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bekaidos61@gmail.com**LEVEL-BASED LEARNING APPROACHES  
IN SPEECH THERAPY FOR STUTTERING**

**Annotation.** Stuttering is a complex speech disorder that affects not only the fluency of oral speech but also brings challenges the emotional well-being and cognitive development of primary school students. These days, speech therapy increasingly emphasizes the need for pedagogically grounded approaches that integrate corrective intervention into the educational process. In this context, the present study addresses the application of level-based learning technology as a structured pedagogical mechanism for stuttering correction. The research is focused on substantiating the effectiveness of a level-based learning model adapted to speech therapy practice. A four-level correctional program was designed, progressing from the development of basic articulatory and speech-motor skills to the generalization of fluent speech in communicative situations. The study employed a quasi-experimental design involving control and experimental groups of primary school students diagnosed with stuttering, combining speech therapy methods, corrective exercises, and coordinated support from teachers and parents. What stands out from the pedagogical experiment is how level-based learning instruction sharpens speech form, articulatory motor skills, and emotional state more than standard therapy routines. Because this framework fits into focused academies as well as diverse learning spaces, real-world use becomes a tangible option. The practical significance of the study lies usefulness when applied across diverse schools, both focused and inclusive environments alike. Beyond that, reshaping therapy theory through level-based learning adds depth, turning technique into a more human-centered act of support.

**Keywords:** stuttering, speech therapy, level-based learning, speech fluency, articulatory motor skills, emotional regulation, primary school students

**Introduction**

Stuttering is a persistent developmental speech disorder marked by involuntary interruptions in the flow of speech – including repetitions, prolongations, and blocks – which interfere with verbal communication, social participation, and academic engagement in children. Contemporary evidence frames stuttering as a multifactorial neurodevelopmental condition involving complex interactions among neurological, cognitive-linguistic, and emotional processes. Emerging models emphasize atypical speech motor planning and

execution as core contributors to stuttering, with neurofunctional differences in speech production networks implicated in sustained disfluency patterns [1].

Systematic reviews of intervention studies with school-age children demonstrate that a variety of treatment approaches – such as operant methods, speech restructuring techniques, and hybrids incorporating cognitive-behavioral components – can reduce stuttering severity when appropriately applied, though effect sizes and evidence strength remain variable [2]. Moreover, recent large-scale clinical trials confirm that structured stuttering modification programs yield statistically significant improvements in both subjective psychosocial outcomes and objective speech measures, reinforcing the importance of standardized, manual-driven treatment protocols [3].

Parallel lines of research highlight the significance of emotional regulation, pragmatic language development, and communicative confidence in therapeutic success, suggesting that interventions addressing emotional processes alongside speech mechanics produce more robust and sustainable changes [4]. In addition, technological advancements – including digital speech therapy applications and tele-speech platforms – are increasingly validated as effective adjuncts that enhance accessibility, practice intensity, and self-monitoring in speech intervention [5; 6].

Within the Kazakhstan and Central Asian context, research underscores the necessity of integrating comprehensive medical-psychological-pedagogical frameworks for stuttering intervention that accommodate linguistic diversity, bilingual acquisition environments, and educational inclusion, as well as the close linkage between speech development and broader cognitive and personality formation [7; 8]. Historically, the concept of level-based and differentiated learning originates in general pedagogical theory, in particular in development and instruction models that emphasize step-by-step learning and individual readiness. The fundamental pedagogical principles proposed by Vygotsky, Galperin, and others have shown that effective skill acquisition occurs through successive stages, moving from basic motor and cognitive regulation to higher levels of functional and communicative competence. Later, these principles were adapted in correctional pedagogy and special education, where structured progression and hierarchical organization of tasks became important support mechanisms for children with developmental and speech disorders. Despite these advances, a notable contradiction persists: while clinical models offer promising results, most intervention research does not systematically integrate structured pedagogical technologies that organize learning based on developmental readiness and educational progression. Traditional speech therapy often remains focused on isolated speech mechanisms or psychological reactance, without leveraging instructional sequencing or differentiated learning strategies drawn from general pedagogy.

The research gap addressed in this study lies in the lack of empirical evidence regarding the effectiveness of applying level-based learning technology as a core pedagogical mechanism for correcting stuttering speech in primary school students. Existing studies rarely examine how structured, multi-level instructional models can be adapted to speech therapy and integrated into the educational process to simultaneously support speech fluency, emotional stability, and cognitive development.

The aim of this research is to substantiate the scientific and practical effectiveness of applying level-based learning technology in the correction of stuttering speech among primary school students.

The object of the study is the special education process.

The subject of the study is the scientific and practical foundations of applying level-based learning technology in speech therapy for stuttering.

The study seeks to contribute to contemporary speech therapy and special pedagogy by offering a structured, pedagogically grounded model that aligns correctional objectives with educational goals and responds to current demands for inclusive and development-oriented intervention strategies.

#### **Materials and methods**

The present study employed a quasi-experimental research design aimed at examining the effectiveness of level-based learning technology in the correction of stuttering speech in primary school students. The research procedures were organized sequentially and implemented in natural educational conditions, which ensured the ecological validity of the obtained results.

##### *Research setting and participants*

The empirical study was conducted at the “Zerek” Children’s Development Center. The participants were 20 primary school students (first grade) diagnosed with stuttering speech disorders. Based on preliminary diagnostic results, the children were divided into two comparable groups: an experimental group (n=10) and a control group (n=10). The groups were balanced in terms of age, severity of speech impairment, and general cognitive development.

Participation in the study was voluntary, and cooperation was established with parents and teaching staff to ensure consistent implementation of the intervention program.

##### *Research design and procedure*

The research was carried out in three consecutive stages:

Stage 1 – diagnostic (identification stage).

At the initial stage, a comprehensive assessment of speech characteristics, articulatory motor skills, and emotional state during speech production was conducted in

both groups. This stage aimed to determine the baseline levels of speech development and to identify specific deficits associated with stuttering.

Stage 2 – formative (intervention stage).

During the formative stage, the experimental group participated in a specially designed correctional-developmental program based on level-based learning technology, while the control group continued to receive traditional speech therapy support. The intervention program was structured according to a four-level model, progressing from basic speech and articulatory skills to the generalization of fluent speech in communicative situations. The program included group and individual speech therapy sessions, corrective exercises, didactic and game-based activities, and elements of psychological support. In addition, consultative and educational work was carried out with teachers and parents to reinforce the corrective influence beyond therapy sessions.

Stage 3 – control (monitoring stage).

At the final stage, repeated diagnostic assessments were conducted using the same instruments as in the initial stage. This made it possible to compare pre- and post-intervention indicators and to evaluate the effectiveness of the applied methodology.

*Research methods and instruments*

To obtain empirical data, a combination of theoretical, empirical, and quantitative methods was used.

Theoretical methods included analysis, synthesis, and generalization of scientific literature on stuttering, speech therapy, and pedagogical technologies.

Empirical methods involved observation, pedagogical experimentation, and psychodiagnostic assessment. The following standardized and practice-oriented diagnostic tools were applied:

Cheveleva's methodology for assessing speech fluency, speech behavior, and the influence of emotional state on speech production in children who stutter [9];

Kozlovskaya's diagnostic exercises for evaluating the level of development of articulatory motor skills [10].

At the diagnostic stage, the severity of speech impairment associated with stuttering was assessed using their diagnostic criteria and classified into three levels: low, medium, and high, based on speech fluency, articulatory motor control, and emotional stability indicators. The baseline distributions of these levels were comparable between the experimental and control groups, ensuring group homogeneity prior to intervention.

Also, the emotional state during the speech was assessed through structured observation using diagnostic indicators, including speech-related anxiety, emotional stress, avoidant behavior, and communicative confidence. Noticeable behavioral signs such as indecision, facial tension, avoidance of speech, and emotional discomfort were

systematically recorded. This assessment ensured that emotional factors were evenly distributed between the groups and did not affect the results of the experiment.

These methods were chosen because of their relevance to the research objectives and well-established use in speech therapy practice with stuttering children.

#### *Data analysis*

The quantitative data obtained at the identification and monitoring stages were analyzed using descriptive statistical methods, including percentage distribution and comparative analysis of indicators in control and experimental groups. In addition, the Mann-Whitney U test for independent samples was used. The dynamics of changes in articulatory motor skills, speech form, emotional state was evaluated by comparing the results before and after the intervention.

Due to the relatively small sample size, the analysis focused on identifying stable positive trends and comparative differences between groups rather than on complex inferential statistics. This approach ensured the reliability and validity of conclusions within the scope of the study design.

#### *Intervention Procedure*

This intervention was carried out as part of a formative experiment aimed at correcting speech difficulties associated with stuttering in primary school students using a level-based learning approach adapted to speech therapy practice. The experimental program is designed in such a way as to ensure the gradual and systematic development of fluent speech by organizing corrective work in accordance with the level of increased speech complexity.

The intervention was carried out with children of primary school age who were diagnosed with stuttering and included a series of structured speech therapy sessions. Participants in the experimental group were trained in level technology, and the control group continued to receive traditional speech therapy treatment without a differential increase in level.

The intervention program was implemented during one full academic year, covering nine months from September to May. Classes with a speech therapist were held three times a week, lasting 60 minutes each. Thus, each participant in the experimental group received approximately 12 sessions per month, for a total of an estimated 108 intervention sessions over the entire study period.

The stage of level-based learning consisted of successive stages of learning, each corresponding to a certain level of speech development. At the initial level, corrective work is aimed at developing articulatory motor skills, regulating speech breathing, forming simple speech patterns, including individual sounds, syllables, short words. At the intermediate level, the tasks are aimed at expanding speech patterns using phrases, short phrases, controlled dialogical speech. At the advanced level, special attention was

paid to the formation of coherent speech, including detailed statements, storytelling and spontaneous communication in structural situations.

In the event differentiated tasks were systematically used in accordance with the current level of speech development of each child. The transition to the next level was determined based on the results of completing tasks at the previous level, which ensured an individual pace of training. During each lesson, regular formative feedback and corrective support were provided to improve fluency and reduce stuttering.

The control group followed traditional speech therapy procedures commonly used in educational practice, focusing on articulation exercises, speech breathing, and fluency training without structured level differentiation. The effectiveness of the intervention was evaluated by comparing post-intervention speech development levels between the experimental and control groups.

### **Results and discussion**

The results of the formative experiment were analyzed to verify the research hypothesis concerning the effectiveness of applying level-based learning technology in the correction of stuttering speech in primary school students. The analysis focused on changes in articulatory motor skills, speech form, and emotional state during speech production, comparing indicators obtained at the diagnostic and control stages in both the experimental and control groups.

#### *Quantitative analysis of results*

At the initial stage of diagnostics, both groups showed a relative level of speech development with a predominance of low and average indicators in all evaluated parameters. This confirmed the initial equivalence of the groups and ensured the correctness of the subsequent comparative analysis.

After the introduction of the Level-based Training Program, positive dynamics were observed in the experimental group for all measurable indicators, and only minor, statistically insignificant changes were observed in the control group. In particular, the proportion of students of the experimental group who reached a high level of development of articulation motor skills increased from 10% to 20%, and the proportion of students with a low level of development of articulation motor skills decreased from 51% to 36%. These results show a clear tendency to improve the coordination and control of speech-related motor functions.

A similar dynamic was recorded in the development of the speech form. After the end of the experiment, 10% of the students of the experimental group reached a high level of fluency, and the proportion of students with low scores decreased from 66% to 51%. On the contrary, there were only minor changes in the control group, indicating that even traditional speech therapy approaches were not enough to achieve relative improvements over the same period of time.

Significant changes were also revealed in the emotional state of students. In the experimental group, the percentage of students who showed emotional stability when speaking increased from 10% to 20%. Meanwhile the percentage of students with pronounced emotional distress decreased from 35% to 20%. These results show the importance of structured pedagogical support to reduce speech-related anxiety and increase communicative confidence (Table 1).

Table 1 – Comparative results of practical and experimental research, in %

Dimensions	Control group						Experimental group					
	At the beginning of the experiment			At the end of the experiment			At the beginning of the experiment			At the end of the experiment		
	High	Medium	Low	H	M	L	H	M	L	H	M	L
Articulatory motor skills	4	28	68	6	30	64	10	39	51	20	44	36
Speech form	0	50	50	0	54	46	0	34	66	10	39	51
Emotional state	0	58	42	0	58	42	10	55	35	20	60	20
Average indicator	1	45	53	2	47	50	6	42	50	16	47	35

The results presented in Table 2 and Figure 1 show that the overall level of speech development in the experimental group shifted significantly towards medium and high indicators. In particular, the proportion of students with high levels of speech development increased from 6% to 16%, while low levels decreased from 50% to 35%. In the control group, these indicators remained largely unchanged.

Table 2 – Comparative results of the diagnostic and control phases for the control and experimental groups, in %

Levels	Control group		Experimental group	
	At the beginning of the experiment	At the end of the experiment	At the beginning of the experiment	At the end of the experiment
High	1	2	6	16
Medium	45	47	42	47
Low	53	50	50	35

*Statistical analysis.* Post-intervention differences between the experimental and control groups were examined using the Mann-Whitney U test for independent samples. This test was selected due to the small sample size and the ordinal measurement level of the outcome variables. For statistical processing, the developmental levels of speech indicators (low, medium, high) were numerically coded as 1, 2, and 3, respectively,

allowing the data to be ranked and compared using nonparametric procedures. Such numerical coding of ordinal categories is a commonly accepted methodological approach in small-sample quasi-experimental research in special education and speech therapy.

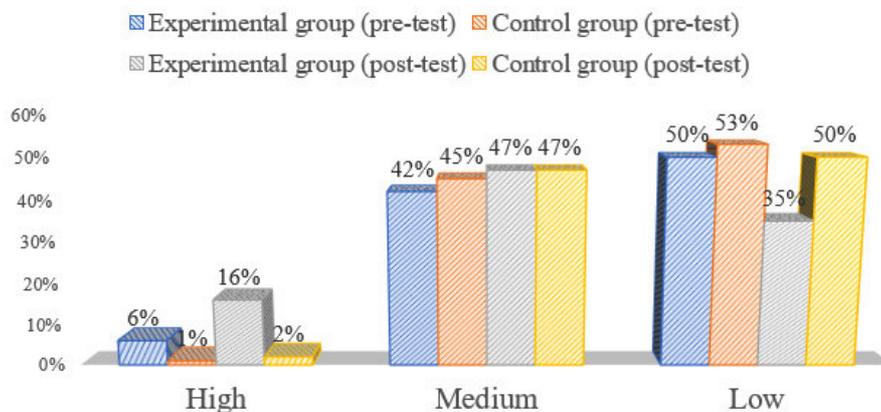


Figure 1 – Comparative indicators of the application of level-based learning technology in the remediation of stuttering speech deficits in the experimental and control groups

At the post-intervention stage, individual coded scores for each participant in the experimental and control groups were ranked jointly, and the sums of ranks for each group were calculated. Based on these rank sums, the Mann-Whitney U statistic was computed to assess whether the distribution of overall speech development levels differed significantly between the two groups. The analysis revealed that the experimental group demonstrated significantly higher overall speech development levels compared to the control group ( $U = 28.0$ ,  $p < .05$ ).

The magnitude of the effect for the Mann-Whitney U test was calculated using the formula  $r = Z / \sqrt{N}$ . Based on the obtained value of U ( $U = 28.0$ ), the standardized Z-score was estimated as  $Z = -1.66$ . The calculated effect value was  $r = .37$ , which indicates the average effect of the intervention in accordance with Cohen's criteria. This result confirms that the observed improvement in fluency and emotional stability in the experimental group was not only statistically significant, but also practically significant in educational and therapeutic contexts.

This statistically significant result indicates that the observed differences between groups were unlikely to have occurred by chance and provides empirical support for the effectiveness of the level-based learning technology. Specifically, the structured, stage-by-stage pedagogical intervention contributed to higher post-intervention speech development outcomes in children who stutter when compared with traditional speech therapy approaches.

*Interpretation and discussion of findings.* The scientific novelty of this study lies in the systematic adaptation of the technology of level-based learning, originally developed within the framework of pedagogical theory, to the field of speech therapy for children with stuttering, and its empirical verification in an educational environment. While the existing hierarchical models of therapy are primarily aimed at the clinical development of speech motor skills, the proposed model is a pedagogically structured intervention structure based on sequencing learning, developmental readiness, and differentiated learning. This approach transforms speech therapy from a predominantly clinical procedure into an integrated pedagogical process that simultaneously supports fluency, emotional stability, and communicative competence.

The observed positive dynamics can be explained by the sequential and cumulative nature of level-based learning, which corresponds to the gradual development of speech mechanisms described in classical and contemporary speech therapy literature. L.I. Belyakova and E.A. Dyakova emphasized that stuttering is characterized by systemic disruptions in the coordination of respiratory, phonatory, and articulatory processes, which require consistent and hierarchically organized correction [11]. The four-level instructional model applied in this study operationalizes this principle by progressing from foundational speech-motor skills to the transfer of fluent speech into communicative contexts.

Unlike fragmentary correctional techniques that focus on isolated components of speech, the level-based model ensures continuity and internal coherence of therapeutic influence. At the initial level, emphasis on articulatory motor control and regulated breathing aligns with the physiological approaches described by G. Shapiro and R. Jacobs, who argue that stabilization of speech motor patterns is a prerequisite for fluent speech production [12]. Subsequent levels address speech rhythm, prosody, and communicative application, reflecting the didactic progression advocated by Z. Tarkowski, who underscores the importance of structured practice in reducing speech initiation difficulties [13]. During the process of teaching complex words, the development of word-formation skills is essential [14]. Subsequently, speech activity can be developed through communication technologies and dialogue with peers [15].

The findings also corroborate the position of Z. Myrkhalykov [16], who highlight that level-based pedagogical frameworks promote learner engagement and prevent cognitive overload by aligning instructional demands with the learner's current developmental capacity. In the present study, this alignment appears to have reduced speech-related tension and facilitated sustained participation in speech activities, which is particularly significant for children who stutter and often experience heightened anxiety in communicative situations.

A key outcome of the research is the demonstrated relationship between speech fluency development and emotional regulation. The reduction in emotional tension during speech observed in the experimental group supports the view expressed by M.P. Boyle that emotional factors, such as self-efficacy and communicative confidence, play a decisive role in successful stuttering intervention [17]. Similarly, S. Baxter note that interventions addressing both overt speech disfluencies and covert emotional reactions yield more stable therapeutic outcomes [18]. The structural and predictive nature of level-based learning can serve as a compensatory psychological mechanism for children to provide a sense of control and achievement at each stage of learning.

These conclusions are also confirmed by international studies conducted in recent years. Modern scientific works emphasize the importance of combining pedagogical differentiation with emotional support in speech therapy programs. In particular, N.E. Neef points out that sequential, repetitive and gradually complex speech tasks contribute to the restructuring of neural speech networks [19]. This condition can partly explain the improvement in articulatory coordination and fluency in the experimental group.

From an educational point of view, the results obtained show that in addition to correcting speech, level-based learning technology also contributes to the development of cognitive and self-regulatory skills. As A. Ermagambet and Z. Movkebayeva argued that speech therapy integrated into the educational process supports the holistic development of children with speech disorders by strengthening attention, motivation, and learning autonomy [20]. The involvement of teachers and parents in the intervention further enhances this effect, creating a supportive communicative environment beyond formal therapy sessions.

While hierarchical and step-by-step intervention models have previously been used in speech therapy, especially in methods of speech fluency formation and stuttering correction, these models are primarily based on clinical and therapeutic paradigms focusing on the physiological and behavioral mechanisms of speech. On the contrary, the level-based learning model proposed in this study is clearly based on pedagogical theory and principles of curriculum design. Unlike traditional approaches to hierarchical therapy, which are usually implemented as isolated therapeutic procedures, the present model integrates speech correction into a structured educational system based on developmental readiness, sequencing, and differentiated learning. Such a pedagogically based structure allows not only to correct speech disorders, but also promotes broader cognitive, emotional and communicative development. Thus, the novelty of this study lies in the systematic adaptation of level-based pedagogical technology as an integrated learning mechanism in speech therapy practice, and not only as a method of clinical intervention.

Thus, the findings of the present study substantiate the authors' position that stuttering correction should be conceptualized as a pedagogical-therapeutic process, where speech

development, emotional stability, and cognitive engagement are addressed simultaneously. The application of level-based learning technology provides a scientifically grounded and practically feasible framework for achieving these objectives within both specialized and inclusive educational settings.

*Scientific novelty and practical significance.* The scientific novelty of this study is the targeted adaptation of level-based learning technology to the speech therapy intervention process for children who stuttering and its empirical verification in the primary school environment. The proposed approach is characterized by a systematic organization of correctional work, where the tasks of speech development are structured in accordance with the degree of complexity and clearly defined levels of communicative readiness. Such a level organization allows to consistently and consciously manage the correctional process, ensuring the gradual acquisition of speech skills and their constant introduction into communicative activity.

Unlike approaches based on only speech exercises or narrowly focused therapeutic methods, the model developed in this study integrates pedagogical principles with speech therapy practice. This integration ensures that the correctional process works as a structured learning system, in which each stage performs a specific corrective function and prepares the child for the next levels of speech activity. As a result, speech therapy intervention becomes consistent, predictable and is aimed at taking into account individual characteristics in speech and emotional development.

The practical significance of the study is determined by the possibility of using the proposed model in specialized and inclusive educational environments. The level-based structure provides speech therapists with a flexible methodological tool that supports the individualization of learning while maintaining a single corrective basis. Such flexibility is especially important in the process of working with heterogeneous groups of students, as it allows the specialist to adapt the pace and content of the intervention without violating the general logic of correctional work.

*Limitations and implications for further research.* Despite the positive outcomes obtained, several limitations of the present study should be acknowledged. The relatively small sample size and the limited duration of the intervention restrict the extent to which the results can be generalized. These constraints also limit the ability to evaluate the long-term stability of the achieved improvements in speech fluency and communicative behavior.

Further research should therefore focus on expanding the sample and extending the duration of observation in order to assess the persistence of corrective effects over time. Additional studies may also explore the application of level-based learning technology with different age groups and varying degrees of stuttering severity. Such investigations

would contribute to a more comprehensive understanding of the methodological potential of this approach and support its broader implementation in speech therapy practice.

Nevertheless, the findings of the present study provide convincing evidence that level-based learning technology constitutes an effective pedagogical mechanism for addressing stuttering in primary school students. The results substantiate its value as a structured and adaptable model that supports both corrective and educational objectives within inclusive speech therapy settings.

### **Conclusion**

The results of the present study confirm the effectiveness of applying level-based learning technology in the correction of stuttering speech among primary school students. The pedagogical experiment carried out showed that the structural, multilevel model of learning contributes to a significant improvement in articulatory motor skills, fluency and emotional stability, thus confirming the hypothesis of the research put forward.

The pedagogical experiment carried out showed that the structural, multilevel model of learning contributes to a significant improvement in articulatory motor skills, fluency and emotional stability, thus confirming the hypothesis of the research put forward.

From a scientific point of view, this study expands modern scientific approaches to the correction of stuttering, justifying the pedagogical potential of the technology of step-by-step training in speech therapy practice. Unlike traditional approaches, which often consider speech mechanisms in isolation, the presented model conceptualizes stuttering correction as an integrated pedagogical-therapeutic process. This approach is consistent with multifactorial interpretations of stuttering, and sustained improvement in speech supports the need to simultaneously develop the physiological, emotional and cognitive components of speech activity.

The scientific novelty of the study is determined by the adaptation of the technology of level learning for speech therapy purposes in the context of primary education and its empirical testing. The four-level correctional model developed as part of the study provides a clear methodological basis that allows you to systematize therapeutic content in accordance with the level of development readiness of the student, ensure the continuity of corrective influence and gradually transfer fluency to specific communicative situations. This contribution substantively complements the existing speech therapy methods, integrating the principles of pedagogical differentiation and step-by-step training into the practice of Correction.

The practical significance of the results obtained is characterized by the possibility of using the proposed model in specialized and inclusive educational environments. The structural nature of level training creates conditions for speech therapists to individualize training, observing the methodological sequence. In addition, the systematic involvement of teachers and parents in the correctional process increases the stability of the results

achieved and contributes to the formation of a favorable communicative environment outside of formal therapeutic sessions.

At the same time, despite the positive results obtained, the study has a number of limitations, such as the limited sample size and the duration of the intervention, which can make it difficult to generalize the results on a wide scale. In this regard, future research should be aimed at conducting longitudinal studies covering groups with a large number of participants, as well as studying the possibilities of adapting level learning technology for different age periods and different levels of severity of stuttering. In addition, in future work, it is relevant to consider the potential for integrating digital and communication technologies into the level speech therapy model.

Thus, the conducted study proves that level-based learning technology is a scientifically justified and practical approach to correcting stuttering in primary school students. Its implementation contributes not only to the improvement of speech fluency but also to the holistic development of children with speech disorders, thereby addressing key objectives of modern inclusive and special education.

*Contribution of the authors:*

*N. Duissekeyeva – was responsible for the conceptualization of the study, development of the theoretical framework, and review of relevant literature on level-based learning approaches in speech therapy for stuttering.*

*A. Bekmurat – coordinated the research design and methodological framework, supervised the study implementation, and contributed to the critical revision and final approval of the manuscript.*

*G. Karabalayeva – contributed to the interpretation of findings, formulation of practical implications for speech therapy practice, and language editing of the manuscript.*

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#### **Тұтығу тіл бұзылысын түзетуге арналған логопедиялық деңгейлік оқыту әдісі**

**Аннотация.** Тұтықпа – бұл ауызша сөйлеу тілінің еркін сөйлеуіне ғана емес, сонымен қатар бастауыш сынып оқушыларының эмоционалдық әл-ауқаты мен танымдық дамуына да әсер ететін күрделі сөйлеу тілі бұзылысы. Қазіргі таңда, логопедиялық практикада түзету жұмыстарын білім беру үдерісімен үйлестіретін педагогикалық негізделген тәсілдерді қолдану қажеттілігін көбірек атап өтуде. Осы тұрғыда осы зерттеу тұтығу тіл бұзылысын түзетудің құрылымдық педагогикалық механизмі ретінде деңгейлік оқыту технологиясын қолдануды қарастырады. Зерттеу логопедиялық практикаға бейімделген көп деңгейлі нұсқаулық моделінің тиімділігін негіздеуге бағытталған. Негізгі артикуляциялық және сөйлеу-моторикасын дамытудан коммуникативтік жағдайларда еркін сөйлеуді жалпылауға дейінгі төрт деңгейлі түзету бағдарламасы әзірленді. Зерттеу барысында тұтықпасы бар бастауыш сынып оқушыларынан құралған бақылау және эксперименттік топтармен квазиэксперименттік жұмыс жүргізіліп, логопедиялық әдістер, түзету жаттығулары және мұғалімдер мен ата-аналардың қолдауы кешенді түрде қолданылды. Педагогикалық эксперимент нәтижелері деңгейлік оқыту технологиясының дәстүрлі логопедиялық тәсілдермен салыстырғанда сөйлеу еркіндігін, артикуляциялық моториканы және эмоционалдық тұрақтылықты дамытуда анағұрлым тиімді екенін көрсетті. Зерттеудің практикалық маңыздылығы ұсынылған модельді арнайы және инклюзивті білім беру жағдайларында қолдану мүмкіндігімен айқындалады. Бұл зерттеудің құндылығы деңгейлік оқыту принциптерін интеграциялау арқылы логопедияның әдіснамалық

негіздерін кеңейтуден тұрады. Осылайша тұтығу тіл бұзылысын түзетудің тұтас, педагогикалық бағытталған стратегияларын жасауға ықпал етеді.

**Кілтті сөздер:** тұтықпа, логопедия, деңгейлік оқыту, еркін сөйлеу, артикуляциялық моторика, эмоционалдық реттеу, бастауыш сынып оқушылары

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### Подходы уровневого обучения в логопедии при заикании

**Аннотация.** Заикание – это сложное речевое расстройство, которое влияет не только на беглость устной речи, но и создает проблемы для эмоционального благополучия и когнитивного развития учащихся начальной школы. В наши дни логопедия все чаще подчеркивает необходимость педагогически обоснованных подходов, которые интегрируют коррекционное вмешательство в образовательный процесс. В этом контексте в настоящем исследовании рассматривается применение технологии уровневого обучения в качестве структурированного педагогического механизма коррекции заикания. Исследование направлено на обоснование эффективности многоуровневой модели обучения, адаптированной к логопедической практике. Была разработана четырехуровневая коррекционная программа, направленная на развитие базовых артикуляционных и речедвигательных навыков до обобщения беглой речи в коммуникативных ситуациях. В исследовании использовался квазиэкспериментальный подход, включающий контрольную и экспериментальную группы учащихся начальной школы с диагнозом заикание, сочетающий логопедические методы, корректирующие упражнения и скоординированную поддержку со стороны учителей и родителей. Результаты педагогического эксперимента показывают, что уровневый подход к обучению приводит к более выраженному улучшению беглости речи, артикуляционной моторики и эмоциональной устойчивости по сравнению с традиционными логопедическими методами. Практическая значимость исследования заключается в применимости предложенной модели как в специализированных, так и в инклюзивных образовательных учреждениях. Ценность этого исследования заключается в расширении методологических основ логопедии за счет интеграции принципов уровневого обучения, что способствует разработке целостных, педагогически ориентированных стратегий коррекции заикания.

**Ключевые слова:** заикание, логопедия, уровневое обучение, беглость речи, артикуляционная моторика, эмоциональная регуляция, учащиеся начальной школы

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