World Bulletin of Education and Learning (WBEL)
ISSN: ISSN (E): 3072-175X
Volume 01, Issue 01, October 2025

https://worldbulletin.org/index.php/1

DESIGN APPROACH IN DEVELOPING EDUCATIONAL MATERIALS FOR STUDENTS WITH SPECIAL NEEDS

Normurodov M. N.
Chirchik State Pedagogical University

Abstract
This article discusses the theoretical and practical aspects of using a design approach in developing educational materials for students with special educational needs. The research highlights the role of instructional design in promoting creativity among teachers, ensuring inclusiveness, and improving the efficiency of learning materials. The design approach in special education fosters active learning, engagement, and the development of cognitive and independent thinking skills among students.

Keywords: Design approach, special education, instructional design, inclusive learning, visual aids, accessibility, individualized learning.

Introduction

The modern educational system increasingly emphasizes the importance of personalized learning and equal access for all students, including those with special educational needs. According to the *Concept of Inclusive Education in the Republic of Uzbekistan (2021–2025)*, the main objective of modern pedagogy is to create an adaptive and inclusive educational environment.

The **design approach** serves as an effective strategy in achieving this goal. It considers not only the visual design of educational content but also its structure, interactivity, and psychological aspects. This approach redefines the teacher's role — from an information provider to a learning facilitator — and places the learner at the center of the educational process.

World Bulletin of Education and Learning (WBEL)
ISSN: ISSN (E): 3072-175X
Volume 01, Issue 01, October 2025

https://worldbulletin.org/index.php/1

2. Literature Review

The theoretical foundations of the design approach stem from the concept of instructional design developed by scholars such as B. Bloom, R. Mager, and D. Merrill. They emphasized the systematic development of teaching objectives, learning activities, and assessment methods.

In Uzbekistan, Q. Khodjayev (2019) underscored the need for individualization in special education. T. Jurayev (2020) justified the importance of flexibility in inclusive education, while M. Norqulova (2022) focused on adapting linguistic materials for students with developmental challenges.

Globally, the **Universal Design for Learning (UDL)** model is widely used, promoting flexibility, accessibility, and equality. It ensures that all learners can access content in ways that best fit their abilities and preferences.

3. Research Methodology

The study utilized analytical, comparative, and observational methods. Data were collected from special education institutions, focusing on design features of current teaching materials.

Key methodological principles included:

- **Flexibility:** Adapting materials to learners with different cognitive or sensory needs.
- **Interactivity:** Promoting engagement through active participation.
- **Visualization:** Combining visual and auditory elements effectively.
- **Motivation:** Encouraging curiosity and attention through design.

Qualitative data analysis helped assess improvements in engagement, concentration, and academic performance.

4. Results and Discussion

Findings revealed that design-oriented learning materials improved motivation, communication, and self-expression among special needs students. For learners with visual impairments, large fonts, high-contrast visuals, and audio support enhanced comprehension. For those with speech or hearing impairments, visual aids, icons, and pictograms facilitated better understanding.

World Bulletin of Education and Learning (WBEL)
ISSN: ISSN (E): 3072-175X
Volume 01, Issue 01, October 2025

https://worldbulletin.org/index.php/1

Teachers also reported increased creativity and adaptability when developing design-based materials. Lessons became more dynamic and inclusive, allowing students to learn at their own pace.

However, some challenges persist — particularly the lack of teacher training in design-based pedagogy and limited access to technological resources. Therefore, it is essential to integrate digital tools such as interactive simulations, multimedia, and gamified learning materials into special education.

5. Conclusion

The design approach plays a crucial role in improving the quality of education for students with special needs. It encourages inclusivity, accessibility, and active participation while enhancing the professional competence of teachers.

Recommendations:

1. Introduce training programs on instructional design in teacher education.
2. Create adaptive design guidelines for special education materials.
3. Develop open-access digital repositories for inclusive educational resources.
4. Strengthen cooperation between universities and special education centers for innovation in design-based pedagogy.

References

1. Bloom, B. S. (1956). Taxonomy of Educational Objectives: The Classification of Educational Goals.
2. Mager, R. F. (1984). Preparing Instructional Objectives. Belmont, CA: Lake Publishing.
3. Merrill, D. M. (2002). First Principles of Instruction. Educational Technology Research and Development.
4. Khodjayev, Q. (2019). Individualization in Special Pedagogy. Tashkent.
5. Jurayev, T. (2020). Flexible Approaches in Inclusive Education. Uzbekistan Journal of Pedagogical Research.
6. Norqulova, M. (2022). Adaptation of Lexical Materials for Students with Disabilities. Samarkand State University.
7. CAST (2018). Universal Design for Learning Guidelines. Wakefield, MA.