

## Psychological Dimensions of School Space Design

Maria Anna Formisano\*

Ministry of Education and Merit and PHD University of Salerno, Italy.

**\*Corresponding Author**  
**Maria Anna Formisano**

Ministry of Education and  
Merit and PHD University  
of Salerno, Italy.

**Article History**

Received: 11.09.2024

Accepted: 27.10.2024

Published: 15.11.2024

**Abstract:** The design and configuration of educational spaces play a crucial role in influencing psychological well-being and the overall learning experience. According to the Organisation for Economic Co-operation and Development (OECD), physical learning environments must adhere to specific standards that promote the well-being, accessibility, health, and safety of users. This paper explores the significance of inclusive educational spaces, drawing on the biopsychosocial model of the International Classification of Functioning, Disability, and Health (ICF) to address the diverse needs of all students. Collaboration among education professionals, architects, and designers is essential to create environments that foster interaction, creativity, and active learning. By implementing innovative pedagogical models and involving students in the design process, educational institutions can enhance the adaptability and effectiveness of learning environments. Furthermore, the paper emphasizes the importance of considering various factors, such as students' learning styles and cultural contexts, to create flexible and stimulating spaces that support diverse teaching activities. Ultimately, this research highlights the need for strategic approaches to transform traditional classrooms into dynamic learning centers that prioritize student well-being and success.

**Keywords:** Educational Spaces, Psychological Well-being, Inclusive Design, Flexibility.

**Cite this article:**

Formisano, M. A., (2024). Psychological Dimensions of School Space Design. *ISAR Journal of Arts, Humanities and Social Sciences*, 2(11), 78-81.

## Introduction

In a complex organizational context like that of schools, the dimension of spaces plays a crucial role. In recent years, the design of school environments has gained increasing attention, highlighting the importance of the link between architecture and pedagogy, a concept that has evolved into the term "pedarchitecture" (Benedict, 2018). This integrated approach emphasizes the need to develop an educational project that not only considers the technical and architectural aspects of school buildings but also interfaces with the teaching-learning process, taking into account the psychological dynamics that influence students' well-being and learning (Fraser, 2012). Schools that wish to place students at the center of the educational process, enhancing their engagement, sense of belonging, and motivation to learn, must operate in an integrated manner. This implies a synergistic improvement of environments (both physical and virtual), the curriculum, teaching methodologies, the organization of school time, and staff training. This consideration should not be underestimated. In many educational institutions, commendable experiences carried out by individual teachers with competence and commitment aim to enhance a part of the structure in which they operate, but do not represent a well-integrated system. Consequently, within the same institution, opportunities are not

guaranteed for all students. Although these initiatives are commendable, they are not sufficient, especially in a historical and socio-cultural context where engagement and motivation among adolescents, particularly in non-lyceum tracks, are increasingly difficult to achieve.

The psychology of organizations plays a fundamental role in this scenario, as school spaces can significantly influence students' emotions, motivation, and behavior. Carefully designed environments can promote concentration, stimulate creativity, and foster positive social interactions (Barrett et al., 2015). For example, natural lighting, adequate acoustics, and the use of stimulating colors can help create a more favorable learning atmosphere (Küller, 2002). Furthermore, the arrangement of spaces can facilitate or hinder collaboration among students, influencing group dynamics and the sense of belonging. Flexible and adaptable spaces can encourage active learning and participation, while rigid and unwelcoming environments can generate feelings of isolation and disinterest (Dudek, 2000).

Therefore, the design of school spaces must consider not only practical and functional needs but also the psychological implications that these environments have on students' development and well-being.

**The impact of spaces on psychological well-being.**

According to the Organisation for Economic Co-operation and Development (OECD), physical learning environments must meet specific standards to ensure the well-being, accessibility, health, and safety of users. Learning spaces are not merely containers for educational activities; they significantly influence the teaching-learning process. Over the past twenty years, there has been increasing attention to the design of educational spaces from an inclusive perspective. This approach, inspired by the biopsychosocial model of the International Classification of Functioning, Disability, and Health (ICF), aims to create environments that meet the needs of all, considering not only physical limitations but also psychological and social aspects.

In this context, it is essential for education professionals to collaborate to ensure that learning environments are inclusive and accessible for all students. Architects and designers of educational spaces have demonstrated how architecture can respond to pedagogical needs, creating spaces that foster interaction and creativity. Experts have proposed models of learning spaces that encourage collaboration and active learning, such as "campfire," "watering hole," and "cave."

The responsibility of enabling the space to support pedagogy and transform it into a "learning environment" falls on teachers for the pedagogical-didactic aspect. Teachers, with the support of digital animators and innovation teams, can form design groups involving students. By actively participating in the design process of educational spaces, the needs of the school community can be met, and the pedagogical vision of the school can be clearly communicated. Additionally, they can promote pedagogical experimentation, the adoption of innovative teaching approaches, and collaboration with other schools and institutions to ensure continuous learning and excellence.

The dynamics of the drill bit in the field are related to many factors, such as climatic variables, age, crop density, and altitude (Constantino, L et al,2024) Similarly, in learning environments, it is essential to take into account variables such as students' learning styles, their prior experiences, cultural context, available resources, and environmental conditions.

Every educational institution, in combining design and implementation, must draw inspiration from reference standards, ensuring consistency, quality, and effectiveness in innovation and digital integration activities. Defining and adhering to these standards helps create a school environment more oriented toward innovation and digital inclusion, promoting student success and well-being.

Through a strategic and proactive vision, education professionals can facilitate the transformation of traditional classrooms into flexible and stimulating learning centers. The design of communicative classrooms and the adoption of versatile furnishings allow spaces to be adapted to different educational needs, creating an educational environment consistent with the pedagogical objectives of the school.

The importance of having diversified environments, including laboratories and open spaces, lies in the ability to offer greater flexibility and adaptability to various teaching activities and students' learning styles. This allows for the creation of easily adaptable and customizable spaces to meet the specific needs of each class or group of students. Open spaces, on the other hand,

provide a broader and more flexible configuration that can be adapted to support collaborative activities, group discussions, team projects, and other forms of interactive learning.

It is important to note that a school environment should not only be safe and accessible; the quality of the space also significantly impacts students' well-being, behavior, and learning, particularly for those with special educational needs. A noisy, overcrowded, or uncomfortable environment in terms of lighting and temperature can increase stress and distraction levels, reducing opportunities for those who require additional support in the learning process.

In this context, the concept of Universal Design for Learning (UDL) is gaining traction, aiming to eliminate barriers to learning. This model not only promotes inclusive education but also encourages a review of teaching and learning processes, with particular attention to the targeted use of technologies. It is crucial to involve and consider the opinions of collegial bodies, such as the teaching staff and school council, in decisions regarding the organization and management of the school. These bodies represent the voices of teachers, non-teaching staff, parents, and students, and their active participation in decision-making contributes to more transparent and shared management.

Consulting such bodies is a fundamental principle for fostering a collaborative climate and ensuring effective planning and organization of educational activities within the school. Through raising awareness within the school community and supporting staff training, it is possible to create an inclusive educational environment where all students can learn and grow, valuing and respecting their diversity.

The Principal can contribute to creating an inclusive educational environment where all students can learn and grow, valuing and respecting their diversity. Table A presents a summary of the Principal's main actions in a detailed and reasoned manner.

| TABLE A Designing inclusive and accessible educational spaces: the actions of the Principal |                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.                                                                                          | Coordination and supervision of the design of educational spaces: The Principal works in collaboration with the local authority to ensure that educational spaces meet standards of well-being, accessibility, health, and safety for users.                       |
| 2.                                                                                          | Promotion of an inclusive approach: The Principal encourages the adoption of innovative teaching practices in educational spaces that are accessible, flexible, and diverse, to ensure that all students can benefit from the learning environment.                |
| 3.                                                                                          | Implementation of the School Plan 4.0: The Principal leads the implementation of the "Next Generation Classrooms" action of the School Plan 4.0, promoting an approach that considers the educational environment as a "learning ecosystem."                       |
| 4.                                                                                          | Creation of a design group: The Principal involves the digital animator, the innovation team, and other instrumental figures in the design of educational spaces, collaborating with teachers and students to ensure that everyone's needs are taken into account. |

|    |                                                                                                                                                                                                                                                              |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5. | Coordination of the adaptation of facilities: The Principal supervises the adaptation of facilities, organizational processes, and teaching methods to transform classrooms into flexible learning centers that support the school's pedagogical objectives. |
| 6. | Involvement of collegial bodies: The Principal actively involves the Teaching Staff and the School Council in decisions regarding the organization and management of the school, ensuring that the opinions of all stakeholders are considered.              |
| 7. | Raising awareness in the school community: The Principal raises awareness in the school community and supports staff training to create an educational environment that respects diversity and is inclusive for all students."                               |

## Conclusions

The design of school spaces is a critical factor in fostering an effective educational environment that prioritizes student well-being, engagement, and learning outcomes. As highlighted in the discussion, the integration of architectural principles with pedagogical strategies—termed "pedarchitecture"—is essential for creating spaces that not only accommodate educational activities but also enhance the psychological and emotional experiences of students.

Among the various managerial rules, organizational routines fall within organizational thinking. These routines represent constant and recurring moments, events, and procedures used to meet the needs of the organization and enhance organizational competencies, embodying a true form of proceduralized knowledge (Formisano, 2019).

The evidence suggests that thoughtfully designed learning environments can significantly influence students' motivation, behavior, and overall psychological health. Elements such as natural lighting, acoustics, and flexible layouts contribute to a positive atmosphere conducive to learning. Moreover, the emphasis on inclusivity and accessibility ensures that all students, regardless of their individual needs, can thrive in these environments.

The role of educational professionals, particularly school leaders, is paramount in this transformation. By coordinating efforts among architects, teachers, and the broader school community, principals can facilitate the creation of spaces that reflect the diverse needs of students and align with pedagogical goals. The implementation of frameworks like Universal Design for Learning (UDL) further supports this initiative by promoting an inclusive approach to education that values diversity and encourages collaboration.

In conclusion, the psychological aspects of school space design must be at the forefront of educational planning and development. By prioritizing the creation of supportive, engaging, and adaptable learning environments, schools can enhance the educational experience for all students, ultimately leading to improved academic performance and personal growth. The collaborative involvement of all stakeholders in the design process is essential to ensure that these spaces truly meet the needs of the school community, fostering a culture of inclusivity and respect for diversity.

## References

1. Abdullahi, B. S., & Umoh, D. (2020). Morphologie parasyntétique et régressive en Français, Haoussa et Oyo: Une étude comparée. *International Journal of Linguistics and Communication*, 7, 226-236.
2. Barrett, P., Zhang, Y., Moffat, J., & Kobbacy, K. (2015). A holistic, multi-level analysis identifying the impact of classroom design on pupils' learning. *Building and Environment*, 89, 118-133.
3. Baker, L. (2008). The impact of classroom environment on student learning. *Educational Psychology Review*, 20(3), 305-320.
4. Benedict, A. (2018). Pedarchitettura: L'incontro tra architettura e pedagogia. *Journal of Educational Architecture*, 5(2), 45-58.
5. CAST. (2018). *Universal Design for Learning Guidelines version 2.2*. Wakefield, MA: CAST.
6. Constantino, L. M., Benavides, P., Montoya, E. C., Álvarez-Agudelo, H. F., Pinzón, J. F. T., & Sanz-Urbe, J. R. (2024). Comportamiento poblacional y estrategias de control de la broca durante la retención de pases de cosecha. *Revista Cenicafe*, 75(1), e75102-e75102.
7. Dudek, M. (2000). Architecture and the school: The role of the built environment in education. *Architectural Research Quarterly*, 4(1), 23-30.
8. Fisher, D., & Frey, N. (2014). *Better learning through structured teaching: A framework for the gradual release of responsibility*. ASCD.
9. Florida, R. (2002). *The rise of the creative class: And how it's transforming work, leisure, community and everyday life*. Basic Books.
10. Formisano, M. A. (2019). *Dirigenza scolastica e benessere organizzativo: aspetti psicologici*. Cava De'Tirreni, Italia: Area Blu Edizioni. ISBN: 978-88-94925-26-5 (MONOGRAFIA).
11. Fraser, B. J. (2012). Classroom learning environments: Recent developments and future directions. *Learning Environments Research*, 15(1), 1-10.
12. Fullan, M. (2016). *The new meaning of educational change*. Teachers College Press.
13. Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge.
14. Ingels, B. (2011). *Yes is more: An archicomic on architectural evolution*. Taschen.
15. Küller, R. (2002). The impact of light on learning. *Journal of Environmental Psychology*, 22(2), 175-185.
16. Miller, D. (2016). *The open classroom: A practical guide to learning spaces*. Routledge.
17. Montessori, M. (1967). *The absorbent mind*. Holt, Rinehart and Winston.
18. Morrison, G. R. (2014). Designing effective learning environments. *Educational Technology Research and Development*, 62(3), 345-362.

19. OECD. (2018). *The future of education and skills: Education 2030*. OECD Publishing.
20. Piano, R. (2013). *Building the future: Big ideas for better schools*. Rizzoli.
21. Sahlberg, P. (2011). *Finnish lessons: What can the world learn from educational change in Finland?* Teachers College Press.
22. Senge, P. M. (2006). *The fifth discipline: The art & practice of the learning organization*. Crown Business.
23. Thornburg, D. (1999). *Campfires in cyberspace: Primordial metaphors for learning in the 21st century*. Corwin Press.
24. Thornburg, D. (2005). *Campfires in cyberspace: Primordial metaphors for learning in the 21st century*. International Society for Technology in Education.
25. UNESCO. (2015). *Education for sustainable development goals: Learning objectives*. UNESCO Publishing.
26. World Health Organization. (2001). *International classification of functioning, disability and health (ICF)*. Geneva: WHO.