interdisciplinary integrated knowledge about nature and the art of the native word, value orientations in the upbringing of a caring attitude towards the environment by means of analyzing literary works: establishing connections and dependencies in nature between the state of the environment and human activity, interest in knowing the nature of one's land occupies a due place in the studies of past centuries and the present. This problem was given significant importance by J. Comenius, V. Sukhomlynsky, J. Pestalozzi, K. Ushinsky, and J. Rousseau.

Key words: *nature, the surrounding world, scientific picture of the world, analysis of literary works, natural science, integrated course, younger schoolchildren.*

UDC 37.014.5:37.091.33(477)

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DOI 10.24139/2312-5993/2026.01/090-104

EDUCATIONAL CONTENT AS A TOOL FOR OVERCOMING LEARNING LOSSES AND GAPS IN WARTIME CONDITIONS

The article examines the role of educational content in addressing learning losses and educational gaps caused by the full-scale war in Ukraine. Drawing on international research in cognitive psychology, reading science, and comparative education, the study analyzes the mechanisms through which curriculum design can either exacerbate or mitigate learning losses. The theoretical framework integrates the Simple View of Reading model (Gough & Tunmer, 1986), the Matthew Effect in reading (Stanovich, 1986), and the RAPID framework (World Bank & UNICEF). The analysis demonstrates that mathematics and reading constitute foundational competencies whose disruption triggers cascading academic failures across all subject areas. Special attention is given to the challenges faced by Ukrainian students in occupied territories, refugee children abroad, and those affected by distance learning. The article argues for curriculum prioritization focused on fundamental literacy, numeracy, and socio-emotional skills, rather than attempting mechanical coverage of overloaded curricula. Based on international evidence from Guyana, Rwanda, and India, practical recommendations are offered for differentiated curricular approaches tailored to distinct categories of war-affected learners in Ukraine.

Key words: *learning losses, educational gaps, curriculum content, wartime education, reading literacy, Matthew Effect, curriculum overload, teaching at the right level, Ukraine.*

Introduction. The full-scale Russian invasion of Ukraine, which began on February 24, 2022, has precipitated an educational crisis of unprecedented scale. Millions of children have experienced prolonged interruptions in their schooling due to displacement, destruction of educational infrastructure, security threats necessitating shelter-based learning, and the psychological burden of living in a war zone. According to UNHCR (2024), over two million school-age children from Ukraine are currently abroad, with more than 600,000 remaining outside formal education systems in EU countries alone. Within Ukraine, frequent air raid alerts, power outages, and the shift to

distance or blended learning formats have fundamentally altered the conditions under which education takes place.

In this context, educational content — understood as the substance of what is taught, the structure in which it is organized, and the priorities that guide its selection – emerges as a critical lever for both understanding and addressing learning losses. The content of education is not merely a passive repository of knowledge to be transmitted; it is an active instrument that shapes cognitive development, mediates access to further learning, and can either accelerate recovery or deepen existing gaps. As UNESCO (2021) emphasizes, curricula may need to be streamlined to reflect core principles and teach essential skills within the limited time available.

The urgency of this issue is amplified by the fact that Ukraine's educational challenges are not uniform. Children in temporarily occupied territories receive education shaped by Russian propaganda narratives. Refugee children abroad navigate dual educational systems, often studying simultaneously in host-country schools and Ukrainian distance programs. Students within government-controlled Ukraine cope with intermittent access to schooling and the cumulative psychological toll of prolonged conflict. Each of these populations requires a tailored approach to educational content, grounded in evidence about how learning losses accumulate and how they can most effectively be addressed.

This article examines the role of educational content as both a factor in the formation of learning losses and a tool for their remediation, drawing on international research in cognitive psychology, reading science, curriculum theory, and comparative education policy.

Analysis of relevant research. The study of learning losses has a substantial research tradition that long predates the COVID-19 pandemic and the current conflict in Ukraine. The foundational work of Cooper, Nye, Charlton, Lindsay, and Greathouse (1996), published in the *Review of Educational Research*, established through meta-analysis that students lose the equivalent of approximately one month of instruction during summer vacation, with losses being more pronounced in mathematics (equivalent to 2–3 months) than in reading (1–2 months). This «summer slide» phenomenon has since been replicated across diverse educational contexts and has become a foundational concept in understanding how interruptions in schooling affect academic achievement.

The primacy of mathematics and reading as focal areas for learning loss research is not coincidental. Duncan et al. (2007), in a landmark study

published in *Developmental Psychology*, analyzed six large-scale longitudinal datasets and demonstrated that early mathematical skills are the strongest predictors of later academic achievement, surpassing even socio-emotional skills and attentional capacity. Notably, early math skills predicted reading achievement more strongly than early reading skills predicted math achievement, suggesting a particularly foundational role for mathematical competency.

The relationship between reading and mathematics is, however, bidirectional and complex. Research published in *Large-scale Assessments in Education* (2022), employing continuous time models, found that the influence of reading on mathematics (standardized cross-lagged effect ≈ 0.30) exceeds the reverse influence (≈ 0.13), with peak effects observed at approximately six-month intervals. These findings align with theoretical models positing that linguistic competence provides the scaffolding for mathematical concept acquisition, as mastering the rules of a number system parallels the acquisition of written language as a symbolic representational system.

A crucial theoretical contribution to understanding reading and its role in education comes from the Simple View of Reading (SVR), proposed by Gough and Tunmer (1986) and refined by Hoover and Gough (1990). The model posits that reading comprehension is the product (not the sum) of two components: decoding (word recognition) and language comprehension. The multiplicative nature of this relationship means that if either component equals zero, comprehension is impossible. As Castles, Rastle, and Nation (2018) confirmed in their comprehensive review, both components are necessary and neither alone is sufficient. The SVR has been validated in over 150 empirical studies across multiple languages.

The distinction between «learning to read» (typically grades K–3) and «reading to learn» (from grade 4 onward), attributed to Chall (1983), marks a fundamental shift in the function of reading within education. After this transition, reading becomes the primary vehicle through which students acquire knowledge across all disciplines. The «fourth-grade slump» described by Chall and Jacobs (2003) documents how students from low socioeconomic backgrounds, who may have shown adequate performance in early grades, begin to fall significantly behind when texts become longer, more complex, and laden with specialized academic vocabulary.

Perhaps the most consequential mechanism explaining the deepening of educational gaps is the «Matthew Effect» in reading, described by Stanovich (1986) in *Reading Research Quarterly*. Drawing on

the biblical parable of talents, Stanovich demonstrated that students who acquire reading skills early read more, thereby expanding their vocabulary, background knowledge, and motivation — creating a positive feedback loop. Conversely, struggling readers avoid reading, leading to vocabulary stagnation, limited background knowledge, and declining motivation. Cunningham and Stanovich (1997) provided longitudinal evidence that first-grade reading performance powerfully predicted eleventh-grade outcomes in reading comprehension, vocabulary, and general knowledge — even after controlling for cognitive ability.

The inclusion of scientific literacy alongside reading and mathematics in international assessment frameworks such as PISA reflects growing recognition that understanding natural phenomena is essential for informed citizenship. Sadler and Zeidler (2009) argued that scientific literacy is critical for decision-making in democratic societies, while Bybee and Fuchs (2006) emphasized its role in workforce preparation. The PISA 2025 framework additionally highlights digital media literacy as a component of scientific competence, a consideration of particular relevance to Ukraine, where society faces systematic disinformation campaigns involving pseudoscientific narratives.

The problem of curriculum overload has been extensively documented. The OECD (2020), in its report *Curriculum Overload: A Way Forward*, identified both objective overload (content exceeding absorption capacity) and subjective overload (perception of excess, which undermines motivation regardless of actual volume). The World Bank (2024) further specified three interrelated problems: curricula that are overloaded, over-ambitious (expecting learning paces that do not match student reality), and under-focused (lacking clear prioritization of foundational skills).

Aim of the Study. The aim of this study is to analyze the role of educational content as both a contributing factor to and a tool for overcoming learning losses and educational gaps in the context of Ukraine's full-scale war, drawing on international theoretical frameworks, empirical evidence, and comparative policy experiences to formulate evidence-based recommendations for curriculum adaptation.

Research Methods. The study employs a combination of theoretical analysis, systematic literature review, and comparative policy analysis. The theoretical component draws on foundational models in cognitive psychology and reading science, including the Simple View of Reading (Gough & Tunmer, 1986), the Matthew Effect framework (Stanovich, 1986),

and curriculum theory (OECD, 2020). The literature review encompasses peer-reviewed publications in *Developmental Psychology*, *Review of Educational Research*, *Reading Research Quarterly*, *Journal of Research in Science Teaching*, and *Large-scale Assessments in Education*, as well as policy documents from UNESCO, UNICEF, the World Bank, and the OECD. The comparative component analyzes curricular reform experiences in Guyana, Rwanda, and India (Pratham's Teaching at the Right Level program). Additionally, the study includes a content analysis of educational programs in temporarily occupied territories of Ukraine, comparing them with Ukrainian national curricula to identify specific adaptation needs for returning students.

Results. 1. Foundational competencies and their vulnerability to learning interruptions. The analysis confirms that mathematics and reading occupy a uniquely foundational position in the architecture of educational achievement, and that their disruption carries disproportionate consequences for all subsequent learning.

The differential vulnerability of these two domains to interruption is explained by the specificity of underlying cognitive processes. Mathematical operations — particularly computational procedures and algorithms — require regular practice to maintain automaticity. Without systematic rehearsal, students forget procedural knowledge significantly faster than conceptual knowledge (Cooper et al., 1996). Reading, by contrast, depends more heavily on vocabulary and the overall linguistic environment. Children from educated families who continue reading during breaks may even improve their reading skills, while children from less supportive environments demonstrate substantial regression. This asymmetry has critical equity implications: learning interruptions caused by war disproportionately affect children from already disadvantaged backgrounds, as they are less likely to have access to compensatory resources during periods of disrupted schooling.

The RAND Corporation (2019) found that nearly one in five eighth-graders in the United States falls below a «decoding threshold» — a baseline level of reading fluency necessary for comprehension. Above this threshold, comprehension varies; below it, students have virtually no chance of academic success. For Ukrainian students who have experienced years of interrupted education, the risk of falling below this threshold is substantial, particularly for those in occupied territories or those who have undergone multiple displacements.

The Annie E. Casey Foundation (2010) provided compelling evidence of the long-term stakes: 88% of students who did not receive a high school diploma had reading levels below grade-level norms as early as third grade. Students not reading at grade level by the end of third grade were four times more likely to drop out than their proficient peers. These statistics underscore the urgency of ensuring that foundational reading skills are prioritized in any learning recovery strategy.

2. The Matthew Effect and cascading learning gaps in wartime. Stanovich's (1986) Matthew Effect acquires particular salience in the Ukrainian context. Students who have experienced interruptions in schooling due to war, displacement, or distance learning have not merely «missed» certain material — they have entered a negative cycle in which existing gaps impede further learning, generating ever-larger deficits. The mechanism operates through multiple channels: cognitive (insufficient automaticity in foundational skills consumes working memory that should be available for higher-order processing), behavioral (avoidance of challenging tasks that expose skill deficits), and motivational (declining self-efficacy and increasing learned helplessness).

For Ukrainian children, these dynamics are compounded by additional factors. Children in occupied territories have been subjected to Russian-language instruction and propaganda-laden curricula that not only fail to develop Ukrainian-language literacy but actively distort historical and civic knowledge. Refugee children abroad face the challenge of simultaneous bilingual development, where they must acquire proficiency in a host-country language while maintaining or developing Ukrainian literacy. As Lesaux (Harvard Graduate School of Education) has noted, newcomer students face a compound challenge requiring simultaneous development of basic language skills, conversational competence, and the academic language of curriculum and printed materials. Goldenberg (2020) emphasized that instruction for multilingual learners requires enhanced focus on oral language development, particularly listening comprehension, to build sufficient language competence for reading comprehension.

The empirical evidence from Cunningham and Stanovich (1997) demonstrates that first-grade reading performance remains a powerful predictor of outcomes a decade later, even after controlling for cognitive ability. This finding suggests that learning losses incurred during the early elementary years — precisely the period when many Ukrainian children have experienced the most severe disruptions — may have consequences

that persist throughout their educational careers unless actively and systematically addressed.

3. Curriculum overload as an amplifier of learning losses. The analysis reveals a paradox: the very content of education intended to compensate for learning losses can, if improperly designed, exacerbate them. When students returning from periods of interrupted schooling are confronted with an overloaded curriculum that has not been adjusted to reflect their actual learning levels, the result is not accelerated recovery but deepened failure.

The World Bank (2024) modeling demonstrates that three months of school closure without corrective measures results in the loss of more than one full year of learning. Remediation alone can halve long-term losses, but only remediation combined with sustained reorientation of instruction to students' actual levels produces substantial improvement. This finding has direct implications for Ukraine, where school closures and disruptions have, in many cases, far exceeded three months.

The consequences of curriculum overload manifest through several interconnected pathways. First, excessive content volume forces a transition from deep learning (understanding concepts, connections, and principles) to surface learning (mechanical memorization without comprehension). Second, the experience of persistent failure to keep pace with an overloaded curriculum undermines motivation, producing avoidance behaviors and learned helplessness. Third, academic overload directly elevates stress and anxiety, with documented effects on sleep quality and psychosomatic health. Fourth, because each successive topic in a curriculum typically builds upon previous ones, gaps accumulate cumulatively: a student who has not mastered fractions in grade 5 will struggle with proportions in grade 6, percentages in grade 7, and algebraic expressions in grade 8.

In Ukraine, the problem of curriculum overload is compounded by a traditional orientation of natural science and mathematics programs toward olympiad preparation and university entrance for technical specialties. For students not pursuing careers in these fields — who constitute the majority — much of this content remains abstract and unmotivating, while genuinely essential skills such as understanding percentages, reading graphs, and critically evaluating statistical information receive insufficient attention.

4. Educational content in occupied territories: propaganda as curriculum. The analysis of educational programs in temporarily occupied

territories (TOT) reveals systematic instrumentalization of curriculum content for propaganda and cultural assimilation purposes. In the language and literature domain, Ukrainian language and literature are absent as compulsory subjects, replaced by 5–6 hours weekly of Russian language instruction. Works of ancient literature, including the *Tale of Igor's Campaign*, are presented as part of Russian literary heritage. The share of works by international authors is substantially smaller compared to Ukrainian programs.

In the civic and historical domain, there is no course on the history of Ukraine as such. Fragmentary elements of Ukrainian history in Russian programs are directed toward discrediting the idea of Ukrainian statehood and justifying Russian armed aggression. Illustrative examples include the topic «Neo-Nazism in Ukraine» in the grade 11 program, denial of the Holodomor genocide, and appropriation of Ukrainian history through the study of the Kyivan Rus and Hetmanate periods as Russian heritage. Narratives of a «common Russian identity,» «heroičization of war,» and «positive attitudes toward dictatorship» pervade the social studies curriculum.

Notably, differences in mathematics and natural science curricula between Ukrainian and Russian programs are considerably smaller, residing primarily in topic sequencing, terminology, and the grade levels at which specific courses begin (e.g., chemistry begins in grade 7 in Ukraine versus grade 8 in Russia). This finding suggests that adaptation in STEM subjects can be achieved relatively quickly through terminological glossaries and targeted teacher preparation, while the humanities and social sciences require fundamentally different, more intensive reintegration approaches.

5. Refugee children and the challenge of dual education. UNESCO (2025) data reveal significant disparities in educational access for Ukrainian refugee children, with enrollment rates ranging from 97% to as low as 8% depending on the host country. Children with language barriers have enrollment rates 50 percentage points lower than those proficient in the language of instruction. Approximately 29% of Ukrainian students abroad are simultaneously enrolled in local schools and Ukrainian distance programs, with a quarter spending more than three hours daily on online Ukrainian education in addition to the regular school day, creating excessive workload and burnout risks.

Ukraine's Ministry of Education and Science has attempted to maintain connection through a simplified program of 6 or 8 hours per week covering Ukrainian language, literature, history, and geography. Some host countries (e.g., the German state of Hesse) have incorporated Ukrainian language as a

subject in local schools. However, the fundamental tension between maintaining Ukrainian educational continuity and supporting integration into host-country systems remains unresolved, with implications for students' cognitive load, identity development, and eventual reintegration.

6. International evidence for curriculum prioritization. The RAPID framework, developed jointly by the World Bank and UNICEF, provides a structured approach to educational recovery: Reach every child and keep them in school; Assess learning levels regularly; Prioritize teaching the fundamentals; Increase the efficiency of instruction; Develop psychosocial health and wellbeing. The «Prioritize» component specifically calls for concentration on foundational skills — literacy, numeracy, and socio-emotional competencies — through reduced curriculum volume, deep mastery of core competencies rather than surface coverage, and adaptation of instructional pace to actual student levels.

UNICEF (2022) reported that in many countries, children lacked foundational skills even before the pandemic, and overloaded curricula further complicated catch-up, especially after prolonged school closures. Despite this, fewer than half of the 90 countries surveyed reported implementing curriculum adjustments at primary and secondary levels.

International reform experiences provide instructive precedents. Guyana in 2021 introduced a more focused national curriculum for grades 1–9, prioritizing mathematics, language, natural and social sciences, eliminating duplicate content, and integrating remaining topics through logical connections. Rwanda, following the 1994 genocide, conducted deep curriculum reform, refocusing on competencies rather than knowledge and on reconciliation rather than division — demonstrating that radical curriculum transformation is possible in response to crisis. India's Pratham program «Teaching at the Right Level» (TaRL) has demonstrated, through randomized controlled trials, significant positive effects of instruction adapted to students' actual levels rather than their nominal grade placement.

These examples converge on a common principle: a concentrated, streamlined curriculum focused on compulsory foundational knowledge can help all students reach a sufficient level, thereby minimizing achievement gaps. This approach is particularly vital for countries experiencing mass learning losses due to conflict, pandemic, or other crises.

7. Scientific literacy as a dimension of educational recovery. While mathematics and reading receive primary attention in learning loss research, the importance of scientific literacy in the Ukrainian context cannot be

understated. The concept of scientific literacy, first formulated by Hurd (1958), has evolved into a comprehensive framework encompassing the ability to explain phenomena scientifically, evaluate and plan scientific investigations, and interpret data and evidence scientifically (OECD, 2006).

For Ukraine, the development of scientific literacy acquires additional significance as a tool of informational security. Ukrainian society faces systematic disinformation from Russia, including pseudoscientific narratives such as COVID-19 denialism, anti-vaccination propaganda, and pseudo-historical concepts designed to undermine Ukrainian identity and statehood. The ability to critically evaluate scientific claims, assess the credibility of information sources, and distinguish evidence-based reasoning from propaganda constitutes not merely an academic skill but a civic competence essential for national resilience.

The PISA 2025 framework explicitly highlights digital media literacy as a component of scientific competence, reflecting the growing recognition that the modern information environment requires citizens to critically evaluate scientific information encountered online. Research by Breakstone et al. (2021) demonstrated that students' ability to evaluate sources is generally weak, making media literacy a particularly important component of scientific education. In a country at war, where information warfare is a daily reality, this competency takes on existential importance.

Furthermore, the interdisciplinary nature of contemporary challenges — climate change, energy security, public health, environmental protection — demands an integrated understanding of natural processes that transcends individual scientific disciplines. Ukraine's experience with the consequences of the Chornobyl disaster, ongoing environmental damage from military operations, and the public health implications of prolonged conflict all underscore the practical relevance of scientific literacy for every citizen, not merely those pursuing STEM careers.

8. Structured pedagogy and teaching at the right level as delivery mechanisms. The identification of appropriate curricular content is a necessary but insufficient condition for effective learning recovery. The mechanism through which prioritized content reaches students is equally critical. Two evidence-based approaches merit particular attention in the Ukrainian context: structured pedagogy and Teaching at the Right Level (TaRL).

Structured pedagogy provides teachers with clearly organized, scripted lesson plans, student materials, and assessment tools designed to ensure consistent delivery of core content. This approach is particularly

valuable in crisis contexts where teacher capacity may be strained by trauma, displacement, or the demands of unfamiliar teaching formats. In Ukraine, where many teachers themselves have been displaced and are working across unfamiliar pedagogical modalities (distance, blended, shelter-based), structured materials can reduce the cognitive burden on educators while ensuring that essential content is covered with appropriate depth and coherence.

The TaRL approach, pioneered by Pratham in India, groups students by demonstrated skill level rather than age or nominal grade, then provides targeted instruction at the level where each student can actually learn. Randomized controlled evaluations have consistently shown significant positive effects on foundational learning outcomes. The relevance of this approach for Ukraine is clear: students returning from occupied territories, from abroad, or from prolonged distance learning will present radically different profiles of knowledge and skill, often bearing little relationship to their chronological age or the grade level to which they are formally assigned. A system that insists on teaching to the nominal grade level will systematically fail students whose actual competencies diverge from grade-level expectations.

The combination of curriculum prioritization, structured pedagogy, and adaptive grouping represents a coherent strategy for maximizing the impact of limited instructional time and resources. For Ukraine, implementing this combination would require significant investment in teacher training, diagnostic assessment tools, and flexible organizational structures — but the international evidence suggests that such investment yields substantial returns in terms of learning recovery and equity.

9. Differentiated approaches for Ukraine's diverse learner populations. The analysis identifies four distinct categories of war-affected learners, each requiring tailored curricular responses:

Students from territories occupied after 2022 require adaptation programs with strengthened Ukrainian studies components, courses addressing Russian propaganda narratives (particularly in history and social studies), intensive Ukrainian language courses employing a communicative approach, and terminological glossaries for subjects with minor differences (mathematics, natural sciences).

Students from territories occupied before 2022 (Crimea, parts of Donetsk and Luhansk regions) require more intensive adaptation programs reflecting longer periods of educational isolation (up to 8–10 years for

Crimea), dedicated courses in Ukrainian history including events since 2014, strengthened practical components (museum visits, project-based learning, educational excursions across Ukraine), and oral history projects dedicated to the Revolution of Dignity and the Russo-Ukrainian war.

Refugee children returning from abroad need adaptation programs accounting for the specifics of host-country educational systems, strengthened Ukrainian studies components, mechanisms for recognizing learning outcomes achieved abroad, and peer support groups organized by country of previous residence.

Students who remained in Ukraine under distance learning conditions require compensatory programs focusing on foundational competencies (literacy, numeracy), diagnostic assessment of actual knowledge levels with targeted support (teaching at the right level), structured pedagogy with clear student materials and lesson plans, and integrated psychosocial support.

Across all categories, the common organizing principle must be the prioritization of foundational competencies — literacy, numeracy, and socio-emotional skills — rather than mechanical attempts to cover the entirety of missed material. International evidence consistently demonstrates that such mechanical «catch-up» approaches deepen rather than close learning gaps.

Conclusions. This study demonstrates that educational content functions as a dual-edged instrument in the context of wartime learning losses: when improperly designed, it amplifies existing gaps through overload, misalignment with student readiness levels, and failure to prioritize foundational competencies; when strategically adapted, it becomes the most powerful tool available for learning recovery.

The analysis yields several key findings with both theoretical and practical significance. First, mathematics and reading constitute uniquely foundational competencies whose disruption triggers cascading failures across all domains of learning. The Simple View of Reading model (Gough & Tunmer, 1986) demonstrates that reading comprehension requires the multiplicative interaction of decoding and language comprehension — the absence of either component renders the other ineffective. The Matthew Effect mechanism (Stanovich, 1986) ensures that without targeted intervention, initial gaps widen progressively over time, as struggling readers enter negative cycles of avoidance that further impede skill development. The empirical evidence from Cunningham and Stanovich

(1997) confirms that these early differences persist across a decade of schooling, even controlling for cognitive ability.

Second, curriculum overload — a pre-existing problem in many educational systems including Ukraine's — becomes particularly destructive for students with learning losses, as the attempt to cover excessive content forces surface learning, undermines motivation, and accelerates the accumulation of knowledge gaps. The World Bank's (2024) identification of curricula as simultaneously overloaded, over-ambitious, and under-focused captures a systemic problem that predates the current conflict but is dramatically exacerbated by it. The transition from deep to surface learning that overload compels is particularly damaging because it undermines the conceptual foundations upon which future learning depends.

Third, Ukraine's situation is uniquely complex due to the simultaneous existence of multiple distinct learner populations, each requiring differentiated curricular approaches. Students from occupied territories must overcome not only learning gaps but active miseducation through propaganda-laden curricula. Refugee children must navigate the cognitive and identity challenges of dual educational systems. Students within Ukraine must cope with the cumulative effects of intermittent schooling and psychological trauma. A one-size-fits-all approach to educational recovery is fundamentally inadequate for this diversity of need.

Fourth, scientific literacy, often overlooked in discussions of foundational skills, acquires particular importance in the Ukrainian context as a tool of informational security and democratic resilience. The capacity to evaluate evidence, assess source credibility, and distinguish scientific reasoning from propaganda is not a luxury competency but a survival skill in a society subjected to systematic disinformation warfare.

The international evidence, synthesized through the RAPID framework and documented in reform experiences from Guyana, Rwanda, and India, points consistently toward the same conclusion: the most effective response to mass learning losses is not curriculum expansion but curriculum concentration — the deliberate prioritization of foundational skills (literacy, numeracy, socio-emotional competencies) through streamlined curricula adapted to students' actual learning levels. Structured pedagogy and Teaching at the Right Level approaches provide proven delivery mechanisms for this prioritized content.

For Ukraine's educational system, this implies the need for: (1) systematic review of standard educational programs to distinguish a

compulsory core from variable components; (2) development of diagnostic instruments for assessing the actual levels of students from different categories; (3) preparation of teachers to work with students possessing diverse educational experiences and gaps; (4) creation of an integrated psychosocial support system as an inseparable part of the educational process in conditions of war and displacement; and (5) recognition that the «learning to read» stage must be completed by all students regardless of age or formal grade placement, as it constitutes the non-negotiable foundation for all subsequent educational progress.

Prospects for further research include empirical investigation of the effectiveness of differentiated curricular interventions for specific categories of war-affected Ukrainian learners, development and validation of diagnostic assessment tools calibrated to the Ukrainian educational context, and longitudinal tracking of learning recovery trajectories under different curricular models. Additionally, comparative analysis of educational reintegration experiences for children returning from occupied territories and from abroad would contribute to evidence-based policy development in this critically important domain.

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АНОТАЦІЯ

Мозгова Ярослава. Освітній контент як засіб компенсації навчальних втрат і подолання освітніх розривів в умовах війни.

У статті досліджується роль змісту освіти у подоланні навчальних втрат та освітніх розривів, спричинених повномасштабною війною в Україні. На основі міжнародних досліджень у галузі когнітивної психології, науки про читання та порівняльної педагогіки аналізуються механізми, через які дизайн курикулуму може як поглиблювати, так і зменшувати навчальні втрати. Обґрунтовується необхідність пріоритизації базових компетентностей замість механічного проходження перевантажених програм. Пропонуються диференційовані підходи до змісту освіти для різних категорій учнів, постраждалих від війни.

Ключові слова: *навчальні втрати, освітні розриви, зміст освіти, освіта в умовах війни, грамотність читання, ефект Матвія, перевантаженість програм, навчання на відповідному рівні, Україна.*