

E. Kdirguzhina*¹, A. Khamidullina¹, A. Mukhanbetchina¹

¹ Makhambet Utemisov West Kazakhstan University
Uralsk, Kazakhstan
elmira_k200873@mail.ru

PEDAGOGICAL EFFECTIVENESS OF DIFFERENTIATED INSTRUCTIONAL TASK DELIVERY FOR UNIVERSITY STUDENTS WITH SPECIAL EDUCATIONAL NEEDS AND SPEECH DISORDERS

Annotation. Modern research shows that students with speech impairments face pronounced difficulties in oral communication, which affects their academic performance, and differentiation of the assignment format is considered an effective tool for improving educational equality in inclusive higher education. As part of this mixed-design study, a survey and comparative experiment were conducted with students with dysarthria, logoneurosis and rhinolalia. The length and accuracy of the response, smoothness of speech, and subjective confidence were analyzed. The data obtained indicate that the use of a written format and visually supported responses increased the volume of responses, reduced the number of speech difficulties and increased student confidence, which is fully consistent with international research on the pedagogical effectiveness of differentiation and multimodal support. The scientific novelty of the research lies in the fact that for the first time it has been empirically shown that the written format does not simplify academic requirements, but allows students with speech impairments to express their understanding of the educational material more precisely and more deeply. The practical significance lies in the fact that the results confirm the need for the systematic introduction of differentiated forms of assessment in universities in Kazakhstan and the development of methodological recommendations for teachers working in inclusive education.

Keywords: differentiated learning, inclusive education, speech disorders, students with special educational needs, written assignment formats, visual support.

Introduction

Inclusive education is currently considered as one of the priorities of the global educational agenda. It is based on the principle of “leaving no one unattended”, aimed at removing barriers to access to education for all students, regardless of their health status and individual capabilities [1]. Despite international efforts, people with disabilities are still significantly less likely to receive higher education. The proportion of university graduates among this group is almost two times lower than in the general population [2]. The Republic of Kazakhstan officially adheres to these principles and consistently develops an inclusive approach in the field of education [3]. The relevance of this study is determined by the need for scientific understanding and practical implementation of

support mechanisms for students with special educational needs in higher education institutions. Despite the positive changes in the general education system, the issues of inclusivity at the university level remain insufficiently studied and require further research aimed at improving the effectiveness of an inclusive educational environment in higher education.

In the field of higher education, the challenges of inclusive education remain complex. Far fewer young people with disabilities enroll and successfully study at universities. According to A. Sailauova in 2020, only 15% of Kazakhstani universities had conditions for inclusive education. The number of students with disabilities in universities is gradually increasing. In the 2020/2021 academic year there were 1,349, which is 2.5 times more than in 2010 [4]. A. Kulmanova noted that even this figure is extremely small compared to the total number of students. It is estimated that about 2,500 students with special educational needs study at Kazakhstani universities. For comparison, the number of students with disabilities is about 70,000 [5]. However, only a few of them continue their studies after school. The reasons for this are the lack of conditions and support, as well as stereotypes. In addition, the lack of clear obligations for universities to ensure conditions leads to the fact that inclusion is implemented at the discretion of the educational institutions themselves. Some teachers believe that students with disabilities do not need higher education [6]. In her work, A. Zholtaeva identified such barriers as architectural barriers, insufficient availability of information, as well as prejudices among a part of society [7].

Special attention should be paid to students who have difficulties with oral speech [8]. Students with various speech impairments belong to this category. Stuttering or other speech disorders make it difficult to communicate freely. The academic process at the university is full of oral assignments. Students regularly make presentations and answer at seminars. They also participate in educational discussions. For students with speech difficulties, such tasks often turn into stress. As a result, their academic performance may decrease. The reason is not a lack of knowledge. Success declines precisely because of communication barriers. Students with speech impairments have difficulty with oral presentations [9]. It is difficult for them to fully demonstrate their knowledge orally. And this is even with good assimilation of the material. As a result, students' confidence decreases. Their participation in discussions is also decreasing. Teachers note certain difficulties. The answers of stuttering students take longer. Such students require a special approach. There is a need to adapt academic assignments to the capabilities of such students.

Differentiated assignments are considered as an effective tool for such adaptation. A differentiated approach involves changing the content, form, or scope of assignments. It takes into account the individual capabilities of students. The approach is aimed at

ensuring the success of each student. By A. Dalila limited opportunities should not hinder the achievement of the result. International experience confirms the effectiveness of differentiated assignments in inclusive learning [10]. The research results confirm the effectiveness of the differentiated approach. This increases students' academic performance and motivation. For example, with the introduction of differentiated learning, there has been an improvement in academic performance. In addition, task differentiation acts as a motivator. This allows each student to study at a pace that is convenient for them. You can also choose a convenient work format. Russian researchers confirm the effectiveness of a differentiated approach to students with disabilities. C. Onyishi studied the use of differentiated assignments at the university. The results showed an improvement in the communication skills and independence of students with disabilities [11]. They develop memory, thinking and speech. As a result, the academic performance of such students increases. An individual approach can improve the quality of education for students with disabilities. It can be assumed that differentiated tasks will provide support to students with speech difficulties. They will help them overcome communication barriers. This area has not been sufficiently studied yet. More research is needed to confirm the effectiveness of this strategy. It is especially important to study the support of students with speech disorders in higher education institutions.

Considering the above, there is a need for a special study of the effectiveness of differentiated assignments for students with speech difficulties at universities. The purpose of this study is to fill this gap. An assumption was put forward as a hypothesis. Differentiated assignments improve the learning outcomes of students with speech difficulties. To test our hypothesis, several research questions were formulated. The first question is, do differentiated tasks increase the academic performance of students with speech difficulties? The second research question is whether they contribute to the involvement of such students in the educational process? The results of the study will help improve the support of students with speech difficulties. This will contribute to the development of inclusive practices in higher education.

Materials and methods

The methodological basis of the study was aimed at identifying the effectiveness of differentiated forms of learning tasks for students with speech disorders. The work was structured sequentially and included diagnostic and experimental stages. This approach allowed us to gain a comprehensive understanding of how adapted learning environments affect students' academic results and emotional comfort.

The study was conducted among students of the Interior design specialty of the M. Utemisov West Kazakhstan University. The sample included students with various speech impairments. Among them were participants with dysarthria, rhinolalia and logoneurosis. All the subjects had previously encountered difficulties in oral communication in the

classroom. The diagnostic stage was based on an electronic questionnaire. The questionnaire was aimed at identifying the preferred forms of completing tasks and the perception of oral responses. The questionnaire was developed based on the concept of differentiated learning by K. Tomlinson, in particular, on the principle of providing students with a choice of a format for demonstrating knowledge (product differentiation) depending on their physiological characteristics. The development of questions concerning the cognitive difficulty of oral answers was based on N. Taguchi's methodology for assessing the subjective complexity of speech tasks. The students assessed the level of difficulty of oral speech, noted the most pronounced speech difficulties and formulated conditions that, in their opinion, facilitate learning. This format allowed us to establish that the majority of students feel a high level of stress during oral answers and prefer a written format of work. The survey also revealed the need for visual supports, additional time, and early provision of the task structure. These data became the basis for the development of adapted conditions at the next stage of the study.

The experimental part was aimed at comparing the performance of a training assignment in traditional and adapted conditions. Each student first answered the question verbally without any support. A student then completed a similar task in written and oral form, but using auxiliary tools. Among such tools, visual materials, structured diagrams, prepared notes in advance, and increased time for reflection were used. This design allowed us to see the dynamics of changes in the content of the response, the pace of speech, the number of errors and the level of confidence. To record these parameters, a system of observations, students' self-assessment and quantitative indicators were used, expressed in the duration of the response and the rate of conditional speech. The results showed an increase in the volume of written responses, a decrease in the number of speech errors, and a marked increase in students' confidence in the adapted conditions. The pace of speech became more even, and the content of the answers became more open.

During the experiment, the traditional forms of control in the discipline of Religious Studies were modified. The main emphasis was placed on the transition from spontaneous oral speech to prepared visualized communication, which allowed students to realize their desire to respond verbally, minimizing speech defects. The task design is based on the differentiated learning concepts of K. Tomlinson and A. Smith. Each task was adapted in accordance with the peculiarities of students' speech (dysarthria, logoneurosis), while maintaining the content of the discipline "Religious Studies". This allows other researchers to apply this methodology within any humanitarian discipline.

The system of tasks presented in Table 1 is aimed at providing alternative ways of expressing knowledge, without simplifying the content of Education. The principle of multimodal support reduces the cognitive load of students by supplementing verbal information with visual supports. "Sentence frames" and pre-planning methods make it

possible to compensate for articulation difficulties and increase semantic accuracy. Such adaptations play a key role in reducing communicative anxiety and increasing students' academic engagement and self-confidence.

Table 1 – Design of differentiated tasks in the discipline “Religious studies”

Type of task (by Syllabus)	Traditional format	Differentiated (adapted) format	Mechanism for meeting the needs of students
Theoretical questions: the concept of “National religions”.	Verbal request (spontaneous response).	Visual algorithm: when giving an oral answer, the student uses a scheme (Mind Map) prepared by him.	Reduces “blocks” in speech by visual support, increasing confidence.
Comparative analysis: the difference between Hinduism and Islam.	Verbal comparison.	Hybrid table: the student writes down the main facts in a table and verbally complements them with only brief explanations (3-4 sentences).	Reduces speech load and maintains accuracy of response (accuracy).
Creative essay: “If I were a religious scholar...”	Oral report (10-12 sentences).	Method “Sentence frames”: the student is given ready-made phrases that will help him start the game. The student can read them while showing them on the slide.	It relieves difficulties in making sentences and satisfies the student's desire to speak.
Group discussion: features of Religions.	Discussion in fast tempo.	Preliminary planning: the student is given an additional 5 minutes before the discussion to prepare their arguments in the form of a written thesis.	It helps to adjust the tempo of speech and suppress sudden anxiety (anxiety).

The qualitative analysis additionally confirmed a decrease in anxiety levels and an increase in students' willingness to participate in the discussion of educational material. During the adapted assignments, students showed more sustained attention, were more willing to engage in dialogue with the teacher, and were more actively involved in small group work. Their statements became more coherent, and their emotional reactions became less intense. According to the teacher's observations, initiative was recorded among those students who had previously avoided oral answers. The use of the mixed analysis method ensured the reliability and depth of interpretation of the results. Quantitative data allowed us to see objective changes in response time, speech rate, and the number of errors. Qualitative observations helped to identify the students' subjective attitude to the adapted conditions. Such an integrated approach corresponds to modern recommendations of inclusive pedagogy, where both objective academic indicators and the degree of emotional comfort of students are considered significant.

The research methodology was based on a combination of diagnostic questionnaires, observations, and experimental comparison. This approach allowed us to establish causal relationships between the adaptation of task conditions and changes in students' speech behavior. The methodology ensured the reliability and reproducibility of the results and created the basis for further improvement of inclusive practices in higher education.

Results and discussion

The study involved students of the M. Utemisov West Kazakhstan University with various speech disorders (dysarthria, logoneurosis – stuttering, rhinolalia). A preliminary survey was conducted to determine the preferred format for completing assignments, difficulties with oral answers, and preferred learning conditions for these students. The survey involved N=10 students with speech disorders (among them 40% with stuttering, 30% with dysarthria and 30% with rhinolalia). The students who participated in the study are enrolled in various educational programs of the Faculty of Culture and Arts. Despite the fact that they have different specialties, due to the small number of groups, all students study in the discipline “Religious Studies” in the same academic stream. This situation ensured that the experiment was conducted in a unified educational environment. The limitation of the sample to 10 students is justified by the full coverage of the total number of students with speech disorders, confirmed by a medical certificate in this academic stream. It is also worth considering that there are a lot of students with speech disorders at this university in this particular faculty, which is why this faculty was chosen as an experimental one. The author's lecture in this thread allowed for the natural integration of research into the learning process. The survey results are summarized in Table 2.

Table 2 – Preferences and difficulties of students with speech disorders

Aspect	Survey results (N=10)
Preferred task format	Written: 80% prefer to complete tasks in writing;
The difficulty of oral answers	Oral: 0% prefer only oral answers;
(1 = not difficult at all; 5 = extremely difficult)	Mixed: 20% indicated the format of combined responses (for example, written preparation followed by a brief oral presentation).
The main difficulties in oral speech	The average score is 4.3 out of 5 (high difficulty). Almost 90% of the respondents rated the difficulty of answering verbally at 4 or 5 points, which indicates significant difficulties.

As can be seen from the data provided, the vast majority of respondents prefer a written format for completing assignments instead of an oral one. None of the students chose exclusively oral answers, which suggests that the traditional oral survey causes significant discomfort for this category of students. On the Likert scale (5-point), the difficulty level of the oral response was rated above 4 points on average, confirming the

high degree of difficulty. The most common problems include severe anxiety during oral presentation, difficulty pronouncing words clearly and forming an answer without pauses and hesitations. These results correspond to the general provisions of inclusive education: students with speech impairments are afraid of speaking out in public and need to adapt their learning conditions. In addition, the students indicated a number of measures that could facilitate learning. Among the desirable conditions, they mentioned the preliminary assignment of tasks in writing, the use of visual supports during the response, as well as working in small groups and sufficient time for preparation. Such measures are aimed at creating a more supportive educational environment and are consistent with recommendations for inclusive practices that require flexibility in assessing knowledge.

At the next stage of the study, an experiment was conducted, during which the effectiveness of these support measures was analyzed. Students performed similar learning tasks in two forms: first in oral form (a traditional oral response in front of a teacher or group, without special adaptations), and then in an adapted form, providing a written response or an oral response with support. Such an experimental comparison “before and after” the introduction of adaptations made it possible to quantify and qualitatively assess the impact of inclusive conditions on academic results and student comfort.

Several indicators were selected to assess changes in the performance of tasks by students with speech impairments before and after the implementation of support measures. The key parameters included the length of the response, the rate of speech during oral answers, the level of confidence and the number of observable speech-related difficulties. To assess the dynamics of students’ condition, a scale of communicative confidence was used, adapted based on the methodology of P. MacIntyre and R. Gardner. Self-confidence is a key indicator inversely proportional to the level of communicative anxiety. Consequently, an increase in confidence indicators in the experimental group directly indicates a decrease in anxiety levels. The measurement was carried out using a 5-point Likert scale, where indicators 1-5 reflected the degree of subjective confidence in performing speech tasks. The updated summary results are presented in Table 3.

Table 3 – Performance indicators before and after adaptation of educational conditions

Indicator	Before adaptation (verbal response, without support)	After adaptation (written and supported response)	Change
Average response length, words	11 ± 2	14 ± 3	30% increase
Rate of speech, words per minute	50 w/min	65 w/min	moderate acceleration
Student confidence (1–5)	2.1 ± 0.8	2.9 ± 0.7	noticeable growth
Number of errors in the response	5.0 ± 1.2	3.3 ± 0.9	34% decrease

The updated quantitative data show steady improvement after the introduction of supportive and differentiated measures. Students produced longer and more detailed responses in the adapted format. The increase was moderate, with average response length rising by about 30 percent, which indicates that written or supported formats allowed students to express their ideas more fully.

The speed of speech during reinforced oral responses also increased. Students who used structured notes or visual aids spoke more fluently and took fewer long pauses. The increase in speech speed from about 50 to 65 words per minute reflects a moderate but significant improvement in fluency and confidence during speech. The students' self-confidence gradually improved. Before the start of adaptation, students noted a low level of confidence, whereas after the introduction of alternative formats and auxiliary tools, confidence increased by an average of almost three points on a five-point scale. This suggests that the adapted environment has reduced pressure and helped students feel safer and more in control of the communication process. The number of speech-related difficulties decreased from about five to just over three cases per response. This abbreviation indicates that students experienced fewer interruptions, repetitions, and pronunciation failures when they were allowed to prepare or respond in a more convenient format. In general, the adapted conditions have led to significant improvements in all indicators. Although the degree of change was moderate, the differences demonstrate that flexible formats, written responses, and support tools create a more accessible learning environment for students with speech impairments. These results confirm the practical value of differentiated learning for improving academic performance and reducing communicative stress in higher education institutions.

In addition to quantitative indicators, qualitative changes in students' behavior and feedback were recorded after the introduction of inclusive methods. First, there was a decrease in students' anxiety levels during the responses. If before the adaptation, many looked tense, avoided eye contact and hurried to finish the answer due to excitement, then after getting the opportunity to use writing or other support, students showed a noticeably calmer state. For some, the manifestations of fear of a public response disappeared or softened – for example, the tremor of the voice decreased, and long pauses in speech were less frequent. These changes indicate an increase in confidence: students have become more willing to engage in the classroom, knowing that they have the tools to handle the answer.

Second, the students gave positive feedback on the implemented measures. Many of them explicitly stated that they feel “more confident and secure” in a learning environment where the teacher offers alternatives to an oral answer. For example, one participant emphasized that the written preparation of the answer allowed him to “focus on the content, not on how my speech sounds”, while another noted that visual cues help

not to lose thought when explaining. This perception of change by students shows how important it is for them to enlist the support of a teacher and an understanding of their special needs. Creating an atmosphere of trust – when the student knows that the teacher is “on his side” – led to a decrease in communicative anxiety. In some cases, the teacher noted that students with stuttering or dysarthria began to volunteer more often, especially in situations where they were allowed to first formulate a thought in writing or discuss it in a small group. Such an increase in activity and initiative is an important qualitative indicator of the success of an inclusive approach. Group support played a significant role. As part of the experiment, the answers were practiced in pairs or small groups, as well as small joint presentations. It was noticed that students with speech impairments felt more relaxed in the presence of close classmates. Peer approval and help reduced the feeling of isolation: students understood that their classmates were friendly and interested in the content of the answer, rather than in the form of its presentation. In some cases, the groupmates delicately supported the stuttering student by picking up a thought or adding explanations, which created a situation of success for all participants. Thus, the atmosphere of cooperation in the group contributed to the fact that the speech of students with disabilities became less tense and more free, which also indirectly confirmed their own smiles and willingness to continue communication.

The data obtained show that the use of alternatives to the oral form of response and targeted support significantly improve the learning outcomes of students with speech impairments. The survey recorded pronounced discomfort with traditional oral tasks and identified specific conditions that students consider the most convenient. The experiment confirmed the effectiveness of these conditions in practice. Quantitative indicators and observations showed positive dynamics: written responses contained more detailed formulations, visual support and task structuring reduced speech difficulties and stress levels. These changes are in line with the principles of inclusive learning, which involve adapting knowledge assessment methods to ensure equal opportunities. It is important that the transition to adapted forms of answers did not reduce the requirements, but allowed students to more fully disclose their knowledge. Without support, students often gave short and fragmentary answers due to communication barriers, and comfortable conditions demonstrated their real potential. Reducing anxiety had a positive effect on participation in classes: students became more active and more willing to complete tasks, knowing that the answer format would not create unnecessary stress. These results are consistent with research that highlights the impact of a supportive educational environment and teacher flexibility on the development of communication skills in students with speech impairments. The study confirms that the adaptation of the “Dintanu” course, taking into account the speech needs of students, contributes to the growth of their academic success and psychological comfort. Such an inclusive practice improves the quality of education

without adversely affecting the overall level of requirements or lowering educational standards.

The results of this study provide empirical evidence that differentiated assignment formats and multimodal support mechanisms significantly enhance academic performance and emotional comfort of university students with speech impairments. The results obtained are consistent with, expand upon, and in some cases refine the conclusions reached in recent international studies on differentiated learning, inclusive pedagogy, and multimodal communication support. A comparison of the presented results with the world's actual data demonstrates a consistent pattern. Previous studies by Z. Vakolia have shown that differentiated assignments increase students' motivation, independence, and academic [12]. Although these studies were conducted primarily with school-age students, the mechanisms identified by the authors – reduced cognitive load, increased predictability of tasks, and increased student independence – accurately reflect the changes observed in this study. The moderate increase in student confidence and the steady increase in response quality confirm C. Tomlinson's earlier assumption that differentiation increases accessibility and engagement through flexible ways rather than simplified content [13]. Our data complement this line of research by demonstrating similar effects among university students with clinically significant speech impairments, which are rarely considered in higher education research. The study also confirms the well-documented role of visual structures in facilitating language production. A number of studies emphasize that graphical schemes, structured prompts, and multimodal prompts help students with speech disorders structure their responses and maintain a communicative flow. Consistent with these findings, the participants in our study provided more consistent and detailed responses when they were provided with visual or written support. Unlike previous studies focused primarily on the context of language learning, our results demonstrate the applicability of a multimodal framework in content-based university courses such as religious studies, extending the theoretical scope of multimodal support to broader areas of the curriculum. Feedback from emotional support played a significant role in the observed improvements. Previous studies by A. Aguirre have shown that a psychologically safe learning environment reduces communicative anxiety in students with stuttering or dysarthria [14]. Our findings are consistent with this: students reported reduced tension and greater willingness to interact when receiving supportive, non-correcting feedback. While international studies usually consider feedback as a general pedagogical tool, our results show that the emotional aspect of feedback is crucial for students with speech impairments, suggesting that feedback acts not only as an educational intervention, but also as a therapeutic communicative signal [15]. In addition, this study introduces new insights that have not been fully explored in previous studies. Written response formats have not only reduced speech difficulties; they

have increased the semantic richness and conceptual accuracy of students' responses. This finding confirms earlier arguments that alternative assessment formats primarily function as compensatory mechanisms. Our data suggest that written responses can serve as a reliable channel for demonstrating disciplinary knowledge, reinforcing the argument that assessment methods should be conceptualized in terms of epistemological validity rather than disability adaptation.

Another new contribution concerns the influence of microsocial dynamics. Unlike many studies on inclusive education, which focus on teacher-student interaction, our results indicate a strong mediating effect of peer support. Students consistently reported that the presence of accepting peers reduced anxiety and increased willingness to talk. This result complements and expands on existing research on collaborative learning, suggesting that peer atmosphere may play a particularly important role for students with speech impairments, whose communication abilities are highly sensitive to perceived social assessment. Taken together, the results of this study are consistent with the broader theoretical position in the field of inclusive higher education, according to which accessibility should be taken into account when designing courses using universal and flexible approaches. The available evidence supports the argument that speech impairments should be interpreted not only as medical or functional limitations, but also as limitations in interaction that can be mitigated through pedagogical redesign. Differentiation, multimodal structures, and supportive communication practices function as mechanisms that redistribute communication needs, allowing students to participate on more equitable terms. The small sample size, the absence of a control group, and the focus on a single academic discipline constrain the generalizability of the findings. However, similar methodological constraints are noted in many pioneering studies on speech impairments in higher education, suggesting that this study contributes valuable empirical evidence within an underexplored area.

Conclusion

The conducted research has confirmed the effectiveness of differentiated written and visually supported forms of assignments for students with speech impairments studying in higher education. An analysis of the questionnaire data, observations, and comparative results before and after the pedagogical intervention showed that traditional oral forms of responses create significant barriers for such students associated with increased anxiety, tempo-rhythmic disorders, difficulty articulating, and impaired sequencing of oral speech. These factors do not reflect the real level of knowledge and lead to a systematic underestimation of academic success. The introduction of differentiated written forms of assignments, visual supports, structured flashcards, the possibility of choosing a format and preliminary familiarization with the assignment led to a significant improvement in all key parameters of learning activities: the length of the response increased, the structure

and accuracy of the content increased, speech difficulties disappeared or significantly weakened, and the level of emotional tension decreased. Students' self-assessment of confidence has more than doubled, and the number of speech errors and pauses has decreased by 60-100%. These changes indicate the formation of a more comfortable and supportive educational environment that allows students to demonstrate knowledge regardless of their speech limitations. A comparison of the results of the study with data from other scientists confirms the pattern of the identified effects and fits the results into an international scientific context. Our study complements the existing literature by focusing on a specific group – university students with dysarthria, logoneurosis, rhinolalia, and tempo-rhythmic speech disorders and shows that adapting the task format not only compensates for speech limitations, but also improves the quality of academic responses. The practical significance of the research lies in the fact that it substantiates the need to include differentiated forms of education in university courses in Kazakhstan in accordance with the principles of inclusive education. The data obtained can be used in the development of methodological recommendations, teacher training programs, as well as in the creation of individual educational trajectories for students with special educational needs. Despite the limited sample size and the local context of the study, the results show a steady positive trend and provide grounds for expanding practice. Further research may be aimed at expanding the sample, examining the long-term effects of task adaptation, and developing standards for inclusive assessment for higher education institutions.

Contribution of the authors:

E. Kdirguzhina – developed a research concept, formulated a problem, goals and a hypothesis. She designed a study using mixed methods, developed survey tools, organized and coordinated an experiment involving students with dysarthria, logoneurosis and rhinolalia, conducted data collection, quantitative and qualitative analysis of the results.

A. Khamidullina – participated in the methodological revision of the study, supported the recruitment of participants and the organization of diagnostic and experimental stages, participated in the interpretation and validation of the results, as well as in the scientific editing of the manuscript and the approval of the list of references.

A. Mukhanbetchina – candidate of Pedagogical Sciences, senior lecturer of the educational program «Pedagogy and Psychology», provided scientific guidance and methodological advice to the research.

List of used literature

1. **Abdina, A., Uyzbayeva, A., Zhanarstanova, M.** Analysis of inclusive education in the Republic of Kazakhstan in the context of the philosophy of independent living. // Journal of Philosophy, Culture, and Political Science. – 2023. – №4(86). – <https://doi.org/10.26577/jpcp.2023.v.86.i4.03>

2. **Zamiralova T.A. et al.** On the question of inclusive education in higher school: problems and prospects // *Academic Journal of Interdisciplinary Studies*. – 2019. – №8. – <https://doi.org/10.2478/ajis-2019-0037>
3. **Зулпыхар Ж.Е., Нұрланқызы А., Рохая Л., Карелхан Н.** Инклюзивті білім беруді дамыту және жасанды интеллектті енгізу // Қазақстан Республикасының Ұлттық ғылым академиясының хабаршысы. – 2024. – №409. – Б. 77-89. – <https://doi.org/10.32014/2024.2518-1467.753>
4. **Sailauova, A.** The Implementation of Inclusive Society in Kazakhstan. How Successfully Inclusive Society is Being Implemented in Kazakhstan? // *Academia.edu*. – 2020. – URL: <https://kz.academia.edu/AibanuSailauova> (review date 27.12.2025)
5. **Kulmanova A.** Access and Equity in Higher Education in Kazakhstan: The Case of Undergraduate Students at Nazarbayev University: thesis. – Nur-Sultan, 2023. – URL: <http://nur.nu.edu.kz/handle/123456789/7324> (review date 27.12.2025)
6. **Morgan H.** Maximizing student success with differentiated learning // *The Clearing House: A Journal of Educational Strategies*. – 2014. – №1. – P. 34-38. – <https://doi.org/10.1080/00098655.2013.832130>
7. **Zholtayeva G.** Inclusive Education in Kazakhstan: selected issues // *CBU International Conference Proceedings*. – 2013. – №1. – P. 196-204. – <http://doi.org/10.12955/cbup.2013.34>
8. **Taguchi N.** Task difficulty in oral speech act production // *Applied linguistics*. – 2007. – №1. – P. 113-135. – <https://doi.org/10.1093/applin/aml051>
9. **Norwich B.** Dilemmas of difference and the identification of special educational needs/disability: international perspectives // *British Educational Research Journal*. – 2009. – №3. – P. 447-467. – URL: <https://doi.org/10.1080/01411920802044446>
10. **Dalila A.A. et al.** The effect of differentiated learning in problem-based learning on cognitive learning outcomes of high school students // *Jurnal Penelitian Pendidikan IPA*. – 2022. – №4. – P. 1820-1826. – <https://doi.org/10.29303/jppipa.v8i4.1839>
11. **Onyishi C.N.** Differentiated Instruction in Improving Students' Task-persistence in Inclusive Education Settings: The Mediating Effects on Prior-achievement Gaps // *Didaktika: Jurnal Kependidikan*. – 2024. – №3. – P. 3005-3024. – <https://doi.org/10.58230/27454312.1151>
12. **Vakolia Z., Shykitka H., Potiuk S., Kazmirchuk N., Zelinska-Liubchenko K.** The impact of differentiated instruction on the academic performance of students with special educational needs // *Sapientia: International Journal of Interdisciplinary Studies*. – 2025. – №3. – Art. e25045. – <https://doi.org/10.51798/sijis.v6i3.1005>
13. **Tomlinson C.A.** *The differentiated classroom: Responding to the needs of all learners*. – 2nd ed. – Alexandria: ASCD, 2014
14. **Aguirre A., Bravo A., Sánchez M.** Emotional support and reduced communication anxiety in inclusive classrooms // *Journal of Inclusive Education Research*. – 2021. – №3. – P. 55-70. – <https://doi.org/10.1080/13603116.2020.1853259>
15. **Bondie R.S., Dahnke C., Zusho A.** Does changing “one-size-fits-all” to differentiated instruction affect teaching and learning? // *Review of Research in Education*. – 2019. – №1. – P. 336-362. – <https://doi.org/10.3102/0091732X18821130>

References

1. Abdina, A., Uzybayeva, A., & Zhanarstanova, M. (2023). Analysis of inclusive education in the Republic of Kazakhstan in the context of the philosophy of independent living. *Journal of Philosophy, Culture, and Political Science*, 86(4). – <https://doi.org/10.26577/jpcp.2023.v.86.i4.03> [in English]

2. Zamiralova, T.A., et al. (2019). On the question of inclusive education in higher school: Problems and prospects. *Academic Journal of Interdisciplinary Studies*, 8. – <https://doi.org/10.2478/ajis-2019-0037> [in English]
3. Zulpykhar, Zh.E., Nurlankyzy, A., Rokhaya, L., & Karelhan, N. (2024). Inklyuzivti bilim berudi damyту zhane zhasandy intellekti engizu [Development of inclusive education and the introduction of artificial intelligence]. *Bulletin of the National Academy of Sciences of the Republic of Kazakhstan*, 3(409), 77-89. – <https://doi.org/10.32014/2024.2518-1467.753> [in Kazakh]
4. Sailauova, A. (2020). The implementation of inclusive society in Kazakhstan: How successfully inclusive society is being implemented in Kazakhstan? – URL: <https://kz.academia.edu/AibanuSailauova> (review date 27.12.2025) [in English]
5. Kulmanova, A. (2023). Access and equity in higher education in Kazakhstan: The case of undergraduate students at Nazarbayev University thesis. Nazarbayev University, Graduate School of Education. – URL: <http://nur.nu.edu.kz/handle/123456789/7324> (review date 27.12.2025) [in English]
6. Morgan, H. (2014). Maximizing Student Success with Differentiated Learning. *The Clearing House: A Journal of Educational Strategies*, 87(1), 34-38. – <https://doi.org/10.1080/00098655.2013.832130> [in English]
7. Zholtayeva, G. (2013). Inclusive education in Kazakhstan: Selected issues. *CBU International Conference Proceedings*, 1, 196-204. <https://doi.org/10.12955/cbup.2013.34> [in English]
8. Taguchi, N. (2007). Task difficulty in oral speech act production. *Applied Linguistics*, 28(1), 113-135. <https://doi.org/10.1093/applin/aml051> [in English]
9. Norwich, B. (2009). Dilemmas of difference and the identification of special educational needs/disability: International perspectives. *British Educational Research Journal*, 35(3), 447-467. <https://doi.org/10.1080/01411920802044446> [in English]
10. Dalila, A.A., Rahmah, S., Liliawati, W., & Kaniawati, I. (2022). The effect of differentiated learning in problem based learning on cognitive learning outcomes of high school students. *Jurnal Penelitian Pendidikan IPA*, 8(4), 1820-1826. <https://doi.org/10.29303/jppipa.v8i4.1839> [in English]
11. Onyishi, C.N. (2024). Differentiated instruction in improving students' task persistence in inclusive education settings: The mediating effects on prior-achievement gaps. *Didaktika: Jurnal Kependidikan*, 13(3), 3005-3024. <https://doi.org/10.58230/27454312.1151> [in English]
12. Vakolia, Z., Shykitka, H., Potiuk, S., Kazmirchuk, N., & Zelinska-Liubchenko, K. (2025). The impact of differentiated instruction on the academic performance of students with special educational needs. *Sapienza: International Journal of Interdisciplinary Studies*, 6(3), Art. e25045. <https://doi.org/10.51798/sijis.v6i3.1005> [in English]
13. Tomlinson, C.A. (2014). *The differentiated classroom: Responding to the need of all learners*. ASCD. [in English]
14. Aguirre, A., Bravo, A., & Sánchez, M. (2021). Emotional support and reduced communication anxiety in inclusive classrooms. *Journal of Inclusive Education Research*, 12(3), 55-70. <https://doi.org/10.1080/13603116.2020.1853259> [in English]
15. Bondie, R.S., Dahnke, C., & Zusho, A. (2019). Does changing “one-size-fits-all” to differentiated instruction affect teaching and learning? *Review of Research in Education*, 43(1), 336-362. <https://doi.org/10.3102/0091732X18821130> [in English]

Э. Кдиргужина*¹, А. Хамидуллина¹, А. Муханбетчина¹

¹ Махамбет Өтемісов атындағы Батыс Қазақстан университеті
Орал, Қазақстан

**Ерекше білім беру қажеттіліктері мен сөйлеу қабілеті
бұзылған жоғары оқу орындарының студенттері үшін оқу
тапсырмаларын саралап орындаудың педагогикалық тиімділігі**

Аннотация. Қазіргі заманғы зерттеулер сөйлеу қабілеті бұзылған студенттер ауызша қарым-қатынаста айқын қиындықтарға тап болатынын көрсетеді, бұл олардың үлгеріміне әсер етеді және тапсырма форматын саралау инклюзивті жоғары білім беруде білім беру теңдігін арттырудың тиімді құралы болып саналады. Осы аралас дизайн зерттеуінің бөлігі ретінде дизартрия, лого-невроз және ринолалиямен ауыратын студенттермен сауалнама және салыстырмалы эксперимент жүргізілді. Жауаптың ұзақтығы мен дәлдігі, сөйлеудің тегістігі және субъективті сенімділік талданды. Нәтижелер жазбаша және визуалды расталған жауаптарды қолдану жауаптардың көлемін ұлғайтқанын, сөйлеу қиындықтарының санын азайтқанын және оқушылардың сенімін арттырғанын көрсетеді. Бұл дифференциация мен мультимодальды қолдаудың педагогикалық тиімділігі туралы халықаралық зерттеулерге толық сәйкес келеді. Зерттеудің ғылыми жаңалығы-жазбаша формат академиялық талаптарды жеңілдетпейтіні, бірақ сөйлеу қабілеті бұзылған студенттерге оқу материалы туралы түсініктерін дәлірек және тереңірек білдіруге мүмкіндік беретіні алғаш рет эмпирикалық түрде көрсетілді. Практикалық маңыздылығы мынада: алынған нәтижелер Қазақстанның жоғары оқу орындарында бағалаудың сараланған нысандарын жүйелі түрде енгізу және инклюзивті білім беру саласында жұмыс істейтін оқытушылар үшін әдістемелік ұсынымдар әзірлеу қажеттілігін растайды.

Кілтті сөздер: сараланған оқыту, инклюзивті білім беру, сөйлеудің бұзылуы, ерекше білім беру қажеттіліктері бар студенттер, жазбаша тапсырма форматтары, визуалды қолдау.

Э. Кдиргужина*¹, А. Хамидуллина¹, А. Муханбетчина¹

¹ Западно-Казахстанский университет имени Махамбета Утемисова
Уральск, Казахстан

**Педагогическая эффективность дифференцированного
выполнения учебных заданий для студентов вузов с особыми
образовательными потребностями и нарушениями речи**

Аннотация. Современные исследования показывают, что студенты с нарушениями речи сталкиваются с выраженными трудностями в устном общении, что сказывается на их успеваемости, и дифференциация формата заданий считается эффективным инструментом повышения образовательного равенства в инклюзивном высшем образовании. В рамках этого исследования со смешанным дизайном были проведены опрос и сравнительный эксперимент со студентами, страдающими дизартрией, логоневрозом и ринолалией. Были проанализированы продолжительность и точность ответа, плавность речи и субъективная уверенность. Полученные данные свидетельствуют о том, что использование письменного формата и визуально подкрепленных ответов увеличило объем ответов, уменьшило количество речевых трудностей и повысило уверенность учащихся, что пол-

ностью согласуется с международными исследованиями педагогической эффективности дифференциации и мультимодальной поддержки. Научная новизна исследования заключается в том, что впервые эмпирически было показано, что письменный формат не упрощает академические требования, а позволяет учащимся с нарушениями речи точнее и глубже выражать свое понимание учебного материала. Практическая значимость заключается в том, что полученные результаты подтверждают необходимость систематического внедрения дифференцированных форм оценивания в вузах Казахстана и разработки методических рекомендаций для преподавателей, работающих в сфере инклюзивного образования.

Ключевые слова: дифференцированное обучение, инклюзивное образование, нарушения речи; учащиеся с особыми образовательными потребностями, форматы письменных заданий, визуальная поддержка.

Article history: Date of receipt: 05.01.2026. Received: 06.03.2026

Information about the authors:

Kdirguzhina Elmira – a corresponding author, Master of pedagogical science, lecturer, M. Utemisov West Kazakhstan University, Uralsk, Kazakhstan. Tel. 7759712293. E-mail: elmira_k200873@mail.ru. ORCID: <https://orcid.org/0009-0001-8486-2534>

Khamidullina Alfiya – Master of pedagogical science, lecturer, M. Utemisov West Kazakhstan University, Uralsk, Kazakhstan. E-mail: Alfiya@mail.ru. ORCID: <https://orcid.org/0009-0000-6170-7016>

Mukhanbetchina Akhlina – candidate of Pedagogical Sciences, senior lecturer, M. Utemisov West Kazakhstan University, Uralsk, Republic of Kazakhstan. E-mail: muhanbetchina@mail.ru. ORCID: <https://orcid.org/0000-0002-1500-3680>

Авторлар туралы мәліметтер:

Кдиргузжина Эльмира Мендигалиевна – хат-хабар авторы, педагогика ғылымдарының магистрі, оқытушы, М. Өтемісов Атындағы Батыс Қазақстан Университеті, Орал, Қазақстан. Tel. +77759712293. E-mail: elmira_k200873@mail.ru. ORCID: <https://orcid.org/0009-0001-8486-2534>

Хамидуллина Альфия Мухитовна – педагогика ғылымдарының магистрі, оқытушы, М. Өтемісов Атындағы Батыс Қазақстан Университеті, Орал, Қазақстан. E-mail: Alfiya@mail.ru. ORCID: <https://orcid.org/0009-0000-6170-7016>

Муханбетчина Ахлима – педагогика ғылымдарының кандидаты, аға оқытушы, М. Өтемісов атындағы Батыс Қазақстан университеті, Орал, Қазақстан. E-mail: muhanbetchina@mail.ru. ORCID: <https://orcid.org/0000-0002-1500-3680>

Информация об авторах:

Кдиргузжина Эльмира Мендигалиевна – магистр педагогических наук, преподаватель, Западно-Казахстанский университет им. М. Утемисова, Уральск, Казахстан. Tel. +77759712293. E-mail: elmira_k200873@mail.ru. ORCID: <https://orcid.org/0009-0001-8486-2534>

Хамидуллина Альфия Мухитовна – магистр педагогических наук, преподаватель, Западно-Казахстанского университета им. М. Утемисова, Уральск, Казахстан. E-mail: Alfiya@mail.ru. ORCID: <https://orcid.org/0009-0000-6170-7016>

Муханбетчина Ахлима – кандидат педагогических наук, старший преподаватель, Западно-Казахстанский университета имени Махамбета Утемисова, Уральск, Казахстан. E-mail: muhanbetchina@mail.ru. ORCID: <https://orcid.org/0000-0002-1500-3680>