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Individualized Assessment Strategies for Students with Special Needs in Inclusive Classrooms

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ABSTRACT

This research investigates the knowledge, skills, and competencies acquired by students with special needs in an inclusive classroom setting. The study aims to assess the level of development of each student's abilities and their understanding of subject-specific concepts, providing a foundation for implementing individualized teaching strategies. With the legal framework for inclusive education in Uzbekistan established in 2020, the research highlights the gap in fully developed assessment criteria and procedures for students with special needs. The objectives of the study include diagnosing the initial knowledge and competencies of students, developing subject-specific assessment criteria, examining teacher feedback on these criteria, and analyzing the outcomes of assessment tasks. The findings emphasize the need for personalized assessment methods tailored to the unique abilities of students with special needs, ensuring that assessments are both effective and inclusive. This research contributes to enhancing the educational process by supporting individualized, adaptable, and equitable evaluation strategies.

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1. INTRODUCTION

Inclusive education is an innovative approach that aims to provide all children, including those with special needs, with equal opportunities to learn and develop alongside their peers. This model emphasizes individualized and adapted learning programs, ensuring that students with special needs are integrated into the educational system in a way that respects their unique abilities and challenges. However, while the potential benefits of inclusive education are significant, it also presents various challenges particularly in the area of assessment (Glushchenko, 2025; Azizah et al., 2022; Egbedeyi & Babalola, 2023; Al Shaban & Hanafi, 2024; Rizqita et al., 2024; Faddillah et al., 2022; Musayaroh et al., 2023; Adesokan & Bojuwoye, 2023).

Effective assessment is a critical component of the educational process, and it plays a particularly important role in inclusive classrooms. In these settings, assessment methods need to be adapted to accurately measure the progress and achievements of students with diverse learning needs. Since assessment not only evaluates academic performance but also reflects students' overall educational experience, it is crucial that these methods are inclusive and flexible. The ability to accurately assess students' knowledge and skills is a decisive factor in the success of inclusive education, ensuring that students with special needs can learn in a manner equivalent to their peers (Amelia et al., 2019; Sabbani et al., 2021; Nandi & Dede, 2022; Irawan, 2021; Rahmat, 2021; Alimi et al., 2022).

Despite the ongoing efforts to integrate inclusive education into our country's education system, there remain significant challenges, especially in terms of establishing standardized assessment procedures. The assessment of students with special needs, in particular, has yet to be fully refined, and current methods often fail to capture the broad spectrum of skills and competencies these students develop. The application of personalized assessment technologies, based on diverse evaluation styles, is critical to overcoming these challenges and ensuring that all students receive fair and effective evaluations (Yang et al., 2024; Maryanti, 2021).

The core of inclusive education lies in the creation of individualized programs tailored to meet the unique needs of each student. In this context, assessment methods must be carefully designed to evaluate not only academic knowledge but also social adaptation, behavior, and emotional development (Amelia et al., 2019; Sabbani et al., 2021; Nandi & Dede, 2022; Irawan, 2021; Rahmat, 2021; Alimi et al., 2022). Key indicators for assessment include:

- (i) Achievement levels in academic subjects
- (ii) Social integration and adherence to school behavior norms
- (iii) Participation in school activities and peer relationships

The scientific novelty of this research lies in its focus on developing individualized assessment criteria for students with special needs in inclusive classrooms. By applying specific criteria that are tailored to different categories of special needs, the research aims to offer a more nuanced understanding of how to assess these students effectively. These criteria are designed to accommodate the individual abilities and learning profiles of students, ensuring that assessments are both fair and comprehensive.

Moreover, this study identifies the underlying reasons for low performance indicators among students with special needs, offering targeted recommendations for improving these outcomes. It also develops strategies for creating personalized work plans based on students' specific abilities and needs, ensuring that each student's learning process is adequately supported. Ultimately, this research provides a framework for enhancing the assessment of students with special needs, thereby contributing to the development of more effective and inclusive educational practices.

2. METHODS

This research employs a mixed-methods approach, combining both quantitative and qualitative methods to assess the effectiveness of individualized assessment strategies for students with special needs in inclusive classrooms. The study aims to evaluate the knowledge, skills, and competencies acquired by students with special needs, as well as their social adaptation within an inclusive educational environment. This section outlines the research design, data collection methods, and procedures used to gather and analyze the data.

2.1. Participants

The study sample consisted of 148 students with special needs enrolled in inclusive classrooms across 42 schools in six regions of Uzbekistan: Andijan, Bukhara, Samarkand, Fergana, Kashkadarya, Jizzakh, Tashkent city, and the Republic of Karakalpakstan. These students represent various categories of special needs, including cognitive, physical, and emotional disabilities, providing a diverse sample to examine the applicability of the individualized assessment criteria. The students were divided into experimental and control groups, allowing for the comparison of different assessment strategies. Teachers and special educators from each school also participated in the study to provide insights into the practical implementation of these assessment methods.

2.2. Data Collection

The research used multiple data collection tools to capture a comprehensive picture of the students' progress and the effectiveness of assessment methods:

(i) Surveys and Questionnaires.

Surveys were administered to assess the students' academic knowledge, skills, and social adaptation. These surveys included questions on the students' academic performance in various subjects, their participation in class activities, and their interactions with peers. Separate questionnaires were given to teachers to gather feedback on the assessment criteria used in their classrooms and their perceptions of the effectiveness of these methods for students with special needs.

(ii) Interviews.

In-depth interviews were conducted with teachers, parents, and special educators to gain qualitative insights into the experiences and challenges of assessing students with special needs in inclusive classrooms. These interviews aimed to understand how well current assessment practices are adapted to meet the needs of students and to gather suggestions for improving the process.

(iii) Focus Groups.

Focus group discussions were organized with students to gather feedback on their learning experiences and how they perceive the assessment methods. These discussions provided valuable perspectives on students' engagement with the evaluation process and their preferences regarding how their progress is measured.

2.3. Experimental Methods

The study included experimental assessments, where students in the experimental group were evaluated using individualized assessment criteria tailored to their specific learning needs. The control group was assessed using traditional, one-size-fits-all criteria. The results of both groups were compared to evaluate the effectiveness of the individualized assessment approach.

(i) Observational Methods.

Classroom observations were conducted to monitor the daily activities of students with special needs and how teachers implement assessment strategies. The observations focused on the interaction between students and teachers, the students' engagement in tasks, and how well the assessment methods were integrated into the classroom routines.

(ii) Control and Experimental Groups

The study involved control and experimental groups to compare the effectiveness of personalized assessment criteria. Students in the experimental group were assessed using tailored criteria based on their individual needs, while the control group followed standard assessment practices. This design allowed the research to measure differences in academic performance, social adaptation, and overall development between the two groups.

(iii) Data Analysis

Data from the surveys, questionnaires, and focus groups were analyzed using both descriptive and inferential statistics to identify trends and patterns in student performance and social adaptation. Statistical software (SPSS 26.0) was used to perform T-tests and ANOVA to compare the outcomes of the experimental and control groups, with a significance level set at $p < 0.05$.

Qualitative data from the interviews and focus groups were analyzed thematically, allowing the researchers to identify key themes and insights regarding the challenges and successes of implementing individualized assessment strategies. This analysis helped to contextualize the quantitative findings and provided a deeper understanding of the experiences of students, teachers, and parents in inclusive educational settings.

(iv) Pilot Study

A pilot study was conducted across six regions of Uzbekistan, involving a sample of 148 students and their teachers. This pilot study served as a foundation for refining the assessment criteria and evaluation methods, ensuring they were practical and effective for students with different needs. The feedback from the pilot phase helped to refine the data collection tools and methodology, ensuring that the study was both comprehensive and accurate.

3. RESULTS AND DISCUSSION

The individualized assessment methods and defined criteria for evaluating the knowledge of students with special needs provide teachers with a structured approach to implement personalized education plans (Frey, 2019). By applying these tailored assessment strategies, teachers can ensure that each student receives the attention they need while also identifying areas for improvement and setting future goals. This approach facilitates a deeper understanding of student progress, ensuring that the unique needs of each student are met (Chan et al., 2023).

The assessment process in inclusive education follows a layered approach to evaluating students' knowledge. This process involves diagnostic, analytical, and synthesis methods, depending on the stage of the educational journey. This ensures that assessments are aligned with the students' development and provide comprehensive feedback on their progress.

The final grade assigned to each student is the result of cumulative assessments across the study period, based on established criteria (Glushchenko, 2025; Azizah et al., 2022; Egbedeyi & Babalola, 2023; Al Shaban & Hanafi, 2024; Rizqita et al., 2024; Faddillah et al., 2022; Musayaro et al., 2023; Adesokan & Bojuwoye, 2023). It is important that grades are assigned solely according to these criteria, ensuring fairness and clarity. In cases where broader criteria are used, these can be broken down into more specific criteria tailored to the topics being taught, allowing for a detailed evaluation of students' abilities.

A key element of the assessment system is the communication of criteria to students, parents, and special educators before any assessments take place. This transparency helps all stakeholders understand the assessment expectations and provides a foundation for supportive engagement throughout the educational process. Teachers should regularly inform the students about the specific criteria being used in assessments, ensuring clarity in expectations (Lebeer *et al.*, 2012). For example, assessments may focus solely on the material that has been taught, and students' responses—whether through written work or verbal answers—are evaluated based on the established criteria. If students meet the expectations, they will receive a grade of "5"; however, lower grades may be assigned depending on their performance and overall engagement, which is subject to the teacher's discretion (see **Figure 1**).

The knowledge of first-year students in the second semester and second-year students is evaluated according to specific criteria:

- (i) Native Language and Reading Literacy
 - (a) A grade of "5" is awarded if the student's reading speed reaches 50% of the average school reading speed.
 - (b) A grade of "5" is awarded for correctly answering questions using visual aids (e.g., pictures) or providing a brief, one-word answer.
 - (c) For written expression, a grade of "5" is given if the student:
 - Accurately copies words without errors.
 - Independently writes the names of objects shown in pictures.
 - Forms short, grammatically correct sentences based on visual cues.
 - Writes a dictation of 3-4 sentences without mistakes.
- (ii) Mathematics

A grade of "5" is given when the student solves problems accurately and demonstrates a clear understanding of single-step problem-solving.
- (iii) Natural Science

A grade of "5" is awarded for correct answers to questions using a picture and providing a brief, one-word response.
- (iv) Other Subjects (Art, Physical Education, Music, and Ethics)

Assessments in these subjects are based on general criteria, which focus on the student's engagement, participation, and completion of relevant tasks.
- (v) Foreign Languages and Russian Language

For students with underdeveloped speech skills, assessments are postponed until the third grade, allowing time for the development of their speech abilities before evaluation.

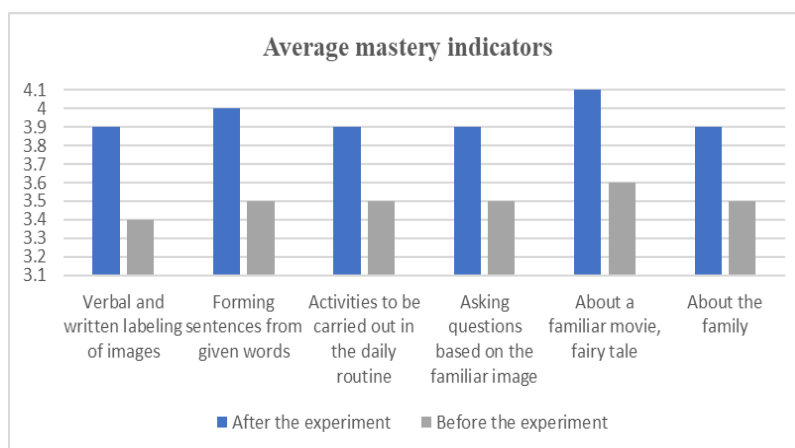


Figure 1. Assessment criteria.

3.1. Comprehensive Explanation of Assessment Methodology

The assessment system in inclusive education is designed to engage students actively in the evaluation process, which not only helps teachers evaluate students' knowledge but also promotes the development of self-assessment and peer-assessment skills (Bourke & Mentis, 2013). These skills are essential for encouraging students to take responsibility for their learning and for fostering a growth mindset. Teachers are expected to adhere to the following principles during the educational process (Gillies, 2014):

- (i) Clear Instructions and Specific Assignments: Teachers must use topics that have been taught and assign tasks based on students' current capabilities, ensuring that tasks are relevant to the material.
- (ii) Step-by-step Guidance: Teachers should explain tasks in a detailed, step-by-step manner, making sure all students understand the expectations before starting their assignments.
- (iii) Consistent Task Completion: Students should be taught to approach tasks systematically, with consistent instructions and adequate repetition to reinforce understanding.
- (iv) Encouragement and Demonstration: Teachers should demonstrate how tasks should be completed and offer positive reinforcement to encourage students to engage and participate actively.

3.2. Types of Activities in the Educational Process

To support diverse learning styles and needs, the educational process should incorporate a variety of activities (Fernández-López et al., 2013; Khamitovna, 2022; Morbo, 2021; Calixtro, 2021; Mnaosa et al., 2022; Escomes & Morbo, 2021; Ledesma et al., 2021; Bakinde, 2022):

- (i) Physical Exercises: These should be integrated into lessons to engage students and promote their physical development.
- (ii) Voice and Breathing Exercises: These are especially useful for students with speech and communication difficulties.
- (iii) Extra Time for Assignments: Providing additional time allows students to complete their tasks without unnecessary pressure, ensuring they can fully demonstrate their abilities.
- (iv) Fill-in-the-Blank Exercises: These types of activities help reinforce learning and support students' language and cognitive development.
- (v) Complete Copies of Exercises: Offering students full copies of the exercises ensures they understand the task at hand and have all necessary resources to complete their work.

3.3. Methods for Evaluating Student Achievement

Teachers should assess students' knowledge based on various methods, including (Tzivinikou, & Papoutsaki, 2016):

- (i) Assessment Levels Based on Work Volume: Evaluate the amount of work completed, time spent, and results achieved.
- (ii) Daily Evaluation: Students should be evaluated on a daily basis to track their progress toward their quarterly grade.
- (iii) Special Conditions: For students with specific needs, assessments should be adjusted to reflect those needs, ensuring fairness and accuracy.
- (iv) Reattempting Tasks: Allow students to redo tasks they failed to complete properly, providing them with an opportunity for improvement.

3.4. Creating a Positive Learning Environment

To ensure a successful assessment experience, teachers must:

- (i) Encourage Positive Responses: Offer verbal encouragement and minimize the use of negative comments like “No!” or “Incorrect!” to prevent discouraging students.
- (ii) Focus on Positive Evaluations: Emphasize students’ achievements and growth rather than focusing solely on errors or shortcomings.
- (iii) Adapt Tasks to Individual Needs: Tasks should be tailored to each student’s unique capabilities and learning path, ensuring they are neither too difficult nor too easy.
- (iv) Provide a Supportive Environment: Teachers should use positive reinforcement, such as encouraging words, a warm tone, and supportive facial expressions, to motivate students throughout the learning process.

4. CONCLUSION

The Assessment Criteria outlined in this study are designed to significantly enhance the academic performance and overall learning experience of students with special needs in inclusive education settings. These criteria aim to ensure that the educational process is personalized and adapted to meet the diverse learning needs of each student, thereby creating a more inclusive and equitable environment. By aligning the assessment process with students' individual capabilities, the criteria provide a more accurate measure of knowledge acquisition, allowing for fair evaluations based on what each student can realistically achieve.

Moreover, the Assessment Criteria encourage teachers to adopt a critical and reflective approach to their teaching practice. By regularly evaluating and adjusting their methods, educators can better address the unique needs of each student, improving both academic outcomes and student engagement. This ongoing reflection also promotes professional growth among teachers, ensuring that their practices are continuously evolving to meet the diverse needs of their learners.

To ensure that the assessment process is meaningful and effective, the materials used for evaluation are carefully selected based on each student’s individual strengths and learning pace. This ensures that assessments are both challenging and achievable, promoting a deeper understanding of the subject matter while accommodating students’ specific learning profiles. As a result, the assessment system becomes not only a tool for measuring knowledge but also a key component of fostering personalized learning that encourages success for all students, regardless of their learning challenges.

5. AUTHORS’ NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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