Blended learning for children with SEN

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Abstract. Inclusive education is a fundamental principle of modern educational systems, ensuring equal learning opportunities for all students, including those with Special Educational Needs (SEN). In this context, blended learning has emerged as a relevant pedagogical model. This paper examines its role in supporting the academic, social and emotional development of students with SEN.

The study adopts a conceptual and descriptive approach based on educational literature and practical teaching experience. It outlines the core elements of blended learning: direct interaction, digital resources and learner autonomy, and compares face-to-face and online learning environments.

The analysis indicates that blended learning facilitates differentiated instruction, enhances student engagement, and supports individual learning rhythms. Digital platforms enable continuous monitoring of progress, automatic assessment, and immediate feedback. For students with SEN, this approach contributes to improved academic performance, increased motivation, and the development of social and emotional competencies, while promoting diversity and tolerance within the school community.

Ultimately, blended learning offers a sustainable and inclusive pathway for improving educational quality in special education contexts. However, its effectiveness relies on thoughtful instructional design and the teacher's capacity to harmonise technological tools with authentic human engagement.

Keywords: Blended learning; SEN; Inclusive education; Digital resources; Differentiated instruction.

1. Introduction

In designing teaching activities for students with Special Educational Needs (SEN), it is essential to use a wide variety of teaching methods in order to keep students actively engaged throughout the lesson. In developing the classroom as an optimal learning environment, the teacher plays a crucial role, as they create the teaching–learning–assessment framework and make their entire pedagogical repertoire available to students: knowledge, experience, explanations, perspectives, empathy, openness, sensitivity, understanding, acceptance and tolerance.

The innovative methods employed should be interactive, ensuring that the student becomes an active partner in the learning process. The use of technology enables differentiated instructional pathways that address the unique needs of each learner while respecting their individuality within the group.

From this perspective, the use of blended learning in the education of children with Special Educational Needs (SEN) can contribute to several key objectives:

- Improving academic performance: Children with SEN who have access to appropriate blended learning strategies can enhance their performance and achieve their learning goals.
- Social and emotional development: Participation in classroom activities and interactions supported by blended learning can help children with SEN develop their social and emotional competences.
- Promoting diversity and tolerance: Inclusive schooling contributes to fostering diversity and tolerance among students and within the wider community, leading to a more open and inclusive society and to more accessible and equitable education for all children.

Blended learning also involves the use of software that automatically records student data and monitors progress, providing teachers, students and parents with detailed information. Assessments can be graded automatically, and feedback can be delivered instantly.

2. Theoretical background

Blended learning is a pedagogical model that integrates the best practices of both online and traditional learning. Essentially, it combines:

- Direct interaction between teacher and student (either through physical presence or via videoconferencing);
- Digital resources (such as online courses, quizzes and simulations);
- Learner autonomy (students can progress through the content at their own pace).

Blended learning emphasises a balanced integration of human interaction and technology, unlike pure e-learning, which relies exclusively on digital platforms.

Blended learning is a term that describes a mixed learning approach, combining traditional instructional methods with independent study, thus creating a hybrid educational model. It represents a significant shift in teaching strategies through the integration of digital technologies into the teaching–learning–assessment process.

Technology should not be understood solely as hardware and software. It also encompasses broader sources of knowledge and information, including the teacher as a facilitator of learning, other specialists, virtual libraries, and specialised academic resources.

Motto: "A man is rich or poor according to what he is, not what he has." — Henry Ward Beecher

At the foundation of the modern vision of education - no longer regarded as a privilege reserved for a few, but as a right for all - lies the principle that education constitutes a fundamental element in the development of individuals and societies. This idea has shaped the concerns of the international community over the past five to six decades (Dragu, 1996).

3. Blended learning in special education

When discussing inclusive education, we primarily refer to children with Special Educational Needs (SEN). In Romania, inclusive education has gained greater attention only in recent years. In 1997, a national decision was made to generalise the integration of children with SEN into mainstream schools, following the implementation of a pilot programme aimed at integrating children with mild and moderate disabilities.

The quality of education reflects a school's capacity to create appropriate learning conditions for every child. Technological development has facilitated the integration of a wide range of applications into the educational process, including blogs, wikis, social networks, collaborative editing tools, surveys and virtual classrooms.

The concept of "blended learning" began to emerge at the end of the twentieth century and refers to a system that combines direct interaction between teachers and students with computer-assisted instruction. It is widely considered to be a predominant educational model for the future.

Face-to-face classroom meetings should not be entirely replaced, as students require encouragement and constructive, motivational feedback.

The definition presented above includes two essential aspects that distinguish this learning model from traditional teaching and learning processes. Firstly, the student studies for a significant portion of time in a supervised physical environment. Secondly, for learning to be considered blended, students must receive study materials online and exercise a degree of self-regulation regarding the time, place, mode and pace of learning (Oprea, 2006).

Individual differences among children with SEN should be regarded as learning opportunities rather than limitations. They become problematic only when teachers are unable to identify appropriate strategies to address them.

In a traditional learning environment, students attend lessons and complete their homework afterwards. In contrast, within a blended learning model, students access lesson-related materials (such as video clips, texts or other multimedia resources) before attending class. As a result, they are better prepared to consolidate their knowledge during classroom activities. The teacher, in turn, uses classroom time to facilitate reflection, clarify misunderstandings and deepen understanding. In this way, students are encouraged to develop autonomous learning skills while also engaging in collaborative work.

Blended learning creates additional opportunities for meaningful interaction, allowing more time for direct engagement and interactive activities. It also reshapes the teacher–student relationship: the educator assumes the role of guide and facilitator, while students become more active participants compared to traditional face-to-face instruction (Grosseck & Crăciun, 2020).

In addition, blended learning enables students to decide when and where to access online materials (for example, how many times to watch a video), thereby supporting a deeper and more personalised understanding of the subject matter. At the same time, the issue of monitoring and guiding students in blended environments remains essential for ensuring an effective learning

process. The distinction between face-to-face and online learning highlights the greater flexibility offered by online education, while also emphasising its student-centred nature (see Table 1).

Table 1. Comparison between Face-to-Face and Online Learning models

Learning Dimension	Face-to-face learning	Online Learning
Course Focus	In group	With the people in the group
Content Focus	Teacher-oriented	Student-centered
Schedule	Planned	Anytime
Location	Classroom	Anywhere
Flexibility	Standardized	Personalized
Content	Stable content	Dynamic
Number of Students	Depending on space	No limits
Teacher Training	Sometimes	Extensive prior preparation
Material Distribution	On paper	Electronic download
Degree of Interactivity	Full interactivity	Limited interactivity

The aim of this approach is to combine, in a balanced and coherent manner, the most valuable elements of face-to-face instruction and online learning activities. Classroom sessions can be dedicated to advanced interactive experiences, while the online components are used for research, homework and guided practice activities. Owing to increased access to computers and the internet, blended learning is being adopted with growing frequency (Albulescu, 2021).

By using mixed or combined learning tools—commonly referred to as blended learning—students are able to continue their learning process beyond the classroom. The integration of students with Special Educational Needs (SEN) represents an ongoing journey that should never be interrupted. It plays an essential role in human development, connects all dimensions of education, and has a significant influence on the formation of personality. Educational continuity is therefore fundamental in supporting the holistic development of these learners.

Success in life depends largely on the foundational knowledge and competences acquired during the years of study, which open new pathways towards understanding and personal growth.

Blended learning offers numerous advantages compared to conventional modes of instruction, contributing to increased student engagement, improved academic outcomes and greater overall satisfaction among all participants involved in the educational process.

In order to fully benefit from these advantages, careful planning and effective programme implementation are essential, ensuring that learners ultimately gain meaningful value from this innovative learning approach.

4. Discussion

Previous studies highlight the transformation of the teacher's role from information provider to facilitator, as well as the importance of digital competences in contemporary educational environments. In the context of Special Educational Needs (SEN), these dimensions acquire particular relevance. The possibility of accessing learning materials in advance, revisiting video

explanations and progressing at an individual pace supports differentiated instruction and may reduce cognitive overload or anxiety often experienced by students with learning difficulties. However, while the literature frequently presents blended learning as an inherently advantageous model, its effectiveness in inclusive settings depends largely on careful instructional design, teacher preparedness and the availability of adequate technological infrastructure. Without these conditions, the potential benefits may remain underutilised.

5. Conclusions

The wide range of digital educational resources has the potential to transform teaching activities into engaging opportunities for deeper content exploration. These tools support the development of interactive digital competences and enable virtual exploration activities, offering structured models that facilitate comprehensive understanding. Students have become increasingly familiar with such digital resources and generally demonstrate enthusiasm and motivation when working on these platforms.

In special education, the use of digital educational resources serves as a significant facilitating factor within both the instructional and the corrective–formative processes. These resources can be adapted to the specific learning characteristics of students with Special Educational Needs (SEN), with successful implementation largely dependent on the teacher's expertise and professionalism.

Well-organised and effectively managed educational activities stimulate students' imagination, enhance their capacity for critical thinking and reflection, and create opportunities for independence in both thought and action.

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