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Strategies for the Development of Students' Independent Learning Based on Individual Approaches

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Abstract: Developing and testing innovative strategies for teaching students based on an individual approach. This study aims to develop and examine an individualized independent learning strategy implemented across 74 students in grades 4, 7, and 9 at a school in Uzbekistan. The transition from teacher-centered to learner-centered education has highlighted the urgent need for individualized approaches that accommodate diverse student abilities, psychological states, and learning levels. Ensuring the activity of all students during the lesson and increasing their knowledge. Organization of face-to-face communication between the teacher and the student, as well as online communication. This study employed a quasi-experimental approach using observation, psychological interviews, questionnaires, and differentiated task assignments as data collection instruments. Data were analyzed through descriptive analysis of pre- and post-assessment results comparing student performance across low, medium, and high proficiency categories over four months. To ensure that the psychologist is in constant contact, since the ability, level of knowledge, and psychological state of each student are different. The research shows that difficulties are mainly related to the students' shortcomings and individual characteristics. In order to create an individualized learning environment, a personal portfolio was developed as a result of diagnostic work conducted by the class teacher, psychologist, subject teachers, and the school team for each student. In this innovative education model, students sit together with their classmates, but they complete assignments individually. The most important aspect is the engagement of all students in the learning process. Students work on tasks that match their knowledge level, allowing them to learn the subject more deeply. Teachers and students can communicate online outside of class. The findings indicate significant improvement in student engagement and academic performance across all three grade levels, with 4th grade students reaching 61% proficiency by the final month. The study concludes that individualized task design, combined with psychologist-teacher-parent collaboration, effectively supports independent learning in general education settings.

Keywords: classes, individual approach, innovative education, personal development, psychological characteristics.

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INTRODUCTION

The role of an individual approach to independent learning is to identify the development methods of each person and ensure their activity. Educational reforms are closely related to the transition from a teaching paradigm to a learning paradigm. In this regard, in addition to the knowledge provided by teachers in the learning process, it is necessary to recognize that students' independent work is not only an important form of the

learning process, but also its basis. Independent learning is usually widespread in the higher education system, but it is also necessary to emphasize this in schools. The main difference between independent work at the university and other types of work is the student's independent activity in completing the task without the direct participation of the teacher. In our research, subject teachers help students master the subject and guide them. Of course, independent learning requires discipline and self-motivation. Controlling the learning process reveals the student's full potential and helps to achieve personal and professional goals. Subject teachers achieve more results with an individual approach in the independent learning process.

Despite growing recognition of differentiated instruction in educational literature (Tomlinson, 2001; Vygotsky, 1978), most classroom implementations in post-Soviet Central Asian school systems continue to rely on uniform, teacher-fronted instruction that does not account for individual student differences in ability, motivation, or psychological readiness. Previous studies on individualized learning have largely focused on higher education contexts (Pintrich, 2004) or technologically advanced settings (Dina & Ciornei, 2013), leaving a significant gap in evidence-based practice for general K–12 schools in Uzbekistan. Furthermore, the role of school psychologists in co-designing differentiated tasks alongside subject teachers remains underexplored. The novelty of this research lies in its collaborative model involving psychologists, subject teachers, and parents in constructing individualized learning environments within ordinary classroom settings without segregating students from their peers. This study is urgent given Uzbekistan's ongoing educational reform agenda, which calls for student-centered approaches in all levels of general education.

An individual approach is the sum of all independent activities of students in the classroom and outside of it, in contact with the teacher and in their absence. The purpose of independent learning is:

1. Consolidating and generalizing students' theoretical knowledge in their field;
2. Developing skills and abilities for students to independently master scientific foundations;
3. Developing students' cognitive activity, independent creative work abilities, and creative abilities;
4. Identifying students' and others' skills for self-directed professional development and improvement.

In independent education, an individual approach is the most effective solution for mastering the individual characteristics of a child's psyche, science, and profession. An individual approach to education does not mean separating a child from others and providing separate upbringing, but rather taking into account special conditions for shaping the character of this or that person and understanding their individual psychological characteristics.

Based on the foregoing, this study pursues the following objectives: (1) to develop and implement an individualized independent learning model in grades 4, 7, and 9 mathematics and foreign language classes; (2) to examine the effectiveness of differentiated

task design in improving student engagement and academic performance across proficiency levels; and (3) to identify key challenges and enablers in organizing individualized learning environments in general education schools in Uzbekistan.

METHODOLOGY

Research Design

The individual approach in independent learning is an innovative teaching method that was implemented in 2024, with a total of 74 students from the 4th, 7th, and 9th grades participating in the educational process at the school. The research was conducted only during the teaching of mathematics and foreign languages. For each student, unique learning tasks were developed. During lessons, they sit with their classmates, but often they perform their tasks individually. Before this process, a psychological conversation was held, and subject teachers and parents studied all aspects of the student. Each lesson has different tasks, and each lesson has an individual learning program; the teacher does not teach, but provides individual guidance to each student. The article describes the research conducted on organizing lessons and tasks based on the abilities, level of knowledge, and psychological state of each student in the educational process.

Data collected through observations, questionnaires, psychological interviews, and student task performance were analyzed using descriptive statistical methods. Student proficiency levels were classified into three categories (low, medium, and high) based on pre-assessment results. Performance data were then tracked monthly over four months and compared across grade levels to identify trends of improvement. Qualitative data from teacher and psychologist observations were summarized thematically to identify recurring patterns in student engagement and learning barriers.

Sample and Data Collection

Taking into account the need to organize the educational process based on an individual approach to create a high-quality educational environment in general education schools, we started this research with a conversation with each student. The conversation was about the abilities, interests, and organization of the educational process of students. To create an individual learning environment, a psychologist and subject teacher used conversations, experiments, and tests to assign individual tasks to students during the lesson, taking into account their level of proficiency. Considering the students' level of proficiency, special tasks were organized during the lesson using various methods and techniques. This served as a stimulus for the students' activity level and interest. Of course, this requires the teacher's knowledge and pedagogical skills. The students were divided into three categories: high, medium, and low. We can see an example of the methods used for 4th grade students in tables 1 and 2. Similar lesson processes were organized for other classes as well.

Participants

We conducted this research with the participation of 74 students from the 4th, 7th, and 9th grades. Using various theories of individual approach in education, we tried to determine how well the described problems and proposed measures are connected with theoretical models. In this article, we discuss the results of our research on various traditions of individual approach in independent learning.

Method Used for Mathematics

For teaching the mathematics subject to 4th grade students, three different tasks were prepared for the topic "Equation". In the process of completing these tasks, students moved from simple to complex ones. The result of observations during the research process showed that students who started with simpler tasks approached complex ones with enthusiasm. At least two interesting methods and techniques were used during each lesson. As a result, the topic became understandable for all students.

Table 1. Differentiated Mathematics Tasks (Grade 4 — Topic: Equation)

Low category	Medium category	Top category
x+105=200-64	14x-240=19x	36x+15(350:15)=504-x

Method Used for Foreign Language

For the 4th grade foreign language subject, we applied English lessons to the research process. In this lesson, an interesting game called "Bomb" was organized for the topic "Adjectives". Here, students were also divided into 3 groups as mentioned above. Each group was placed separately. The tasks were organized as follows: lower-level students formed word combinations with adjectives, middle-level students formed simple sentences with adjectives, and upper-level students formed complex sentences.

Table 2. Differentiated Foreign Language Tasks (Grade 4 — Topic: Adjectives)

Low category	Medium category	Top category
Red pens	I have a red pen.	Maria decided to buy a red pen if she went to the store.

In our opinion, it is recommended to pay attention to the openness of ideas in such training and accordingly create a list of results and a learning schedule (including plans) together with the student. An individual approach to independent education can be understood as a personal connection with a gifted student or a student who has not reached the level of a student friend. The lesson is conducted as a team with all students, creates healthy competition, students' teamwork skills are formed. Of course, nothing is aimed at students to separate themselves from their peers, but to try to support and help each other. Before presenting the technology of organizing students' independent activities, we disclose a number of concepts related to this category. The teachers used artificial intelligence in the

course of the lesson, developed their independent education based on an individual approach, the goals and tasks that make up the content of independent education were determined depending on the strength and motivation of students for independent education. We believe that self-learning is a key factor in a person's development and serves to define their ability to work independently in their future professional activities.

FINDINGS/RESULTS

This study lasted 4 months in 1 academic year. As we mentioned above, 74 students from the 4th, 7th, and 9th grades participated. This study differs from other studies on improving students' knowledge in a short period of time. In order to eliminate the problems identified in the first stage of the experiment, the activities of the students were observed during the lesson with the participation of science teachers and psychologists. They were given assignments and filled out questionnaires. The tasks assigned to them correspond to the educational programs. In the previous studies, even if the teacher could fully convey the subject of the lesson to the students in 45 minutes, some students could not fully master the lessons (Khimmataliyev & Burieva, 2024). The main problems encountered in the organization of lesson processes:

1. The problem of time. 45 minutes is not enough for a lesson.
2. Being ashamed of the low skill level of some students compared to their peers.
3. Some conditions for creating an individual learning environment in the classroom are not established.
4. The ability of pedagogues to use time effectively during the lesson is not high.

As a result of the research, we believe that the following should be paid attention to in the organization of the teaching process:

1. In the educational process, psychologists and teachers should create tasks for students based on the interview, questionnaire and, of course, the level of mastery of the subject (Khimmataliev et al., 2023).
2. High-skilled students should be given complex tasks, and low-skilled students should be given tasks suitable for them.
3. Pupils who have completed the task should be encouraged. One of the best motivations for students. Parents should also be active in this regard. Parents' confidence in their children makes them more confident (Douglas et al., 2016).

Prior to the implementation of these tasks, seminars and trainings were organized in cooperation with parents, teachers and students, and the advice of psychologists was studied. Various innovative plans have been developed so that teachers can spend their time effectively during the lesson and each student is not neglected. The content of the individual approach does not directly depend on the nature of the work, but on the ability to find opportunities for independent learning (Himmataliev & Fayzullaeva, 2023). Self-directed learning is a tool that enables students to identify their future paths and assess their own

potential. Although the learner does not have a well-defined need, everyone has a non-biological need for self-fulfillment, self-expression, and self-expression.

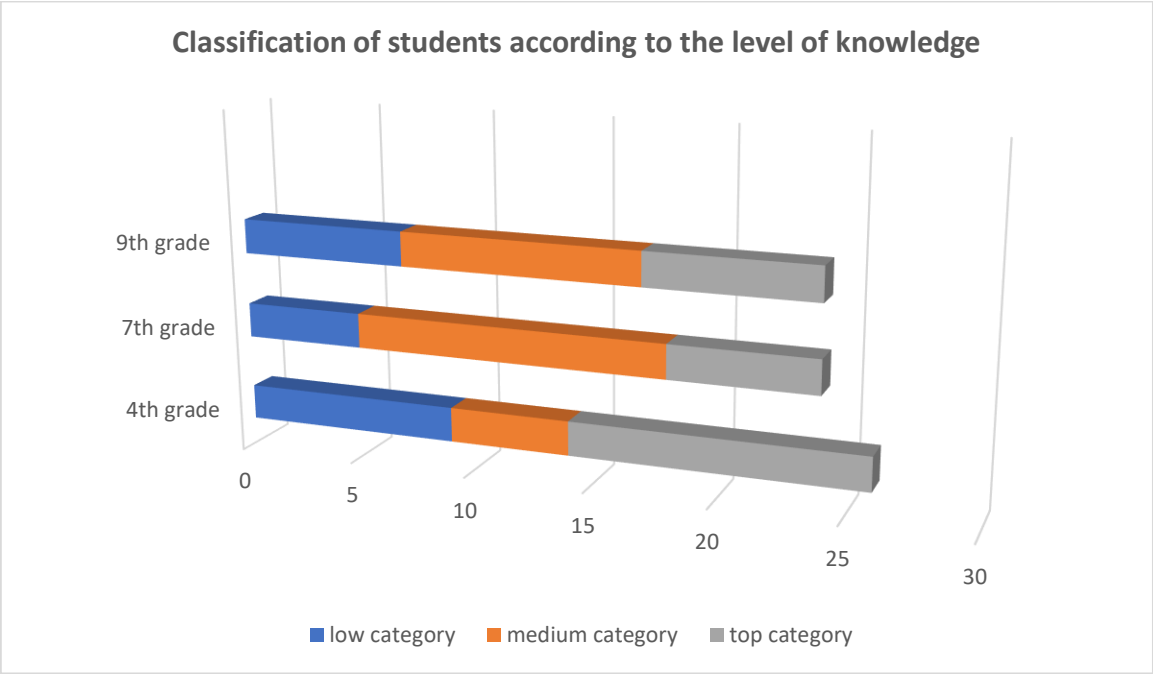

Figure 1.
The General Level of Knowledge of Students Determined Before Conducting The Research.

1. There are 26 students in the 4th grade, of which 9 (34.6%) are students of the lower category, 5 (19.2%) are students of the middle class, 12 (46.2%) students formed the upper class.
2. There are 24 students of the 7th grade, 5 of the lower category (20.8%), 13 of the middle category (54.2%), and 6 of the upper category (25%).
3. 9th graders have a total of 24 students, 7 of the lower category (29.2%), 10 of the middle category (41.6%), and 7 of the upper category (29.2%) constitutes.

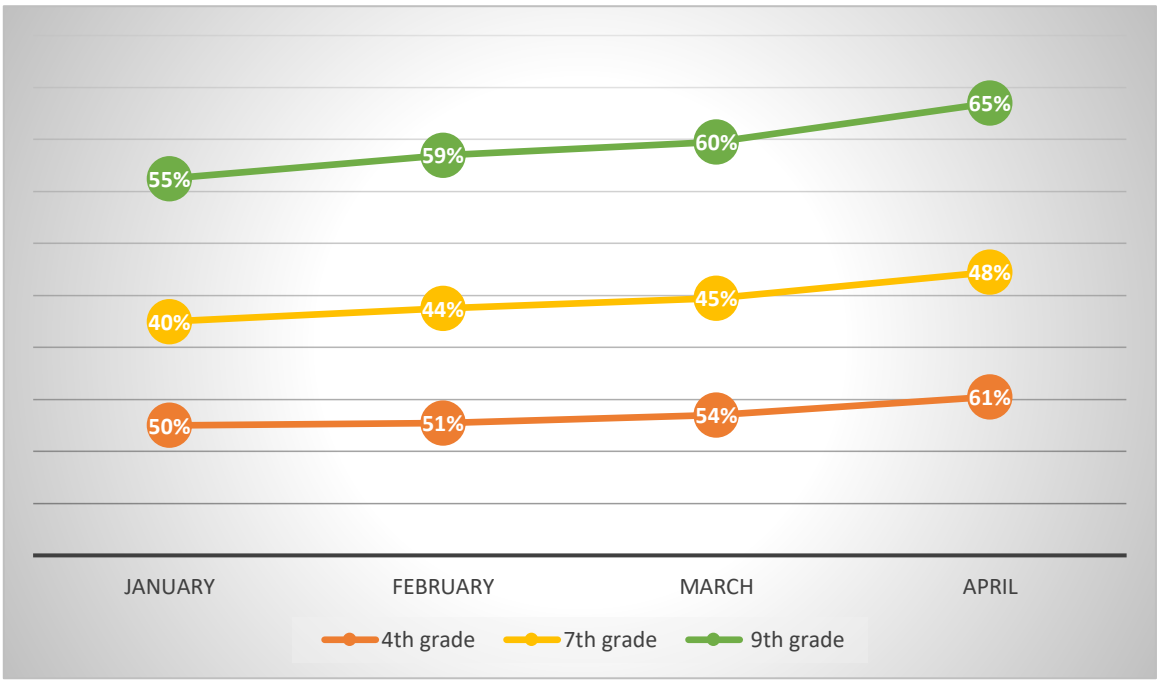

Figure 2.
The Trend of The Growth of the Level of Excellence of the Students of Each Grade Every Month.

Assessment of the level of knowledge in 3 classes for 4 months. The columns for January show the students' initial level of knowledge. In January-February, 7th and 9th grade students achieved the highest results, and if we focus on the March results, 7th grade students achieved better results. In April 4th grade students achieved 61% results. Looking at the results in the tables, it can be concluded that teaching based on an individual approach achieved high results in a short time (Khimmataliev et al., 2024; Mukhmedov et al., 2024). I should also note that the students were not asked the same level of questions until the end of the study. The organization of tasks at different levels and the uniqueness of psychological interviews and experiments represent the novelty of our research.

Discussion

As can be seen from the results of the level of activity in the lessons of the experimental group, during the experimental period, the psychologist and the teacher used various interesting tasks and problems for students in the lesson, as a result, all students of different skill levels were able to complete their tasks quickly and correctly. As we can see, their inspiration increased their interest in the lesson (Khimmataliev & Burieva, 2024). As a result of conducting scientific research and studying sources on the organization and effective implementation of personal education, the following conclusions can be reached:

1. development of an educational program based on an individual approach to education;
2. establishing cooperation between psychologists, teachers and parents;
3. organization of extra classes outside of classes.
4. Divide students into groups based on their interest and level of knowledge. This is one way to solve the problem of time delivery during the lesson;

5. further improvement of professional qualifications of teachers.

CONCLUSION

Each country organizes an education system based on the way of thinking, values, and lifestyle of its people. The organization of students' independent activities should include not only knowledge and methods of their formation, but also the creation of new knowledge, taking into account the subjective experience of each student. A learning process is an open, direct, and non-linear exchange of ideas that is related to students' own development or initiation of one. It awakens your strengths and abilities. In short, it is necessary to organize a curriculum based on the results achieved in 3 classes for 4 months and to organize this experimental work in other schools. Professionals should develop annual goals and discuss information about the child to meet identified learning needs. The purpose of this study was to fully engage students of different learning levels in a 45-minute lesson. The results of the research show that we have achieved the result we thought.

Limitations of the Study

Despite the promising findings, this study has several notable limitations. First, the research was conducted in a single school in Uzbekistan with a relatively small sample of 74 students, which limits the generalizability of the findings to other school contexts. Second, the study duration of four months within one academic year may not be sufficient to capture long-term effects of individualized learning on student achievement. Third, the absence of a formal control group makes it difficult to attribute observed improvements solely to the individualized approach, as other environmental factors may have contributed. Fourth, the study was restricted to two subjects — mathematics and foreign languages — and findings may not transfer to other disciplines.

Recommendations for Further Research

Based on these limitations, several directions for future research are recommended. Future studies should expand the sample across multiple schools and regions to test the scalability and transferability of the individualized learning model. Longitudinal studies spanning at least one full academic year or more would provide stronger evidence of sustained impact on student learning and independence. The inclusion of a control group using conventional instruction would allow for a more rigorous comparison. Additionally, researchers should explore the application of this model in other subjects such as science, history, and literature, and examine how digital tools and artificial intelligence can further personalize the learning experience. Comparative studies between urban and rural school settings in Uzbekistan would also enrich the evidence base for national educational policy.

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