Implementation of Inclusive Education in Ukraine: Current State and Prospects for Development

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Abstract: In the context of a full-scale war, inclusive education in Ukraine takes on a new meaning, as it requires adaptation to extraordinary circumstances, including infrastructure destruction, forced displacement, and digital inequality. The relevance of the study is due to the need to find effective models for ensuring educational participation of students with special educational needs in the landscape of humanitarian crisis. The aim of the study is to assess the effectiveness of blended learning as a tool for implementing inclusive education for children with special educational needs (SEN) in war conditions. The methodology is based on a mixed approach, which includes statistical data analysis, online parent surveys, and expert interviews with teachers and school administrations in Kharkiv, Chernihiv, and Zaporizhzhia regions. The results showed that the most effective model was blended learning with elements of digital adaptation and psychosocial support, particularly in regions with a high level of digital readiness. It was determined that the success of inclusive interaction depends on the level of digital infrastructure, flexibility of management decisions, and parental participation. Visualized indicators of coverage, satisfaction, and online support allow summarizing the advantages and challenges of such a model. The practical significance of the study lies in the formation of conceptual guidelines for building adaptive digital inclusion at the level of educational institutions. Recommendations are proposed for the integration of digital platforms, the creation of crisis management protocols and the involvement of users in the process of creating inclusive services.

Keywords: inclusive education, digital technologies, blended learning, internally displaced persons, special educational needs, educational policy, humanitarian crisis.

Introduction

Modern education is facing unprecedented challenges associated with military operations, mass population displacement, destruction of infrastructure, and growing demands for digital transformation. In the context of a humanitarian crisis, the issue of access to quality education for people with special educational needs (SEN) takes on new meaning, going beyond traditional approaches to inclusion. Therefore, there is a need for a deep rethinking of the forms and mechanisms of inclusive practice, which must adapt to the unstable social environment, technical limitations, and psycho-emotional stress. Namely in such conditions digital educational technologies are transformed from an additional tool into a key factor in ensuring inclusion. In the international scientific discourse, inclusive education is considered as a systemic phenomenon that encompasses managerial, social, technical, and pedagogical aspects. Thus, Zajda and Vissing [1, 2] analyze inclusion in the context of human rights and globalization transformations, while Daniela [3] emphasizes the role of digital technologies in ensuring accessibility. For their part, Moussa et al. [4] emphasize the importance of online education for displaced persons, while Smutchak et al. [5] focus on technical barriers and challenges of digitalization. The research by Sofii et al. [6] and Afanasyeva et al. [7] point to the importance of psychosocial support in an inclusive environment, while Ahrweiler et al. [8] emphasize the need

to co-create inclusive digital solutions. In the domestic Ukrainian scientific space, the topic of inclusion is also becoming increasingly relevant, especially given the context of war and mass educational transformations [9, 10, 11].

Despite the significant amount of work, the research field remains fragmented. The available publications mostly highlight individual aspects of inclusive education – pedagogical methods, technical solutions or regulatory support – but do not cover the complex interaction between digital technologies, management strategies, and learners' needs in emergency situations. The practical effect of blended learning as a model of digital inclusion in armed conflict remains insufficiently studied. There is also a lack of empirical research that systematically analyzes regional differences in the implementation of inclusive digital practices.

In this regard, *the aim* of the article is to investigate the effectiveness of blended learning as a tool for implementing inclusive education in the context of war in Ukraine, as well as to characterize examples of successful integration of digital solutions into the pedagogical and managerial practice of educational institutions. The objectives of the study are: to collect and analyze quantitative and qualitative data on the conditions and results of blended learning in the three affected regions of Ukraine; to compare the identified indicators between regions; to summarize the barriers and opportunities of digital inclusion; to formulate conceptual guidelines for an adaptive model of inclusive education in a crisis period.

Analysis of recent research and publications

In modern scientific research, inclusive education is viewed as a multidimensional phenomenon that encompasses technological, social, pedagogical, and managerial aspects. In particular, a number of works focus on the capabilities of the digital environment to support inclusion in higher education [5, 10, 12, 13]. Researchers emphasize that the use of digital technologies and online courses allows ensuring the accessibility of educational services for different categories of applicants, in particular persons with disabilities [4, 9]. An important place in the research is occupied by the analysis of managerial activities in the conditions of distance learning, which directly affects the effectiveness of the implementation of inclusive policies [11, 14]. The expansion of the functions of inclusive education is also associated with the introduction of collaborative interprofessional approaches, especially in the context of early childhood [6, 15]. These studies confirm that team interaction between teachers and parents creates favorable conditions for inclusive development.

Scientists also pay attention to the psychological and pedagogical features of inclusion, in particular, the role of assertiveness [16] and student well-being [7], which identifies the need for a person-centered approach. The challenges associated with the internationalization of inclusive education in higher education are separately analyzed, taking into account the cultural characteristics of students from different countries [17, 18]. Modern approaches to designing inclusive digital solutions imply involving users in the creative design process [3, 8]. Papers on global trends in human rights, informal development, and access to education complement research on inclusive policies as a systemic phenomenon [1, 2, 19, 20, 21].

Despite the variety of approaches, the issue of integrating inclusive practices into formal management strategies of the Ukrainian education system, taking into account digitalization, remains insufficiently explored. There is a lack of empirical research that highlights the impact of technological changes on the institutional development of inclusion [22, 23, 24, 25]. Namely these aspects represent the subject of further research. At the same time, increasing attention is being paid in the scientific discourse to the potential of inclusive education in the context of humanitarian crises and forced displacement. The study by Moussa et al. [4] emphasize the need to adapt online education for displaced persons, demonstrating the importance of access to quality content through digital platforms. The inclusive dimension of globalization changes in education is revealed by the works of Zajda and Vissing [1], which analyzes the intersection of human rights, globalization, and educational reforms.

Special attention in the research is paid to applied aspects of inclusion, in particular, the introduction of gaming technologies in language learning as a way to increase the motivation and involvement of students with special educational needs [14]. In the work of Ališauskienė et al. [15], an interdisciplinary approach to inclusive education in early childhood through collaboration between professionals and families is presented. The experience of developing an inclusive development index, which allows quantitatively assessing the level of implementation of policies of equal access to education, is represenative [24]. Considerable attention has also been paid to analyzing the barriers that students with disabilities face in the educational process and describing effective pedagogical strategies aimed at supporting their self-realization [25]. The work of Niine et al. [23] raises the issue of harmonizing the principles of inclusive pedagogy with effective management approaches, which is relevant for educational reforms. Two chapters of the collection by Zajda and Vissing [1] emphasize the connection between globalization, human rights, and

education, providing a philosophical basis for inclusive policies in the context of global transformations. Finally, Korngold [22] considers inclusive education as one of the factors of sustainable development in the context of corporate social responsibility, which expands the boundaries of analysis due to the intersectoral dimension.

Of particular note is the consideration of effective practices from countries in the Global South. For example, Elder [18] summarizes the experience of inclusive education in Kenya as a model for the United States, emphasizing the benefits of flexible local approaches to engaging vulnerable groups. Willis and Verdeli's work [21] focuses on inclusive approaches in humanitarian initiatives that go beyond the classical education system, but influence the formation of an inclusive environment. A separate vector of research concerns the formation of an inclusive educational space in Ukraine. Smutchak et al. [5], Kostynets and Kostynets [10] and Sofii et al. [6] highlight the challenges of digitalization of educational services, in particular, the need to adapt digital media to the needs of users with developmental disabilities. In this context, research on the internationalization of higher education is relevant, which takes into account the voice of students from China regarding barriers to inclusion [17].

In summary, the existing research provide a theoretical and practical basis for implementing inclusive education in the digital age, but still gaps remain. In particular, in Ukraine, a clear model for implementing digital inclusion in the system of management of educational institutions has not yet been developed. Mechanisms for monitoring the effectiveness of inclusive practices in the digital environment have also not been sufficiently studied, which is a task for further scientific research.

Methods

The study was conducted in the 2023–2024 academic year based on data collected from three regional education departments of Ukraine – Kharkiv, Chernihiv, and Zaporizhzhia regions, which are characterized by high levels of internal population displacement and partial loss of educational infrastructure. The methodology was based on a mixed approach that combined quantitative and qualitative methods of information collection and analysis. Quantitative data were obtained from official statistical reports of schools on the coverage of students with special educational needs, the level of performance, the use of adapted digital courses, and the intensity of online support. These indicators were normalized to a percentage value for the purpose of interregional comparison. In addition, an online survey was conducted among parents of students with SEN (n=315), the results of which allowed assessing the level of satisfaction with the conditions of education. To gain a deeper understanding of management and pedagogical practices, 12 expert interviews were conducted with representatives of administrations and teachers of inclusive classes, which were analyzed using the content analysis method to identify common semantic patterns. All data were aggregated into summarized tables, and the results were visualized in the form of a graph to build an analytical model of the effectiveness of blended learning in an inclusive environment.

Results

Inclusive education in Ukraine is increasingly viewed not only as a social practice, but as a multidimensional phenomenon that integrates digital, managerial, pedagogical, and legal components. In the context of digitalization, scholars emphasize the importance of creating flexible educational environments that respond to the needs of different categories of learners, in particular people with disabilities or those in conditions of forced displacement [4, 9]. Access to educational content through online platforms is becoming a key prerequisite for implementing the principles of inclusion. Given the challenges of globalization, researchers emphasize the need to take into account the intercultural context and human rights in the design of educational policies [2]. Inclusion in education is no longer an exclusively national task, but is being shaped in the global space through transnational practices, institutional partnerships, and the implementation of international norms.

A separate block of scientific approaches concerns digital inclusion tools, which include the development of adaptive learning environments, mobile applications, gaming applications, and platforms for collaborative learning. Thus, research focuses on the effectiveness of using digital media to adapt educational content to the needs of individuals with special educational needs [5, 10], as well as on user participation in the co-creation of inclusive ICT products [8]. These approaches are of special importance in light of the humanitarian challenges associated with the war, in particular in border areas, where destroyed infrastructure makes access to face-to-face education difficult. In this context, inclusive education is implemented through distance or blended learning components, which allows for the participation of students from vulnerable groups in the educational process using digital platforms and services [14, 15]. Namely situational educational interaction through ICT has become the answer to the new demands of Ukrainian society.

In addition, some works reveal the importance of interprofessional interaction between teachers, social workers, psychologists, and parents as a prerequisite for the successful implementation of inclusive practices, especially in crisis situations [6]. Such approaches are complemented by the concept of psycho-emotional well-being of students, which identifies the need for personally oriented and supportive strategies [7]. In summary, modern scientific approaches in Ukraine demonstrate a gradual transition from declaring the principles of inclusion to designing an adaptive educational ecosystem that functions even in conditions of instability. Such transformations are part of a broader process of humanitarian adaptation of education to the conditions of war, the digital revolution, and global integration pressure.

With the outbreak of a full-scale war in Ukraine, the issue of accessibility of educational services for persons with special educational needs has taken on a new meaning. This is especially true in border and de-occupied regions, where infrastructure destruction, unstable internet connections, disruption of social integration and increased anxiety levels are simultaneously observed. These challenges require a systematic analysis of the barriers that limit the educational participation of such applicants. Table 1 presents a typology of key barriers to access to inclusive education, taking into account the war state context.

Table 1. Main barriers to access to inclusive education in border and war-affected regions of Ukraine

Barrier category	Specific manifestations	Examples from practice and research
Infrastructure	Destruction of schools, lack of safe access to facilities, lack of adapted transport	Some students are unable to physically reach educational institutions; damage to educational buildings and shelters [4, 21]
Digital	Lack of stable internet, technical limitations (lack of gadgets), lack of adapted platforms	In communities on the front line, access to distance learning is episodic, and access to inclusive features of online services is often lacking [5]
Socio-psychological	Anxiety, maladjustment, disruption of family support, loss of academic motivation	Students with SEN in combat zones demonstrate emotional instability and reduced engagement in the educational process [6, 7]
Personnel and management	Outflow of qualified personnel, lack of crisis management, unpreparedness of teachers to work in emergency situations	Some teachers do not have digital methods of inclusive learning, the lack of flexible instructions from the Ministry of Education and Science in the regions under threat [11]

Source: created by the author based on [4, 5, 6, 7, 11, 21]

As can be seen from Table 1, barriers to access to inclusive education in wartime are multi-layered and require comprehensive solutions. Issues of infrastructure and digital inequality are exacerbated by the inability to attend educational institutions in person or participate in online classes. Psycho-emotional instability and lack of qualified support further complicate the educational process. This requires adapting educational policies to the realities of crisis management while simultaneously expanding ICT capabilities to support an inclusive educational environment.

In the context of a humanitarian crisis and disruption of educational infrastructure, the potential of information and communication technologies (ICTs) to ensure the continuity and inclusiveness of the educational process becomes particularly important. Digital solutions can compensate for infrastructural, communication, and organizational gaps through flexible models of educational interaction. Table 2 presents the possibilities of using ICTs as a means of overcoming the main barriers to inclusive education in the affected regions.

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Table 2. ICT opportunities for overcoming educational barriers in wartime

ICT solutions	Form of implementation	Barriers to overcome	Examples and evidence from research
Digital platforms (Zoom, Moodle, Google Classroom)	Synchronous and asynchronous learning	Lack of face-to-face access, geographical distance	Platforms allow for convenient learning, taking into account specific needs [12]
Situational educational interaction through messengers, Viber channels, Seesaw	Informal, short-term or contextual support	Temporary disadaptation, unstable internet connection	Educators in temporarily occupied or deoccupied territories use mobile applications for microinteractions [10]
Mobile apps (Coursera, Duolingo, Khan Academy)	Flexible access to educational content	Lack of qualified support, lack of school infrastructure	Training programs are adapted to the individual pace and needs of the user [4, 14]
Platforms with special inclusion features (Read&Write, Microsoft Immersive Reader)	Adaptive environment for people with SEN	Cognitive, sensory, language barriers	Inclusive technologies support learners with visual, speech, and concentration impairments [3, 8]

Source: created by the author based on [3, 4, 8, 10, 12, 14]

As can be seen from Table 2, ICT tools allow for rapid adaptation of educational processes to the conditions of an emergency. The use of asynchronous and synchronous learning ensures educational continuity, even in the event of a shortage of teachers or the impossibility of physical presence. Situational forms of interaction (messengers, mobile channels) provide flexibility, and specialized platforms of inclusive design take into account the needs of applicants with developmental disabilities. Such multifunctionality of the digital environment creates the basis for adaptive inclusive policies in wartime.

Blended learning has become one of the most sustainable models of educational interaction in wartime, as it allows for the combination of face-to-face and distance learning elements, taking into account the needs and capabilities of the learners. For individuals with special educational needs, as well as internally displaced persons, this model is not only a logistical alternative, but also a means of inclusive support through digital tools, personalized trajectories, and access to resources regardless of location [4, 12].

The study is of applied nature and is based on a mixed method of data collection and analysis. The empirical part is based on data collected within three regional education departments (Kharkiv, Chernihiv, and Zaporizhzhia regions), which provided generalized statistical reports on the coverage, success, and conditions for implementing blended learning in the 2023–2024 academic years. These regions were selected based on the criteria of high population displacement, prolonged hostilities, partial loss of educational infrastructure, and active attempts to restore the educational process through digital platforms. The main emphasis is on assessing the effectiveness of blended learning for students with special educational needs (SEN), including children with disabilities, developmental disorders, and internally displaced persons. The data collection method included: 1) analysis of internal reports of educational institutions, 2) processing of the results of an online survey of parents (n=315), 3) expert interviews with representatives of administrations and teachers of inclusive classes (n=12). The sample size covered about 20 schools in each region.

The effectiveness was assessed using five indicators:

– the proportion of students with SEN who were involved in the educational process;

– level of parents' satisfaction with the conditions of education;

– academic performance (average score and ratio of students who completed the program);

– the share of adapted digital courses in curricula;

– intensity of online support for teachers (number of hours of remote support per week).

Quantitative data were normalized to percentage values for interregional comparison. Qualitative interviews were assessed using content analysis of key meanings and their reduction to general patterns of educational interaction in

wartime conditions. All indicators were summarized in a table for further construction of a graphical model and analytical analysis.

Figure 1 presents generalized indicators of the effectiveness of blended learning for different groups of learners.

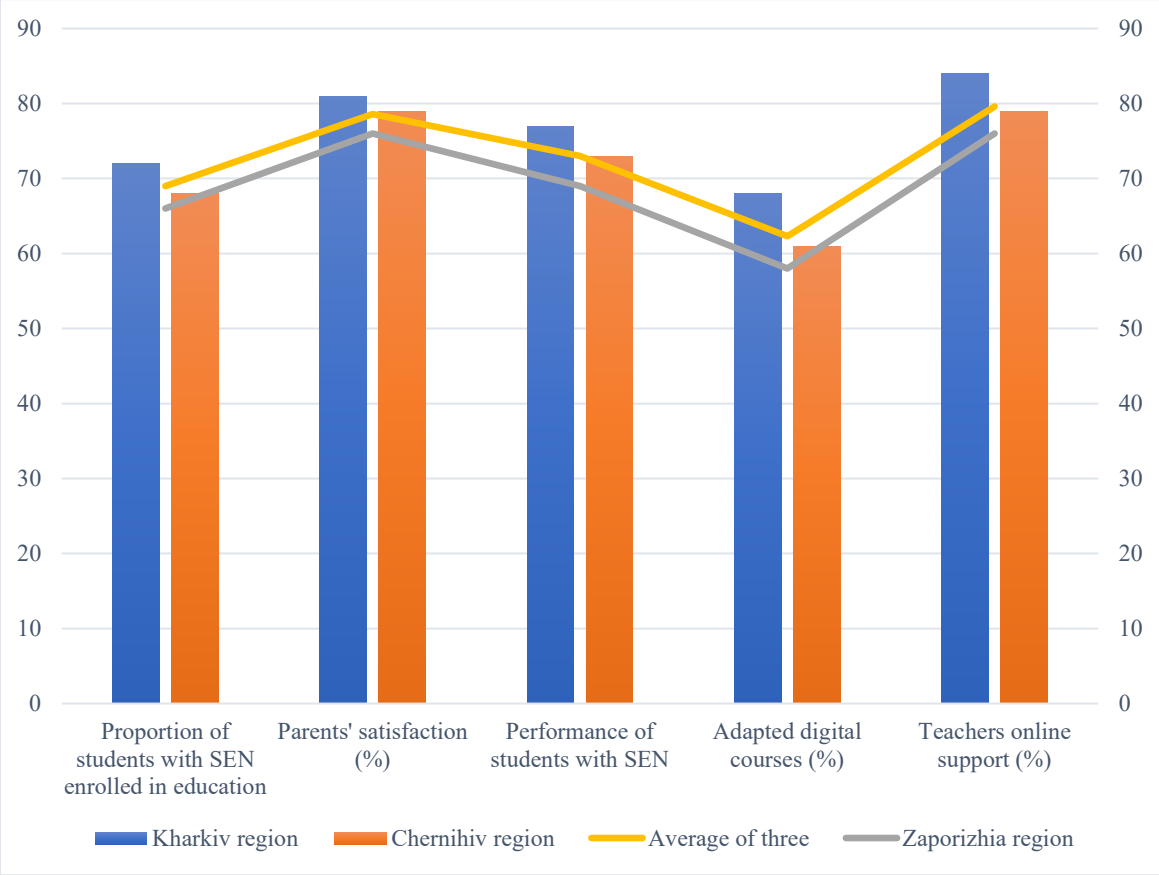

Figure 1. Indicators of the effectiveness of blended learning in an inclusive environment (in %)
Source: created by the author based on [4, 5, 11, 12]

Analysis of the numerical data presented in Figure 1 reveals both general positive trends and regional differences in the implementation of blended learning for students with special educational needs in wartime. The highest level of coverage of students with special educational needs is observed in Kharkiv region – 72%, which is 6 percentage points (pp.) higher than in Zaporizhzhia region (66%) and 4 pp. higher than in Chernihiv region (68%). This dynamics can be explained by greater investments in digital infrastructure and the efforts of local education authorities in Kharkiv region, which has experience of rapid digitalization even before the full-scale invasion.

The level of parents satisfaction is also highest in Kharkiv region (81%), which exceeds the corresponding indicator in Chernihiv (79%) by 2 pp. and in Zaporizhzhia (76%) (by 5 pp.). Such positive dynamics may indicate clearer communication between teachers and families, as well as flexibility in study schedules. The success rate of students with SEN ranges from 69% in Zaporizhzhia region to 77% in Kharkiv, which confirms the close connection between the level of organization of the educational process and educational results. The difference of 8 pp. between these regions is significant and indicates the need to strengthen pedagogical support in less successful regions. The indicator of adaptation of digital courses is also highest in Kharkiv region (68%), where it is 10 pp. higher than the similar indicator in Zaporizhzhia region (58%). This indicates the unevenness of the processes of digital transformation of educational content, which directly affects the accessibility and quality of education. Online support for teachers varies within 76–84%, with the highest value again in Kharkiv. The difference between the extreme indicators is 8 pp., which

can be explained by the different degrees of readiness of educators to work in a digital environment. In general, the Kharkiv region demonstrates the highest indicators by all criteria, which may indicate the successful implementation of the blended model as a means of inclusive education. Zaporizhzhia region, on the contrary, requires additional measures to strengthen adaptation support, increase digital inclusion and strengthen psychological and pedagogical support. All regions, despite the challenges, demonstrate a general trend of effective use of ICT in the formation of an inclusive learning environment.

With the outbreak of full-scale war, digital educational technologies have become not only a means of supporting the educational process, but also a critical resource for ensuring inclusion. In conditions where physical access to educational institutions is limited, the integration of digital solutions taking into account the needs of students with SEN has become a challenge for Ukrainian schools, but at the same time a source of innovation. Management teams and teaching staff in individual regions have demonstrated the ability to adapt quickly, develop effective strategies, and ensure the sustainability of inclusive education in a digital environment. Table 3 provides summarized examples of such successful practices, classified by type of digital solution and context of its use.

Table 3. Examples of successful integration of inclusive digital solutions into the activities of educational institutions in Ukraine

Name of institution / initiative	Type of digital solution	Management or pedagogical innovations	Inclusive target audience	Results / effects of implementation
Lyceum No. 5, Chernivtsi	**Google** Platform **Classroom** with assistant feature	Automated task distribution by difficulty level	Students with learning difficulties	Increased participation in online lessons by 23%; improved student independence [12]
Gymnasium, Kramatorsk	**Read & Write**, **Microsoft Immersive Reader**	Implementing instructions for using adaptive reading	Students with visual impairments, dyslexia	Improved comprehension of texts; reduced anxiety when performing tasks [3]
Educational hub for IDPs, Dnipro	**Khan** Mobile Apps **Academy**, **Duolingo**	Individual educational trajectories based on language and cognitive diagnostics	Displaced teenagers	Increased motivation to learn; maintaining educational level during adaptation [4]
School No. 22, Ivano-Frankivsk	**Padlet** and **Seesaw** for parent engagement	Weekly visual progress reports; family involvement in assessment	Children with developmental disabilities	Increasing trust between teachers and parents; building team interaction [6]
Vocational and technical education institution, Poltava	Own LMS platform with support chatbot	Creation of online modules with video instructions; support chat for SEN students	Youth with disabilities	Improving access to materials; reducing the number of non-admissions [11]

Source: created by the author based on [3, 4, 6, 11, 12]

As can be seen from Table 3, the successful integration of inclusive digital solutions into the activities of Ukrainian educational institutions occurs at different levels: from basic adaptation tools (supported reading, mobile platforms) to complex LMS systems with built-in support algorithms. The key conditions for effectiveness are institutional readiness for change, team interaction between teachers and families, as well as the use of analytics to personalize learning. These practices demonstrate not only the technical, but also the strategic flexibility of the Ukrainian education system in the context of a humanitarian crisis.

Conceptual guidelines for the formation of an adaptive model of digital inclusion in education in Ukraine in conditions of emergency situations. The realities of modern Ukraine, in particular armed aggression, mass displacement of the

population and the destruction of critical infrastructure, require a rethinking of the inclusive education system taking into account digital transformations. Traditional approaches to inclusion, which were based on physical presence, should be supplemented or replaced by flexible digital models capable of rapid adaptation in conditions of instability. In this context, it is advisable to form *an adaptive model of digital inclusio,* based on the following conceptual guidelines:

1. Multi-access principle. It is necessary to provide parallel support for students with different levels of access to digital resources: from full online participation to offline formats (apps, flash drives, printouts). This is especially relevant for temporarily occupied territories and communities with limited connectivity.

2. Flexible pedagogical architecture. Educational platforms should allow for changing learning formats (synchronous/asynchronous), adapting materials to the needs of students with SEN, and integrating alternative communication channels - messengers, voice messages, and video instructions [3, 10].

3. Institutional resilience. Management strategies should include scenario planning and crisis protocols in the event of loss of access to the platform, teacher absence, or mass student displacement. This requires building resilient digital infrastructures at the level of united territorial communities, general secondary education institutions, and vocational education [11].

4. ICT platforms as an environment for psychosocial support. Platforms should include elements of emotional contact, visual accompaniment, feedback space, and access to psychological help – this is critical to supporting applicants in a state of anxiety, loss, or isolation [7].

5. Participatory design of inclusive services. The process of creating digital solutions should involve direct users - students with special needs, parents, teachers, IT specialists. Namely the co-creation approach allows making interfaces understandable and services adaptive [8].

6. Integration of performance evaluation. The adaptive model should contain built-in mechanisms for monitoring accessibility, satisfaction, and learning effectiveness - using dashboards, analytical modules, and feedback from all process participants [12, 24].

7. Legal and ethical compliance: Ensuring digital inclusion should be carried out in accordance with data protection legislation, children's rights, WCAG accessibility standards and EU inclusion policy principles [2].

Thus, the adaptive model of digital inclusion is not a universal template, but a flexible system with dynamic elements that takes into account not only the needs of users, but also the real limitations of wartime. Its implementation is possible only if technological, pedagogical, and managerial solutions are integrated into a single strategy for the digital transformation of education in Ukraine.

Discussion

The obtained results of the study confirm the hypothesis of the effectiveness of blended learning as a tool for inclusive support of students with special educational needs in war conditions. The positive dynamics of participation of students with special educational needs, the increase in the level of parental satisfaction and high indicators of digital adaptation indicate a gradual transition of Ukrainian educational institutions from declarative to practical inclusion, focused on flexibility and personalization of educational trajectories. Comparing the results with the data of other researchers, we observe a consistency with the conclusions of Bakhmat et al. [12], who point to the potential of the digital environment as an adaptive educational space. Similarly, Moussa et al. [4] emphasize the importance of online education for internally displaced persons, which is confirmed by the example of the use of mobile applications in Dnipro given in the study. At the same time, as Smutchak et al. [5] note, digitalization is heterogeneous - this is consistent with the identified differences between regions in the implementation of ICT solutions.

In contrast to the general optimism, other authors emphasize the structural limitations of inclusive policies. For example, according to analysis by Niine et al. [23], the effectiveness of inclusion depends largely on the level of managerial autonomy and crisis management capacity. This correlates with our finding of the need for institutional resilience, especially in regions affected by hostilities. Comparison with the data of Sofii et al. [6] also emphasizes the importance of interprofessional interaction, which in the Ukrainian context is implemented mainly situationally, rather than systematically. The issue of equality of access to digital resources remains controversial. While the study by Daniela [3] demonstrates the effectiveness of adaptive design tools, field data from Chernihiv and Zaporizhzhia regions indicate limited technical equipment in schools and unstable internet connectivity. This indicates the existence of hidden barriers that are not always taken into account in regulatory strategies. It is also worth mentioning the

limitations of the study. First, the results are based on data from only three regions, which does not allow extrapolation to the entire country. Second, the survey of parents and teachers is subjective in nature, which affects the level of generalization. Nevertheless, the results are representative for analyzing the situation in conditions of prolonged instability and can be the basis for further research.

In summary, the discussion suggests the need to integrate digital, psychological-pedagogical, and managerial solutions in shaping adaptive inclusive policies. The conceptual approaches proposed in the study are consistent with the ideas of Ahrweiler et al. [8] on participatory design, as well as with the vision of Zajda and Vissing [1, 2], who view inclusion as a global transformation of education in the context of human rights. However, the existing contradictions between practice and policy suggest that digital inclusion in emergencies requires further research, including taking into account sustainable development indicators, as suggested by Korngold [22].

Thus, the discussion confirms the relevance of blended learning as a model of inclusive education in times of crisis, but emphasizes the need to develop flexible strategies based on empirical data, user participation, and institutional support.

Conclusions

The results obtained demonstrated the effectiveness of using blended learning as an effective tool to support inclusive education in wartime, especially for students with special educational needs and internally displaced persons. The study found that digital platforms and mobile applications can not only compensate for the shortage of educational resources, but also contribute to the preservation of the psycho-emotional well-being of students affected by the humanitarian crisis. As expected, the level of effectiveness depended on institutional readiness, technical support, and interaction between participants in the educational process. The novelty of the study lies in the development of a practical model of digital inclusion that takes into account the conditions of an emergency situation, as well as in the empirical assessment of blended learning indicators for students with SEN. The study was limited in its regional coverage and difficulties in collecting full-fledged statistical data due to the unstable situation in border areas. Despite this, the conclusions obtained can be applied in educational policy, management decisions at the level of territorial communities and in the adaptation of educational platforms. In further research, it is advisable to expand the geography of analysis, integrate psychometric tools for assessing the impact of digital inclusion, and explore the experience of international partnerships in creating inclusive EduTech solutions. It is recommended to introduce a national monitoring index of inclusive digital transformation of education, which will allow for timely identification of inequalities and adjustment of policies in conditions of instability.

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