Current Trends in the Development of the Institutional Educational Environment

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Abstract

The paper examines current trends in the creation of institutional educational environments, with particular emphasis on the contemporary challenges faced by secondary schools. The theoretical synthesis highlights the need to reconsider the way schools create and organise their environments – physically, digitally, culturally and in terms of values. The analysis addresses key components of the educational environment from didactic, psychological, and technological perspectives. The aim of the paper is to identify the principal trends and compare the Slovak context with selected foreign initiatives. The paper also proposes recommendations for pedagogical practice, with a focus on well-being, and the creation of a supportive and safe school environment.

Keywords: Educational Environment, Social and Emotional Safety of the School

1   Introduction

The institutional educational environment has become one of the key areas of contemporary pedagogical research, as the quality of learning and the overall effectiveness of educational systems are increasingly associated with the characteristics of the physical, digital, social and emotional conditions in which learning takes place. Current European frameworks emphasise that the school is not merely a place for the transmission of knowledge, but a complex and dynamically evolving ecosystem that co-creates the cultural, value-based and relational contexts of learning and shapes processes of socialisation, motivation and students' psychosocial functioning.

Theoretical concepts grounded in ecological, systemic and constructivist approaches highlight that the educational environment represents an interconnected structure in which a change

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in one element – such as the digitalisation of teaching, individualisation of learning or increased diversity of student populations **–** generates transformations in other dimensions of the system. This perspective aligns with European strategic documents that stress inclusiveness, sustainability, democratic participation and the promotion of mental health as integral components of high-quality education.

At the same time, empirical findings increasingly demonstrate that the quality of the school environment is a significant predictor of academic achievement, student motivation, well-being and sense of belonging. The analysis of current trends in shaping the educational environment therefore requires an interdisciplinary approach that integrates pedagogical, psychological, sociological and organisational perspectives. The aim of this study is to identify key developmental tendencies in the field of institutional educational environments, outline their theoretical foundations, illustrate their manifestations in the European and Slovak context and propose their implications for educational research and teachers' professional development

2 Educational Environment as a Multidimensional and Dynamic System

The educational environment is defined in contemporary pedagogical theory as a multidimensional, variable and dynamically evolving system comprising physical, digital, social and emotional determinants that shape learning processes, socialisation and the overall personal development of learners (Leone, 2019; OECD, 2021). At the institutional level, the educational environment represents a complex framework encompassing the value orientations of the school, the quality of interpersonal interactions, the subjective sense of safety, as well as the social and didactic climate.

From the perspective of theoretical models, the educational environment can be interpreted through Bronfenbrenner's ecological systems theory (1979), which emphasises the interconnectedness of the various contextual layers influencing the individual. Similarly, theories of 'learning environments' (Fraser, 2015) highlight that the educational environment is not a mere sum of isolated factors but an interactional system that creates conditions for high-quality learning.

A change in one component – such as the digitalisation of teaching –generates modifications in other parts of the system (OECD, 2021), which is characteristic of complex adaptive systems (Davis & Sumara, 2006).

2.1 Components of the Educational Environment

In line with contemporary European concepts of 'learning environments', the educational environment can be understood as a multidimensional system comprising physical, digital,

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social and emotional (psychological) dimensions. These dimensions are interconnected and jointly determine the quality of the learning process, school climate and the well-being of both students and teachers (OECD, 2020; European Education Area, 2024).

Physical Environment

The physical environment includes the architecture of the school building, the layout and equipment of classrooms, lighting quality, acoustics, microclimate, and the availability of spaces for relaxation, individual work and cooperation. Research conducted as part of the OECD Learning Environments Evaluation Programme (LEEP) confirms that the quality of the physical environment – particularly natural light, acoustic comfort, air quality and flexible spatial arrangements – is associated with improved learning outcomes and higher levels of students' subjective well-being. Contemporary European approaches prioritise flexible, multifunctional spaces that enable differentiated instruction, small-group work and project-based learning (OECD, 2017; Eurydice, 2024).

Digital Environment

The digital environment comprises the technical infrastructure (computers, mobile devices, interactive boards, learning platforms) and the ways in which schools integrate technology into teaching and learning. European policy documents and analytical reports emphasise that what matters is not merely the level of equipment, but above all: the digital competences of teachers and students; the quality of pedagogical design of digital activities; the level of cybersecurity; the critical and ethical use of digital content (European Commission, 2023). Hybrid and online forms of learning extend the school environment into virtual spaces, increasing flexibility and personalisation, while simultaneously raising demands for supporting students from less stimulating backgrounds and ensuring equity of access (Eurydice, 2023).

Social Environment

The social environment consists of the network of relationships among students, teachers, school leadership, parents and the broader community. The concept of school climate, elaborated in the European context as part of inclusive and democratic education systems, highlights the importance of trust, respect, cooperation and student participation (European Agency for Special Needs and Inclusive Education [EASNIE], 2025). Research demonstrates that perceived support, fairness and openness on the part of teachers are key predictors of students' emotional experiences, motivation and school functioning (Bocchi, 2023; Martinelli, 2023).

Emotional (Psychological) Environment

The emotional/psychological environment relates to students' feelings of safety, acceptance, identity and meaningfulness of school life. European frameworks for school well-being (European Commission, 2024) conceptualise well-being as the integration of cognitive,

emotional, social and physical dimensions of students' experience. According to Petlák (2025), as conditions and the world itself continue to change, the concept of well-being also evolves, and its meaning and significance are growing. Maslow's hierarchy of needs makes it clear that safety relates to a person's subjective feelings and the fulfilment of their need for security — a state in which they feel unthreatened, comfortable in a particular place or situation and within relationships with others, experiencing no negative emotions and maintaining a sense of personal identity as well as cooperation with others. The requirements for well-being arise from expanding knowledge about education and all aspects connected to it, but they are also a response to the dominance of scientism in schools, where students' emotions were pushed into the background. School atmosphere, communication practices, levels of empathy and psychological support are closely linked to school-related stress, anxiety and students' sense of belonging (Eurydice, 2023).

3 Trends in Shaping the School Environment – A Theoretical Synthesis

Contemporary pedagogical and didactic theory and practice increasingly demonstrate that the educational environment is no longer understood as a neutral 'backdrop' to instruction, but rather as an active agent influencing learning, socialisation and the psychological well-being of both students and teachers. Empirical findings from European comparative studies (TALIS, PISA, Eurydice, EASNIE) as well as national research highlight the need to systematically reconsider the ways in which schools design the physical, digital, social and value-based dimensions of their functioning.

Spatial Flexibility and Pedagogical Design
Traditional arrangements of desks in rows are increasingly being replaced by flexible spatial configurations that can be adapted to learning goals and student needs. In the European context, preferred solutions include variable layouts (circles, groups, learning zones), connections between classrooms and open spaces, and specialised zones (quiet spaces, project areas, community spaces). Findings from LEEP and related analyses show that such environments support collaboration, creativity and interactivity, and can contribute to improved PISA outcomes, particularly among students from less stimulating backgrounds (OECD, 2017, 2020).

Digital Transformation and Hybrid Teaching
The digital environment of schools in Europe is expanding rapidly through the adoption of LMS platforms, national educational portals and collaborative applications. Hybrid arrangements (combining in-person and online learning) enable individualised and asynchronous learning, while simultaneously increasing demands for the support of students at risk of digital

disadvantage. European documents emphasise the need to develop the digital competences of teachers and whole school teams, including the pedagogical use of technology rather than merely technical proficiency (Sipică & Toma, 2022; European Commission, 2023).

Well-being as an Integral Component of the Educational Environment

Among the most prominent trends is the shift from exclusively cognitive-oriented goals towards the integration of mental health and well-being into educational policy and school practice (Nozori, 2025).

The European Commission and the Expert Group on Supportive Learning Environments stress the whole-school approach, in which well-being is not an 'add-on', but a structural dimension of school life (European Commission, 2024).

A well-being-oriented environment includes physical elements (rest zones, relaxation and quiet spaces); psychological and social support (school psychologists, peer support, mentoring); a culture of respect, participation and safe communication.

European research confirms that a positive school climate and supportive relationships are associated with higher student motivation, lower absenteeism and improved learning outcomes (Bocchi, 2023; Martinelli, 2023).

Inclusivity and Universal Design for Learning

An inclusive educational environment is designed to be open and accessible to all learners regardless of their abilities, cultural or linguistic background, disabilities or socioeconomic status. European frameworks and EASNIE statistics emphasise the need for a supportive, caring and participatory environment that addresses the holistic needs of learners (EASNIE, 2025).

The concept of Universal Design for Learning (UDL) is increasingly applied in European educational policies, particularly in relation to diversity and equal opportunities. The environment should be designed in such a way that it does not require ex post adaptations but rather anticipates population variability from the outset (Eurydice, 2023).

Sustainability and "Green" Educational Environments

European documents on education for sustainability highlight that the school environment itself constitutes an important 'curriculum element' – physical infrastructure, greenery, and the management of energy and waste create a framework for environmental literacy and responsible citizenship (European Commission/Eurydice, 2024).

A sustainable educational environment includes green architecture (natural materials, energy efficiency, greenery); ecological programmes (waste sorting, water collection, school gardens); integration of environmental themes into everyday teaching.

Such approaches reinforce students' sense of meaningfulness in school life while simultaneously developing competences necessary for sustainable societal functioning (Petkou et al., 2025).

4 Research and Empirical Insights

4.1 Slovak Context

TALIS 2018 and the Professional Environment of Teachers
The international OECD TALIS 2018 study provided important data about teachers' perceptions of their professional environment across OECD countries, including Slovakia (OECD, 2020). For the Slovak context, particularly significant findings concern school climate and relationships, support from school leadership, professional collaboration among teachers and opportunities to implement innovative pedagogical approaches.

According to the national TALIS report, Slovak teachers more frequently than the OECD average perceive insufficient support, limited opportunities for participation in decision-making and a less developed culture of collegial collaboration (OECD & NÚCEM, 2020). These data suggest that the organisation and culture of the school environment in Slovakia may constitute a limiting factor for the development of innovative and inclusive teaching.

National Research on Well-being and School Climate (NIVaM)
In recent years, the National Institute for Education and Youth (NIVaM) has conducted several studies focused on student and teacher well-being as well as the quality of the school environment. Findings confirm a strong association between students' subjective well-being, the quality of interpersonal relationships, opportunities for rest and support at school and the degree of student participation in decision-making (NIVaM, 2023a, 2023b).
Among the most significant findings are:

1. *Relationships as a Key Indicator of Well-being*
Students who perceive their teachers as fair, supportive and open to communication report higher satisfaction with school, lower levels of stress and a greater willingness to cooperate. Conversely, experiences of ridicule, ignoring or lack of interest are associated with lower self-confidence and poorer emotional functioning.
2. *Physical and Social Conditions as Protective Factors*
The possibility to rest in a safe space, access to support services and aesthetically arranged classroom environments correlate with higher levels of student satisfaction and a lower incidence of psychosomatic difficulties.
3. *Student Participation and the 'Student Voice'*
Students who have a real opportunity to participate in decision-making (choice of activities, involvement in classroom and school structures) report higher subjective well-being and a stronger sense of meaningful connection to school.
4. *Risk Factors: Stress, Misunderstanding, Bullying*
Experiences of verbal, social or online bullying are associated with higher levels of stress, anxiety, psychosomatic symptoms and an increased risk of school absenteeism.

These findings align with European frameworks for supporting mental health and well-being in schools, which recommend systematic work on school climate, student engagement and multidisciplinary support (Ministry of Education SR, 2023).

Slovak teachers often perceive their professional environment as lacking support, with limited opportunities to participate in decision-making and an underdeveloped culture of collegial collaboration. Students who view their teachers as fair, supportive and open to communication show higher satisfaction with school and lower levels of stress. In contrast, negative experiences with teacher behaviour led to lower self-confidence and poorer emotional functioning. Physical and social conditions of the school also play an important role, particularly the availability of safe spaces for rest and access to support services. Aesthetically and functionally arranged classrooms increase student satisfaction and reduce psychosomatic difficulties. Risk factors such as stress, misunderstandings or bullying are associated with higher anxiety, psychosomatic problems and an increased risk of absenteeism.

Overall, research suggests that supporting students' mental health and well-being requires systematic development of a positive school climate, high-quality relationships and accessible support mechanisms.

4.2 International (European) Context

OECD LEEP Programme – Physical Environment and Learning Outcomes

The OECD Learning Environments Evaluation Programme (LEEP) focuses on assessing the quality of physical learning environments and their relationship to student outcomes and pedagogical practices (OECD, 2017).

LEEP has identified several key parameters of effective physical learning environments:

- lighting — with an emphasis on natural daylight,
- acoustics — reducing noise and disruptive stimuli,
- air quality and thermal comfort,
- flexibility and spatial zoning,
- aesthetics and visual clarity of the environment.

Findings indicate that modern, flexible and well-maintained environments contribute to improved student outcomes and are particularly significant for learners from socioeconomically disadvantaged backgrounds. OECD recommends that investments in infrastructure be linked to pedagogical design and that both students and teachers be involved in decisions regarding spatial modifications.

European Frameworks for Inclusion, Diversity and Well-being

Eurydice, OECD and EASNIE provide a framework for understanding how diversity, inclusion and well-being policies shape educational environments:

Promoting Diversity and Inclusion in Schools in Europe (Eurydice, 2023) analyses policies aimed at supporting learners with special educational needs, migrants, minority groups and students from marginalised backgrounds, emphasising the importance of a supportive climate and accessible resources.

Equity and Inclusion in Education (OECD, 2023) presents a holistic framework for the development of equitable and inclusive education systems and highlights the need for schools to respond differentially to the diverse needs of learners.

EASNIE (2025) underscores the importance of a supportive, caring and participatory school and classroom climate as the core of an inclusive education system.

European Guidelines for Mental Health and the Whole-School Approach

New EU guidelines for policymakers in the field of well-being and mental health in schools recommend a systemic, whole-school approach that integrates:

- school strategy,
- curriculum,
- teacher support,
- counselling and prevention services,
- participation of families and the wider community (European Commission, 2024).

This framework is aligned with conceptual models of school well-being that integrate the dimensions of climate, support, participation and emotional safety (Bocchi, 2023; Martinelli, 2023).

5   The Teacher as a Creator of Innovative Educational Conditions

The teacher plays a key and irreplaceable role in the process of education. The educational environment is shaped primarily by the teacher's professional activity, pedagogical competences, interpersonal behaviour, organisational strategies of teaching, and the ability to respond to the diverse needs of learners. The educational environment does not represent only the material and spatial framework of the classroom; rather, it constitutes a complex system encompassing the psychosocial climate, organisational structure of the educational process, digital learning conditions and the network of relationships among all actors in the school. In this context, the teacher acts as a central agent who shapes, coordinates and functionally integrates these components into a cohesive environment that supports learning and student development. In contemporary pedagogy, the teacher's role is understood holistically: the teacher is not only an expert on instructional content but also a creator of conditions for students' development, learning and well-being. The teacher supports the '21st-century learning environment' by implementing hybrid forms of instruction, project-

based learning and collaborative learning spaces. Their approach must reflect current trends, societal needs and translate them into the design and creation of educational conditions.

As a creator of a safe and supportive environment, the teacher ensures students' physical and psychological safety. Through everyday actions, the teacher shapes the school climate— students who perceive their teacher as supportive and fair demonstrate higher self-esteem, lower levels of stress and greater interest in learning.

Hanuliaková and Lobotková (2023) conceptualise the teacher as a professional who, through didactic, communication and social competencies, creates a stimulating and supportive learning environment, motivates students and adapts instruction to their needs.

Antoniuk et al. (2023) further emphasise that a comfortable and safe learning environment emerges when the teacher intentionally promotes open communication, student participation and learner responsibility for their own learning.

As a facilitator of learning and motivation, the teacher fosters students' intrinsic motivation by providing appropriately challenging tasks, constructive feedback and meaningful opportunities for choice. They create conditions in which students perceive learning as meaningful and connected to real life. The teacher supports autonomy, competence and relatedness—the three basic psychological needs defined by Self-Determination Theory (Deci & Ryan, 2020).

As a model of social behaviour, the teacher demonstrates through their communication, conduct and conflict-management practices how to build relationships, collaborate and regulate emotions. They promote inclusion, mutual respect and a positive social climate. The psychosocial dimension of the environment places emphasis on safety, fairness and supportive relationships. Within this dimension, the teacher acts as a regulator of interactions, creator of norms and model of socially desirable behaviour. A positive climate characterised by trust, respect and recognition is a significant predictor of student engagement, well-being and academic success; conversely, a conflictual or inconsistent environment increases the risk of stress and school failure (Pasandalan & Cerado, 2025).

As a member of a professional community, the teacher collaborates with colleagues, exchanges experiences and contributes to the development of school culture. The teacher participates in decision-making related to the organisation of instruction and the school environment. Within partnership communication, they cooperate with parents and professional staff. The teacher's role is increasingly expanding to include coordination of collaboration with colleagues, school leadership and families. The teacher is perceived as a member of a professional community jointly responsible for the culture of the school and for establishing systemic conditions that support learning and the well-being of all students.

This aspect becomes particularly prominent in the context of inclusive and sustainable schools, where the educational environment is understood as a shared product of all actors, although the teacher remains its most visible representative in everyday practice (Mubaidillah, 2025).

From these perspectives, it follows that the teacher's role in the educational environment is not solely didactic but also strongly socio-psychological and organisational-professional. The teacher is a key actor who can shape an environment that supports learning, well-being, participation and student development. Without the teacher's intentional and responsible engagement in these aspects, the potential of the school remains unfulfilled. Ensuring such comprehensive pedagogical practice requires adequate support for teachers—professional development, collegial collaboration, opportunities for reflection, mental-health support and appropriate organisational conditions in the school (clear rules, fair management, participatory culture). A sustainable educational environment presupposes understanding the teacher's role as a complex professional mission.

5 Conclusion

The educational environment is a complex, dynamic and adaptive structure that conditions the quality of instruction, psychosocial well-being, motivation and the overall development of learners. Its systematic research and cultivation are essential within the European context for building inclusive, democratic and sustainable education systems. Given the multifaceted nature of the educational environment, pedagogical research must focus on developing valid tools for its diagnosis and evaluation (e.g., TALIS, CLASS, ECERS); examining the determinants of positive school and classroom climate; supporting teachers' professional competences—particularly in the areas of inclusion, ICT, differentiation and socio-emotional learning; and fostering teachers' professional learning through collaborative forms (Hargreaves & Fullan, 2012).

From a pedagogical-psychological perspective, the educational environment is closely linked to research on motivation, well-being, school coping and the prevention of risk behaviour (Ryan & Deci, 2020).

Contemporary European findings and national research clearly confirm that the educational environment is a key determinant of educational quality, well-being and social inclusion. The physical, digital, social and emotional components of the environment form a dynamic, interconnected system in which a change in one element influences the configuration of the whole. Trends such as flexible architecture, digital transformation, inclusive environments, whole-school well-being and sustainability highlight the need for systemic and long-term school development planning.

The Slovak context demonstrates that relationships, school culture, leadership style and the degree of student and teacher participation are of paramount importance. The future of schooling depends on its capacity to conceptualise the educational environment as an adaptive, inclusive and supportive space in which every learner can fully develop their competences, identity and well-being in alignment with the challenges of the 21st century.

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Acknowledgements

References

Antoniuk, O., Vertel, A., Kolodyazhna, A. et al. (2023). Creating a Comfortable Learning Environment: The Role of Teachers and Education Seekers. *Cadernos De Educação Tecnologia E Sociedade*, *16*(1), 153–162. https://doi.org/10.14571

Bocchi, B. (2023). *A conceptual model of well-being at school*. University of Trieste.

Bronfenbrenner, U. (1979). *The ecology of human development*. Harvard University Press.

Davis, B., & Sumara, D. (2006). *Complexity and education: Inquiries into learning, teaching, and research*. Lawrence Erlbaum.

European Agency for Special Needs and Inclusive Education [EASNIE], 2025). *Easnie position on inclusive education systems* .https://www.european-agency.org/sites/

European Commission / EACEA / Eurydice. (2024). *Learning for sustainability in Europe: Building competences and supporting teachers and schools*. Publications Office of the European Union https://eurydice.eacea.ec.europa.eu/publications/

European Commission / EACEA / Eurydice. (2023). *Promoting diversity and inclusion in schools in Europe*. Publications Office of the European Union.

https://saltoinclusion.eu/wp-content/uploads

European Commission. (2023). *Digital Education Action Plan 2021–2027*. https://eur-lex.europa.eu/

European Education Area. (2024). *Wellbeing at school*. https://education.ec.europa.eu

Fraser, B. J. (2015). Classroom learning environments: Foundations, findings, and future directions. In Hattie, J., & Anderman, E. (Eds.), *The international handbook of educational psychology* (pp. 119–134). Routledge.

Hanuliaková, J. & Lobotková, A. (2023). *Učiteľ a jeho zručnosti v škole 21. storočia*. VŠ DTI Dubnica nad Váhom.

Hargreaves, A., & Fullan, M. (2012). *Professional capital*. Teachers College Press.

Leone, L. (2019). *Learning environments and student well-being*. Springer.

Martinelli, V. (2023). Student emotional well-being, school climate and classroom anxiety. *Educational Studies*, University of Malta.

Ministry of Education, Science, Research and Sport of the Slovak Republic. (2023). *Podpora duševného zdravia.* https://www.minedu.sk/podpora-dusevneho-zdravia/?utm_source

Mubaidillah, T.F., & Mubaidillah, I. A. (2025). The Role of School Social Environment Management in Building a Positive Psychological Climate for Students. *Journal of Learning Technology and Educational Reform. 1*(1) 2025 11-23 https://journal.liacore.org/jolter/

Národný inštitút vzdelávania a mládeže. (2023a). *Well-being a pracovná spokojnosť učiteľov – Slovensko 2023*. https://nivam.sk/

Národný inštitút vzdelávania a mládeže. (2023b). *Sprievodca well-beingom v školskom prostredí*. NIVaM. https://www.ssi.sk/wp-content/uploads/2023/04/Publikacia-WELLBeing-2023.pdf

Nozori, S. A. (2025). Creating learning environment through well-being-related activities for university students. *Cogent Eduaction, 12*(1) https://www.tandfonline.com/doi/full

OECD. (2017). *Learning Environments Evaluation Programme (LEEP)*. OECD Centre for Effective Learning Environments. https://one.oecd.org/document/EDU/EDPC

OECD. (2020). *TALIS 2018 Results (Volume II): Teachers and school leaders as valued professionals*. OECD Publishing. https://www.oecd.org/content/dam/oecd/en/publications/reports

OECD. (2020). *Skills for 2030*. OECD Publishing. https://www.oecd.org/content/dam/oecd

OECD. (2021). *The OECD learning compass*. OECD Publishing. https://www.oecd.org/en/about/

Pasandalan, S., & Cerado, E. (2025). Linking school climate to teachers' motivation, satisfaction, and commitment among public high schools in Muslim Mindanao. Journal of Interdisciplinary Perspectives, *3*(9), 589–598. https://doi.org/10.69569/jip.2025.503

Petkou, D., Kounani, A., Tsiouni, M., & Afedoulidou, E. (2025). Can Sustainable Schools Influence Environmental Consciousness and Behavior in Early Childhood? The Perspectives of Early Childhood Educators. *Education Sciences*, *15*(7), 916. https://doi.org/10.3390/educsci15070916

Petlák, E. (2025). *Didaktika. Teória a prax vo vzdelávaní*. Wolters Kluwer Bratislava.

Ryan, R. M., & Deci, E. L. (2020). *Self-determination theory*. Guilford Press.

Sipică, I.S., & Toma, E. (2022). The main challenges in education in the context of digital transformation of learning. Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, *22*(3). https://www.researchgate.net/publication/