2021), for example, demonstrated that entrepreneurship education can contribute to the development of entrepreneurial self-efficacy among school-aged students. This is particularly relevant to the present findings, as the reproductive level observed in initiative and decision-making may indicate that students possess basic entrepreneurial orientations but have not yet developed sufficient confidence to act independently. Thus, strengthening self-efficacy may be an important mechanism for facilitating the transition from externally regulated activity toward greater initiative and autonomy.

Efficiency, as a component of the activity-implementation domain, demonstrates a predominantly productive level, reflecting students' ability to consistently carry out tasks, albeit with limited autonomy and variability in decision-making. Similar findings have been reported in studies of Western educational systems (Zimmerman, 2002; Pintrich, 2004), where adolescents at the productive level exhibit stable performance under structured guidance but show limited initiative and creativity. The reflexive-value component, which involves readiness to assume responsibility for outcomes, also remains predominantly at the reproductive level. A comparable imbalance between operational-activity and value-regulatory components has been identified in studies on adolescent social and cognitive development conducted in the USA and Europe (Blume et al., 2020). These findings highlight the broader challenge of integrating self-regulation skills with entrepreneurial initiative during the later stages of schooling and underscore the universal nature of this issue across different educational contexts.

The relevance of this developmental imbalance is also reflected in recent research specifically focused on adolescents. Salavou et al. (2023) found that psychological resources are associated with entrepreneurial intention among adolescents, suggesting that the development of entrepreneurial orientations during this period depends not only on knowledge and skills but also on students' internal psychological resources. In addition, Lafortune et al. (2024), using experimental evidence from high school students, showed that gamified entrepreneurship training can increase students' entrepreneurial activity and engagement with business-oriented ideas. These findings indicate that entrepreneurial thinking at the secondary-school level can be strengthened when students are provided with opportunities for active participation, exper-

imentation, and independent action rather than being limited to the acquisition of theoretical knowledge.

The findings indicate an asymmetrical pattern in the development of entrepreneurial thinking: while initiative and efficiency demonstrate relatively productive levels, the value-regulatory component—particularly responsibility for decision-making and risk management—remains insufficiently internalized. This observation aligns with the theoretical perspective that the development of entrepreneurial thinking requires an integrated approach encompassing cognitive, affective, and behavioral dimensions, as well as systematically structured pedagogical conditions (Drucker, 2006; Nabi et al., 2017).

This interpretation is consistent with more recent evidence indicating that entrepreneurship education affects entrepreneurial development through several interconnected psychological mechanisms. Sun et al. (2023) emphasize the importance of entrepreneurial mindset and motivation in linking entrepreneurship education with entrepreneurial intention. Similarly, Otache et al. (2024) demonstrate that entrepreneurial self-efficacy, entrepreneurial alertness, and opportunity recognition are important factors in the relationship between entrepreneurship education and entrepreneurial intentions. These findings provide additional support for interpreting entrepreneurial thinking as a multidimensional construct in which cognitive processes, motivational resources, confidence in one's abilities, and the capacity to recognize opportunities are closely interconnected.

Based on a comparison with international practice, it can be concluded that for high school students, a key condition for the formation of a creative level of entrepreneurial thinking is to provide opportunities for independent decision-making, planning actions taking into account uncertainty, controlling the result, and assessing risks. The introduction of project tasks, case methods, and immersive educational technologies (VR/AR, simulations) can contribute to the accelerated internalization of these skills, as confirmed by experimental studies in the USA and Singapore (Nabi et al., 2017). An important implication of the findings is the need to consider the educational environment as a key factor in shaping entrepreneurial thinking. Regular involvement of students in problem-based learning, project activities, collaborative decision-making, and reflection on the consequences of their choices may strengthen the integration of motivational, activity-related, and value-regulatory components. Such educational practices can create conditions for the gradual transition from externally regulated behavior toward greater autonomy, initiative, and responsibility. Consequently, entrepreneurial education should be viewed not only as the acquisition of economic knowledge, but also as a process of personal development.

Recent empirical research provides further justification for this pedagogical orientation. Overwien et al. (2024) found that entrepreneurship education activities can influence students' entrepreneurial intention, while Al-Qadasi et al. (2024) highlighted the role of self-efficacy and attitude in the relationship between entrepreneurship education and entrepreneurial behaviour. Together with the experimental findings of Lafortune et al. (2024), these studies suggest that educational interventions are more likely to support entrepreneurial development when students are actively engaged in applying knowledge, making decisions, identifying opportunities, and experiencing the consequences of their actions. Therefore, the transition from reproductive and productive levels toward a creative level may require not only additional content but also a learning environment that systematically combines autonomy, practical experience, reflection, and responsibility.

Thus, the results underscore the need for comprehensive pedagogical support aimed at enabling high school students to transition from reproductive and productive levels to a creative level of entrepreneurial thinking. Such support should focus on the development of initiative, proactivity, decision-making skills, and responsibility for outcomes. These findings not only confirm international trends in fostering entrepreneurial mindsets among adolescents but also provide a foundation for adapting and enhancing educational strategies.

## Conclusion

The study revealed an asymmetrical distribution of entrepreneurial competencies among high school students, whereby relatively developed elements of initiative and efficiency coexist with a comparatively underdeveloped level of responsibility, which remains predominantly at the reproductive level. This structural differentiation indicates that the formation of entrepreneurial thinking is not a linear process but rather a dynamic interaction of cognitive, activity-related, and value-regulatory components.

Initiative and efficiency constitute the foundation for autonomous action and the generation of solutions; however, their full realization depends on the development of internal responsibility and the ability to manage risk. In this regard, entrepreneurial thinking can be conceptualized as a regulatory cognitive framework that supports self-directed action, informed decision-making, and accountability for outcomes.

Thus, a key condition for the transition from reproductive and productive levels to a creative level of entrepreneurial thinking is the establishment of a purposefully designed pedagogical environment that promotes proactivity, strategic variability, autonomy, and reflexivity. The development of these competencies contributes to the formation of personal maturity and an entrepreneurial orientation, transforming the educational environment into a space for early professional self-determination, where knowledge, skills, and values are integrated into a coherent system of competencies.

## Contribution of the authors:

**Altynbek A.** - conceptualization, methodology, investigation, formal analysis, and writing – review & editing. She conducted a methodological and theoretical analysis of the experimental data and reviewed the works of Kazakhstani and international scholars.

**Abdigapbarova U.** - conceptualization, data curation, formal analysis, writing – original draft, and project administration. She prepared the Introduction, formulated the aim and objectives of the study, analyzed the research data, and contributed to the structure, organization, and formatting of the manuscript.

**Saparkyzy Z.** - literature review, visualization, validation, writing – review & editing, and supervision. She reviewed relevant literature, contributed to the visualization of research findings, critically revised the manuscript, and approved the final version for publication.

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### **Жоғары сынып оқушыларының кәсіпкерлік ойлауының даму деңгейін критерийлер негізінде бағалау**

**Аңдатпа.** Зерттеу жоғары сынып оқушыларының кәсіпкерлік ойлауын психологиялық конструкт ретінде қарастыру мәселесіне арналған. Дербес шешім қабылдауға, бастамашылдық танытуға және өз әрекетінің нәтижелеріне жауапкершілікпен қарауға психологиялық даярлықты қалыптастыру қазіргі білім берудің басым бағыттарының бірі болып табылады. Алайда жоғары сынып оқушыларының кәсіпкерлік ойлауының қалыптасу деңгейі эмпирикалық психологиялық-педагогикалық зерттеулер аясында жеткілікті деңгейде зерделенбеген. Бұл білім беру үдерісінде кәсіпкерлік ойлаудың қалыптасу деңгейін объективті бағалауға мүмкіндік беретін диагностикалық критерийлер мен деңгейлік көрсеткіштерді әзірлеу қажеттілігін айқындайды.

Зерттеу әдіснамасы мен әдістері. Зерттеуде психологиялық-педагогикалық эксперимент, кәсіпкерлік ойлаудың көрсеткіштерін бағалауға арналған диагностикалық әдістемелер, сандық және сапалық талдау әдістері, сондай-ақ эмпирикалық деректерді өңдеудің статистикалық әдістерін қамтитын зерттеу әдістерінің кешені қолданылды.

Нәтижелер. Зерттеу барысында жоғары сынып оқушыларының кәсіпкерлік ойлауының негізгі көрсеткіштері мен қалыптасу деңгейлері айқындалып, оның құрылымдық компоненттерінің даму дәрежесіндегі айырмашылықтар анықталды. Сонымен қатар оқушылардың кәсіпкерлік ойлауының бастапқы қалыптасу деңгейінің өзіндік ерекшеліктері сипатталды.

Ғылыми жаңалық. Зерттеуде алғаш рет жоғары сынып оқушыларының кәсіпкерлік ойлауының құрылымы мен қалыптасу деңгейлерін критерийлік-деңгейлік бағалауға негізделген эмпирикалық деректер алынды. Зерттеу кәсіпкерлік ойлаудың мотивациялық, рефлексивтік-құндылықтық және тұлғалық компоненттерін қамтиды.

Практикалық маңыздылығы. Зерттеу нәтижелері жалпы орта білім беру жүйесінде кәсіпкерлік ойлауды қалыптастыруға және кәсіпкерлік құзыреттерді дамытуға бағытталған

білім беру бағдарламалары мен диагностикалық құралдарды әзірлеу барысында пайдаланылуы мүмкін.

**Түйін сөздер:** кәсіпкерлік ойлау, жоғары сынып оқушылары, мотивациялық компонент, тұлғалық компонент, рефлексивтік-құндылықтық компонент.

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### **Критериальная оценка уровня развития предпринимательского мышления старшекласников**

**Аннотация.** Настоящее исследование посвящено проблеме предпринимательского мышления старшекласников как психологического конструкта. Формирование психологической готовности к самостоятельному принятию решений, проявлению инициативы и ответственности за результаты собственной деятельности является одним из приоритетных направлений современного образования. Вместе с тем уровень сформированности предпринимательского мышления у старшекласников остается недостаточно изученным в рамках эмпирических психолого-педагогических исследований. Это обуславливает необходимость разработки диагностических критериев и уровневых показателей, позволяющих объективно оценивать степень его сформированности в образовательном процессе.

**Методология и методы.** В исследовании использован комплекс методов, включающий психолого-педагогический эксперимент, диагностические методики оценки показателей предпринимательского мышления, методы количественного и качественного анализа, а также статистические методы обработки эмпирических данных.

**Результаты.** В исследовании определены ключевые показатели и уровни сформированности предпринимательского мышления у старшекласников, а также выявлены различия в степени развития его структурных компонентов. Кроме того, охарактеризованы специфические особенности исходного уровня сформированности предпринимательского мышления учащихся.

**Научная новизна.** Впервые получены эмпирические данные, основанные на критериально-уровневом подходе к оценке структуры и уровней сформированности предпринимательского мышления старшекласников, охватывающего мотивационный, рефлексивно-ценностный и личностный компоненты.

**Практическая значимость.** Результаты исследования могут быть использованы при разработке образовательных программ и диагностического инструментария, направленных на формирование предпринимательского мышления и развитие предпринимательских компетенций в системе общего среднего образования.

**Ключевые слова:** предпринимательское мышление, старшекласники, мотивационный компонент, личностный компонент, рефлексивно-ценностный компонент.

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