ISCTE IUL
REPOSITÓRIO
INSTITUTO UNIVERSITÁRIO DE LISBOA

Repositório ISCTE-IUL

Deposited in *Repositório ISCTE-IUL*:
2026-07-06

Deposited version:
Publisher Version

Peer-review status of attached file:
Peer-reviewed

Citation for published item:
Andrade, H. (2025). Critical spatial practice in the context of art education: The cri_lab sessions conducted at Marquês de Pombal school, in Lisbon. In Paula Guerra, Sofia Sousa (Ed.), Todas as Artes | Todos os Nomes. (pp. 264-278).: Universidade do Porto.

Further information on publisher's website:
/10.21747/978-989-9193-07-9/v4

Publisher's copyright statement:
This is the peer reviewed version of the following article: Andrade, H. (2025). Critical spatial practice in the context of art education: The cri_lab sessions conducted at Marquês de Pombal school, in Lisbon. In Paula Guerra, Sofia Sousa (Ed.), Todas as Artes | Todos os Nomes. (pp. 264-278).: Universidade do Porto., which has been published in final form at https://dx.doi.org//10.21747/978-989-9193-07-9/v4. This article may be used for non-commercial purposes in accordance with the Publisher's Terms and Conditions for self-archiving.

Use policy

Creative Commons CC BY 4.0
The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a link is made to the metadata record in the Repository
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

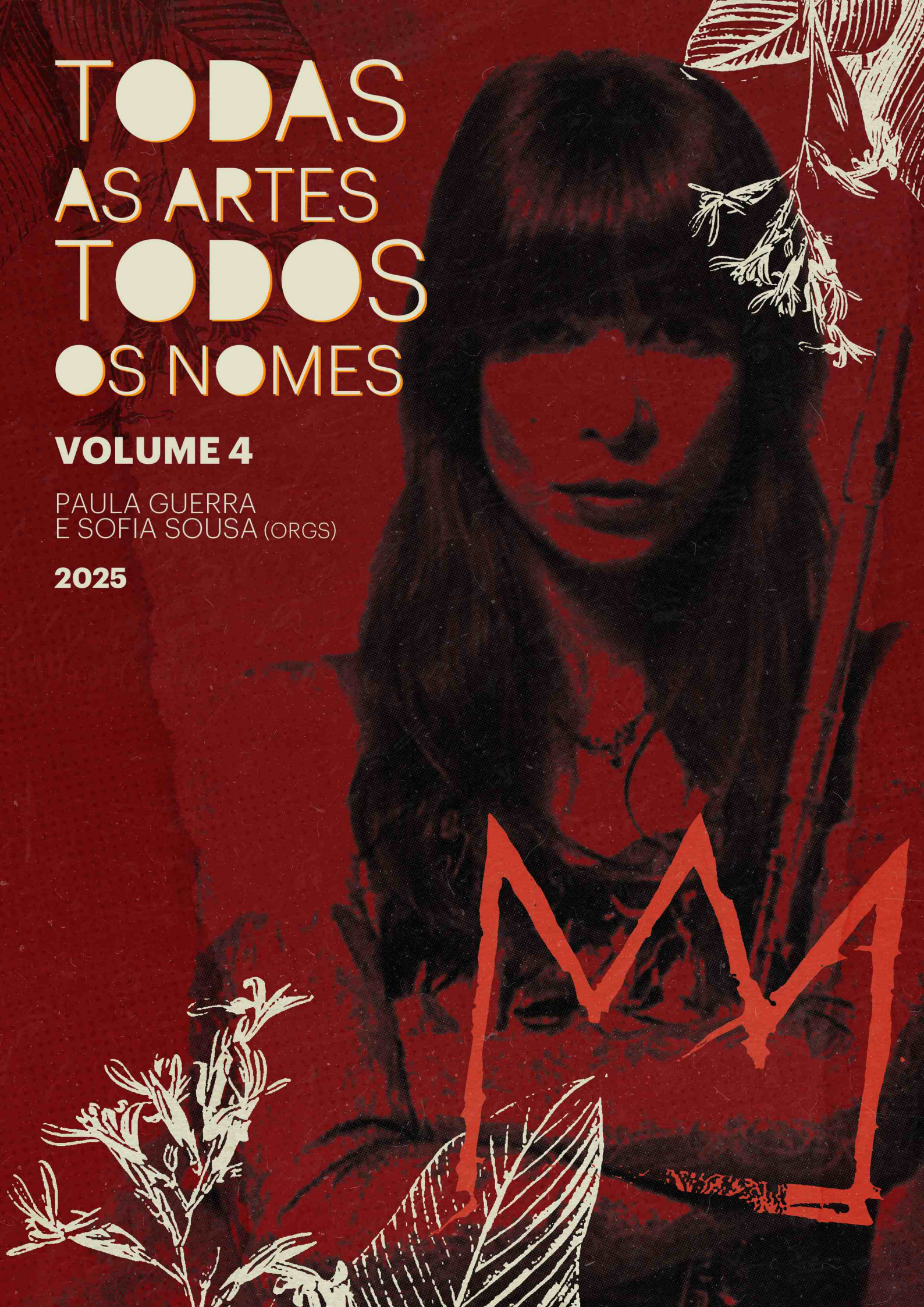
Serviços de Informação e Documentação, Instituto Universitário de Lisboa (ISCTE-IUL)
Av. das Forças Armadas, Edifício II, 1649-026 Lisboa Portugal
Phone: +(351) 217 903 024 | e-mail: administrador.repositorio@iscte-iul.pt
https://repositorio.iscte-iul.pt

TODAS AS ARTES TODOS OS NOMES

VOLUME 4

PAULA GUERRA
E SOFIA SOUSA (ORGS)

2025





ARTWORK: ESGAR ACELERADO

Todas as Artes

Todos os Nomes

CAPÍTULO 20

CRITICAL SPATIAL PRACTICE IN THE CONTEXT OF ART EDUCATION: THE CRI_LAB SESSIONS CONDUCTED AT MARQUÊS DE POMBAL SCHOOL, IN LISBON

Henrique S. Andrade, DINÂMIA´CET, Iscte, Portugal

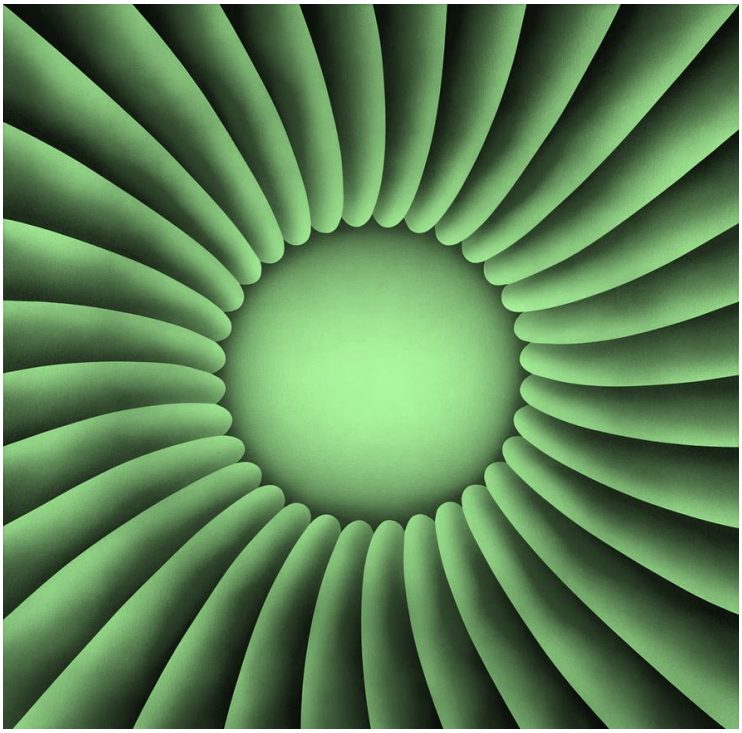
Abstract

The Cri_Lab was an experimental workshop conducted within the context of secondary education (Visual Arts field) and professional education (Communication Design technician Professional Course) for students aged between 15 and 19 years old. Over the course of ten weekly sessions, visual arts methodologies were employed with the objective of challenging students to engage with the school space in a critical and reflective manner. Each session was designed with alignment with the school curriculum and the objectives set by the Portuguese Ministry of Education. The project´s aim was to raise awareness and promote education on themes such as Space and Territory, and how these relate to Art and Culture. This was done with the goal with the goal of contributing to an informed practice of citizenship.

This paper will describe the planning and progression of the Cri_Lab sessions. It will also discuss the relevance of the experience for architectural practice and research. This will be done by describing, critically reviewing and listing considerations. Finally, it will consider how the methodology under study might constitute, or inspire, spatial interventions.

Keywords: critical spatial pratice, art education, design based research, art based research, design methodology, spatial agency.





1. Introduction: Cri_Lab

The objective of this paper is to provide a detailed description and evaluation of an experimental laboratory activity conducted in a secondary education environment, namely the Cri_Lab. This constituted a pilot trial of a PhD research on experimental creative workshops as spatial intervention methodologies. The term "creative" is used in reference to the utilization of visual arts processes as methodologies for design, with the objective of facilitating the transformation of school space while also fostering sensitivity towards space from its primary users, thereby promoting *spatial agency*[1] .

In accordance with Jane Rendell's conceptualization of Critical Spatial Practice, an area of intersection between the disciplines of Architecture and Art is distinguished from both practices while being situated in proximity to both. Given that it pertains to a space that is both critical and reflective in nature. This approach can utilize methodologies that employ creative techniques, prioritizing the expansion of the scope of questions that may inform a critical reading of space, beyond the mere materialization of construction. One potential benefit of this approach is the possibility of promoting context-specific interventions. Rather than implementing a solution in a given context, which may give precedence to factors that are not directly connected to architectural quality, this practice´s main focus is to identify the specific aspects of the site that require transformation. This approach differs from conventional architectural practice in that it does not entail the materialization of a solution to the space. Instead, it is primarily conducive to discussion, critical and experimental. Therefore, as part of a doctoral research project focused on the operability of these methods for spatial production, the *Cri_Lab* project was established as a participatory creative experimental laboratory. The principal aim of these sessions was to experiment with the utilization of creative tools as a methodology for both intervention and critical reading of places, as well as to investigate their potential to promote pedagogical and civic participation. The project's integration of "Critical Spatial Practice" into the workshop framework represents a departure from traditional art and design educational approaches. It offers students a comprehensive experience that encompasses both practical and theoretical elements, encouraging a critical and innovative engagement with space. This approach is designed to foster students' creativity and their ability to engage with the spatial environment in a reflective manner.

[1] Could be seen as the capacity that allows agents to act in ways that deviate from the established structure. (Awan, 2013)

2. Context

The *Cri_Lab* was held at *Marquês de Pombal secondary school* situated in Lisbon, Belém. This is a public school established in 1888[2] to function as a professional training education institution. In 1962, the school relocated to new premises in Belém, having previously been situated in Alcântara. It subsequently took up residence in a newly constructed building, which remains its home today[3]. The school has, therefore, a lengthy and distinguished history, particularly in regard to artistic education. It houses a museum with a notable collection of art and artefacts pertaining to its past. Furthermore, the building is of historical significance and offers considerable potential for exploring the interplay between historical and contemporary artistic expression and pedagogical practices. This is further emphasized by the building's location in close proximity to an important cultural axis comprising Lisbon's contemporary art museums[4]. This was particularly important because *Cri_Lab* was envisioned with the possibility of allowing possible subsequent editions, should this be relevant to both the PhD research and the receiving institution (school).

With regard to the student population, it is notable that a significant proportion of students are from economically and socially disadvantaged backgrounds. Art education might be beneficial creating art therapy-based moments with potential to be articulated with the school SPO and special education strategies[5]. Furthermore, the curriculum of the school, as of 2024, includes secondary teaching in the field of visual arts and professional education in the field of communication design. The workshop can be integrated with these subjects and serve as an additional component of the school curriculum. (Moon, 2003; Deaver, 2012). The selection of the location and context in which the project took place – the Marquês de Pombal school – was based on two main factors. Firstly, the conditions that were already described, that made this place a suitable location for the project, as well as an interesting subject to meet the goals of this trial. Secondly, the workshop took place while the author of this article was part of the school staff as a teacher in both the secondary and professional art and design education team. This undoubtedly facilitated the organization of the project, enabling communication with school agents through the utilization of pre-existing social and professional relationships. Additionally, it afforded the author a unique perspective as a user of the space itself.

The established protocol between the researcher at DINAMIA´CET and Marquês de Pombal school had the objective of facilitating the trial of a comprehensive assessment of the impacts and benefits of the proposed practices, and of enabling adjustments to be made based on participant feedback and needs. Consequently, *Cri_Lab* rapidly started to present as an avenue to experiment within educational methodologies that integrate artistic and architectural practices into the analysis and intervention of urban spaces. It offers an innovative and critical perspective on the interrelationship between design, city, art, culture and education.

[2] Creation decree - June 13th, 1888 (Alves, 2001: 102)

[3] Atlas of school architecture. https://asapehc.tecnico.ulisboa.pt/database/escola.php?id=164

[4] There are a lot of important museums and cultural poles in the school proximity some really relevant to the city art scene like MAC/CCB Museu de Arte Contemporânea or MAAT: Museu de Arte, Arquitetura e Tecnologia.

[5] SPO – Psychology and orientation services

3. Methodology – Merging Action Research/ Design Research/ Art-based research

The PhD research which motivated the *Cri_Lab* aims to explore the potential of integrating art-based methodologies into the design process. In other words, the research subject is first and foremost a methodology, rather than a place, population, object or building. In light of the conviction that a research project on design must entail action, the first step in launching the Cri_lab was to initiate a first approach to that methodology. This phase does not eschew theoretical inquiry; rather, it prioritizes the practical, design-based generation of knowledge. "Acting (making) thus goes hand in hand with reflection in the design process." (Herr, 2017:1) Rather than trying to develop a theoretical framework, this trial main goal was to provide insights for practical applications and subsequent trials.

Herr (2017) refers to design research as to its position, citing Downtown (2003) on three possible fields : "research for design, research about design, research through design". In developing a methodology for design processes, all three fields are pertinent. In order to draw conclusions on all of them the *Cri_Lab* planning process focused on the process itself, the process of allowing users to reflect on space through art-based methodologies rather than aiming for any possible result or space transformation. While the production of space is an important outcome in architectural design methodology, such outcomes will only be discernible and measurable after the process has concluded. This article will serve to document and evaluate these outcomes. This will allow the verification that space production should consider factors other than the resulting materialized object, space or building, including the process and indirect outputs. The process is therefore of paramount importance, as the eventual result is abstract and may not even be a physical operation on space. This implies that the process may be a result in itself. In order to provide a critical evaluation of this type of operation, it is necessary to list the potential indirect outputs (which may have been either hypotheses or not planned at all) at the end. Examples of these sorts of results could include the observation of an increase in space-driven dynamics at school grounds, the eventual quality of artistic work that might justify its display throughout the process, or even a growth in student participation in the workshops.

The notion of prioritizing the process over the object as the focal point of a creative endeavor is not uncommon in certain architectural practices (Awan, 2013) or art-based research (Leavy, 2008, 2017). The implementation of art-based methods in design research is achieved through the utilization of drawing as a means of establishing a common ground between disparate art languages and design research. (Andrade, 2024).

> Although design is familiar to creativity related methods, art-based methodologies might create the opportunity to expand these already existing approaches from the individual use of the author to an enrichment of the creative process through participation, where drawing might become participatory drawing. (Andrade, 2024, p.230)

4. From practice to theory

The planning of the *Cri_Lab* was subject to two significant constraints. The first issue pertains to the objectives of this project, which were previously outlined in the preceding chapter. This project represents a preliminary investigation into a doctoral research program. The second issue concerns the educational requirements, curriculum, and objectives established by the Portuguese Ministry of Education[6]. All of this must be done while accounting for other factors, such as the availability and motivation of all the agents involved to participate.

The *Cri_Lab* was conducted over the course of the 2023/2024 academic year, from March to July. The project comprised ten weekly sessions, each lasting 90 minutes. Each session was designed to employ an art-based methodology for the discussion of the workshop's primary theme, namely the concept of space. The term 'space' was used to denote both a general discussion of the concept and a specific focus on the school environment, encompassing both the building itself and the surrounding territory. As the project progressed, some sessions were modified to address challenges and capitalize on opportunities that emerged from interactions with external agents, including the school itself and other groups or institutions. In some sessions, a guest designer or artist was invited to participate, with the aim of providing guidance on the specific method employed in that session. The *Cri_Lab* was thus conceived as an action research design process, employing art-based methods. An approach that was primarily practical in nature, with no intention of producing any theoretical output during the course of the process. The findings of this process will be presented and discussed in this article, with the objective of identifying potential opportunities for space production. In order to fulfil the aforementioned objective, the following chapter will present a comprehensive account of each session that was conducted within the Cri_Lab. Subsequently, the observed results will be identified and discussed in order to ascertain the perceived risk associated with this approach. Ultimately, conclusions will be drawn regarding the potential for a new version of the project or subsequent similar research actions.



Figure 1: ***Cri_Lab*** **flyer that was delivered to students and parents at the beginning of the project, Cri_Lab materials 2024**
Source: the author

[6] Two guiding documents produced by the Ministry of Education of Portugal that refer to the national strategy for civic education and the Profile of students upon completion of compulsory education

5. Cri_lab – Session´s diary

In planning the sessions, the previously stated objectives were considered, as well as other projects or publications that were referenced for some of the proposed exercises (Heijnen et al., 2020; Green, 2021; Louro, 2024). This chapter will provide a comprehensive account of the methodology and planning of each session, offering a detailed description. A more succinct overview will be provided at the conclusion of the chapter in the form of a table of content. Each session integrated a more technical spatial concept with other abstract concepts (as indicated in the title of each session) through the application of an artistic methodology.

Session 1 – *materiality and the senses*

The session began with an informal conversation with the participating students regarding the significance of materials in spatial experience. The concept of materiality was explored as a sensory experience. The students were required to utilize wax crayon rubbings on book pages in order to record the maximum number of material textures present within the school environment. The students were divided into four groups, with three individuals in each. In order to make the exercise more engaging, points were assigned for each texture, with two points awarded for a unique texture, one point for a texture that was also present in one other group, and zero points for a texture that was present in both other groups. Once the designated period had elapsed, the votes were collated and the materials were subjected to a comparative analysis. This exercise prompted further enquiry and reflection on the materials recorded, even prompting questions about the technical designations used for the materials. At the conclusion of the session, the students were tasked to affix the textures to a panel, thereby allowing them the autonomy to create a collective composition.



Figure 2: **Collage that was the result of session 1, *Cri_Lab* materials 2024**
Source: the author

Session 2 – *equipment and movement*

The session began with a brief discussion about the school's equipment. The students advanced a critical perspective on the age of the equipment but concurred to a sense of belonging to that same material. By employing the stop-motion technique, a video was collectively crafted with the students, conceptualizing the potential of capturing the school's equipment as a living entity, occupying the classroom space autonomously.



Figue 3. ***Cri_Lab* materials 2024.**
Source: the author.

Session 3 – *Communication and urban dynamics*

This session, spread over the course of three days, was planned with the aim of carrying a live workshop at *futurália*[7]. The objective of this activity was to present the academic work produced at the educational establishment during that academic year. An art installation was established, wherein students were divided into groups of five and invited to affix randomly shaped cut-outs to a prepared structure. Additionally, visitors were encouraged to contribute to the installation. In this manner, the venue underwent a gradual transformation through the medium of artistic intervention during the course of the event.

Session 4 – *reality and imagined space*

The theme of this session was the concept of imagined space. The students were encouraged to engage in contemplation regarding the school spaces they had previously encountered and the imprint that these had left upon their memories. They were then tasked with attempting to produce a visual representation of these memories. The exercise was completed using the monotype technique exclusively. This entailed a process that was challenging to regulate (due to the wet nature of the materials) but also a new technique to every student. The students were required to engage with the abstract representation of their own memories, which led to a fruitful discussion on the interrelationship between space, memory and emotion.

[7] Education and career fair, held annually in Portugal at Lisbon Congress Center.



Figure 4: **Some monotype prints produced by the students in session 4, *Cri_Lab* Materials 2024**
Source: the author

Session 5 – *Design and collaboration*

The session comprised an open-day visit to *Fragmentos*[8] by students from the professional technical course in Communication Design, as well as students from the 10th, 11th, and 12th grades of the regular education program. The visit was organized in collaboration with the SPO (Psychology and Guidance Services) with the objective of providing students with direct exposure to the practice of architecture and design. From the *Cri_Lab* perspective, the opportunity to collaborate with the studio allowed students to engage in a process of spatial production under the guidance of experienced professionals. *Fragmentos* presented students with the challenge of designing a shelter for a previously visited site. The students, organized into groups of five, produced a number of models and demonstrated a high level of engagement with the exercise.

[8] Architecture studio based in Lisbon



Figure 5: **Models produced in session 5 at fragmentos studio, *Cri_Lab* Materials 2024**
Source: the author.

Session 6 and 7 – *image and interpretation*

Two sessions were conducted in collaboration with researcher Joana Nunes[9], with the objective of deepening the students' visual culture and enhancing their understanding of the applicability of photography as a representation of space and as a tool for artistic and spatial research. Following a presentation of the guest's work, students were introduced to the theoretical principles of cyanotype printing. Subsequently, participants were invited to capture images of the school space, with a view to discussing the results among themselves. At the conclusion of this exercise, one photograph was selected per student. In the following session, students, now equipped with the requisite materials to develop the photographs produced in the previous session.

[9] Orcid id: 0000-0001-7402-0467



Figure 6: **Two photographs produced by two students in session 6 and 7, *Cri_Lab* Materials 2024**
Source: the author.

Session 8 – *Ephemeral interventions and collectivity and identity*

This number refers to a session, but also to a series of additional meetings outside the regular sessions. These meetings were held with the objective of enabling students to work in collaboration with other school subjects on the production of work related to significant events and memorable days at the school. One illustrative example is the drawing panel developed for a professional courses fair hosted by the school. Furthermore, a number of projects were devised, including an installation, an exhibition, and a participatory art event that engaged the entire school community in commemoration of the 50th anniversary of April 25, 1974. In both activities, the students assumed a prominent role in the creative process, influencing the artistic direction of the resulting art interventions and shows.

Session 9 – *urban context and landscape*

In this session, the participant group undertook a guided walk around Belém, in proximity to the school, with the objective of examining the surrounding area from an aesthetic and critical perspective (Basset, 2004). This entailed exploring the image of the city through the medium of drawing. The session was led by architect and illustrator Catarina Almeida, who provided guidance on both the drawing and the route taken.

Session 10 – *Drawing, Art and space, closing session*

The final session was conducted in collaboration with *Lisbon Drawing Club*[10]. This collective of artists convenes on a weekly basis for the purpose of engaging in drawing activities. In the concluding session of Cri_Lab, students were given a presentation by the collective, in which they discussed their work. Subsequently, the *Lisbon Drawing Club*'s customary weekly session was held at Marquês de Pombal school. It was conducted in accordance with the established format for figure drawing and utilized the school workshops as a backdrop. The session was attended by artists of varying degrees of expertise, and students were afforded the opportunity to participate alongside them. Furthermore, a concise exhibition of the work produced by the students throughout the entirety of the *Cri_Lab* sessions was presented in the location where the workshop was conducted.

Session´s summary table

In order to provide a comprehensive overview and comparison of the entire group of sessions, a table will be presented below. This will entail a cross-sectional analysis of the main characteristics of each session, with a preliminary stage of evaluation comprising three principal factors that were measured throughout the course of the sessions. The initial quantitative measure concerns the number of students present in each session. It should be noted that participation in the workshop was not obligatory, and that only 13 students from the four participating classes enrolled in the workshop. Some sessions had more than 13 students because they had the participation of students who were not initially enrolled in the workshop. Nevertheless, the second factor pertains to student engagement. In order to gauge this, a qualitative classification scale was devised, based on the empirical experience of each session, as follows:

(1) Students were present but refused to participate.

(2) Students participated only by producing the requested activity.

(3) Students produced more than what was requested.

(4) Students engaged in space or art-related discussions

The third factor pertains to the observation of discussions between students that are not directly related to the session topics but nevertheless fall within the realm of space. This is a very important factor in measuring whether students acquire a sense of interdisciplinarity that is useful for the *Critical Spatial Practice* approach.

[10] Collective of artists interested in drawing and art collectivity that holds weekly live drawing sessions.

#	Topics	Art methodology used	In Collaboration with	Outputs	Number of students present (out of a total of 12 students)	Student engagement (1/2/3/4)	Off topic discussion (Yes/No)
1	Materiality; Perception.	Printing (wax rubbing); Collage.	-	Collective composition panel	6	4	Yes
2	Equipment; Movement.	Photography; Stopmotion animation.	-	Stopmotion video	4	2	No
3	Communication; Urban Dynamics.	Art installation	School´s SPO[5] and project department	promoting the school; art installation piece	18	2	No
4	Reality; Imagined space	Monotype printing	-	A large amount of printing work	10	4	Yes
5	Design; Collaboration	Architecture model; linocut	*Fragmentos studio*	promoting the school; models; labour market experience	24	4	Yes
6	Image; interpretation.	photography	Joana Nunes[9]	A large amount of photography work	9	4	Yes
7	Image; interpretation.	Cyanotype development	Joana Nunes[9]	A large amount of photography work	12	2	No
8	Ephemeral interventions; collectivity; identity.	Art installation; drawing; painting; digital techniques	School´s SPO[5] and project department	Several art shows, installations and dynamics	24	4	Yes
9	Urban context; Landscape	Live outdoor drawing; urbansketching	Catarina Almeida	A large amount of drawings	7	3	No
10	Drawing, Art; space	Observation drawing; art show	*Lisbon Drawing Club*	Drawings; final art show	12	3	No

TABELA 1 **OBSERVATION GRID**
Source: the author.

5. Discussion

This chapter will review the results of Cri_Lab, while attempting to produce a synthesis of factors that could be replicated and applied to similar research projects, while also attempting to identify opportunities for the production of educational strategies and the study of non-formal educational strategies and functioning at the school institutional level.

The project suggests that this type of experimental, creative, participatory approach can bring significant benefits to students through creative engagement and spatial knowledge and interaction. The integration of arts-based research with architectural and design

practice could provide an opportunity for innovative learning experiences for students. This can also allow students to reflect on and interact with the physical space of their school. Some notable outcomes can be organized into four distinct groups: spatial engagement (1), spatial knowledge focused education (2), spatial production methodology in the context of an institution (3) and art education (4).

(1) The spatial engagement in the school was definitely influenced during the course of the Cri_Lab. Not only the participating students became active participants in the critical analysis of the school space, but also other teachers started to use the *Cri_Lab* as a tool to intervene in the school space, working with the participating group almost as an institutionally based design studio.

(2) Although only art-based methods were used during the workshops, having space as the main theme of each session created serious moments of critical reflection and discussion. This definitely contributed to spatial literacy and awareness.

(3) The fact that the project was produced within the framework of the school function created, for the duration of the project, a sort of internal design studio capable of working with any agent of the school, producing collective thought ephemeral interventions. This happened with teachers, but also with school departments. It should also be noted that the project was an important way of presenting the school's work, but also of creating new relationships with external entities. The involvement of guest artists and external collaborators such as architects and professional studios enriched the students' learning experience. These partnerships offered students the opportunity to experience art, architecture and design practices.

(4) Art education was definitely a major outcome of the project, both in terms of its articulation with the art curriculum, but also as a complement to material and technical exploration.

In the final session, students exhibited their work while engaging with external artists in a figure drawing session. This provided a culminating moment of reflection on the school space, the scenario for the session, but also through the process of showing work, so important in the art world, validating the students' creative efforts while connecting them to a wider artistic community. Overall, civic awareness, creative agency and interdisciplinary collaboration were promoted. The active involvement of students in both the design and production processes highlights the effectiveness of Critical Spatial Practice as an educational tool, but also as a possible way to transform school space and school dynamics from within.

The *Cri_Lab* also faced limitations, some of which could inform future iterations or similar projects. With the exception of some additional work, the workshop only comprised ten sessions of 90 minutes each. While this structure allowed for a range of activities and experiences, it may have been insufficient for deeper exploration of complex spatial and architectural concepts. In terms of the adaptability of the program, several sessions were adapted or modified as the project progressed. This adaptability allowed the project to respond to unforeseen challenges or opportunities and to adapt to the students' capacities and interests. For future projects, it is recommended that planning be as dynamic as possible, actively incorporating student feedback. Also, in terms of student participation and motivation, the success of participatory projects such as *Cri_Lab* depends heavily on the

enthusiasm and commitment of the students. As expected, student motivation and engagement was not always the case. In general, the most difficult step was to get students to participate in the first session, because once a student was enrolled in the first session, participation remained constant in most cases. Ensuring student participation could require additional support mechanisms, such as closer collaboration with the school's Psychology and Guidance Service (SPO), and also possible integration into the existing curriculum, so that the *Cri_Lab* did not mean extra hours for the students. It was also essential to be part of the school's teaching team in order to mobilize parents and other teachers responsible for each class.

In terms of long-term impact, there is a lack of visible outcomes due to the ephemeral nature of the interventions. While the sessions undoubtedly provided valuable short-term experiences, it is unclear how the students' perspectives on space, design and citizenship developed after the project ended. It is recommended that future projects include follow-up assessments of both students' opinions and spatial interventions that could be linked to Cri_Lab.

The *Cri_Lab* project offers a promising framework for integrating arts-based research into design and architecture education, particularly in secondary and professional education contexts. Its participatory, hands-on approach enabled students to engage with their environment in a way that traditional classroom methods might not allow. This type of creative intervention promotes not only spatial awareness, but also the development of critical thinking skills, empathy and a sense of agency. One of the most interesting results of the project, which was neither planned nor expected, was the fact that the *Cri_Lab* began to function as a kind of studio or spatial department within the school. This could be seen in the articulation with several teachers or school departments who worked with the project to materialize thematic exhibitions, internal events or the school's participation in external events.

6. Conclusion

The *Cri_Lab* project has demonstrated the significant potential of integrating art-based methodologies into both architectural and spatial education. The participatory and experimental framework allows students to engage in creative processes while critically reflecting and actively interacting with their surrounding school space and environment. The project's focus on experimenting with the production of space from a process within the school itself allowed some conclusions to be drawn for a future iteration:

(1) Extending the timeframe: giving participants more time to explore could lead to deeper engagement, understanding and possible outcomes with a longer-term focus.

(2) Flexible structure: The adaptability of the program could be further explored by giving students a more active role in shaping the structure of the workshop, allowing them to propose topics or activities. This will also emphasize participation and reflection, furthering the alignment with Critical Spatial Practice.

(3) Include long term evaluation: Future projects would also benefit from including long term evaluation. Track students' understanding or sensitivity to space and further explore possible links between space transformation and the experiment.

(4) Involve other key actors in the production of school space: extend the workshop to teachers or staff.

The workshop also explored spatial awareness and literacy through art making and production, providing students with a unique opportunity to explore design thinking, develop critical and creative thinking skills, and also civic engagement with space. Despite its relatively short duration, *Cri_Lab* facilitated interdisciplinary collaboration between students, teachers and external professionals or organizations, enriching the learning experience and linking educational and professional environments. The workshop also stimulated a sense of ownership and self-esteem in the students, as they were able to contribute to temporary tangible outcomes within the school, as well as producing and exhibiting artistic work.

Some highlighted areas for improvement in future iterations are improving student participation, ensuring long-term impact, and a deeper exploration of architectural and spatial production while incorporating follow-up assessments. Nevertheless, Cri_Lab's success in functioning as a school-based spatial production agent, connecting designers and users, shows potential to be a complementary model for designing school spaces, potentially broadening the institutional dynamics of schools and integrating critical spatial practice into educational programs.

Agradecimentos

Sincere thanks to the Marquês de Pombal school, the students who participated in the workshop, and the fellow teachers and staff from the 2023/2024 academic year. The author also expresses gratitude to Fundação para a ciência e tecnologia (FCT) for the research grant funding, and to DINÂMIA'CET-Iscte - Centre for Socioeconomic and Territorial Studies for supporting the author's research activities.

Financiamento

Fundação para a Ciência e a Tecnologia (FCT), funding of the research grant with the reference 2024.04693.BD.

Referências Bibliográficas

Alves, L. A. M. (2001). O arranque do ensino industrial na 2ª metade do séc. XIX. In R. Ramos, L., Ribeiro, J., & Polónia, A. (Eds.), *Estudos de Homenagem a João Francisco Marques* (pp. 95–111). Universidade do Porto, Faculdade de Letras. http://hdl.handle.net/10216/8910

Andrade, H. (2024). Drawing a research: Creative approaches to architectural research. In P. Guerra & S. Sousa (Orgs.), *Todas as Artes* (Vol. 3, pp. 228-243). Universidade do Porto, Faculdade de Letras.

Atlas of School Architecture in Portugal – Education, Heritage and Challenges. (n.d.). Escola Secundária Marquês de Pombal. *Retrieved September* 13, 2024, from https://asap-ehc.tecnico.ulisboa.pt/database/projeto.php?id=293&d=Escola%20Industrial%20Marqu%C3%AAs%20de%20Pombal

Awan, N., Schneider, T., & Till, J. (2013). *Spatial agency: Other ways of doing architecture*. Routledge. https://doi.org/10.4324/9781315881249

Bassett, K. (2004). Walking as an aesthetic practice and a critical tool: Some psychogeographic experiments. *Journal of Geography in Higher Education*, 28(3), 397–410. https://doi.org/10.1080/0309826042000286965

Deaver, S. P. (2012). Art-based learning strategies in art therapy graduate education. *Art Therapy*, 29(4), 158–165. https://doi.org/10.1080/07421656.2012.730029

Direção-Geral da Educação. (n.d.). *Estratégia Nacional de Educação para a Cidadania*. Retrieved October 4, 2024, from https://www.dge.mec.pt/estrategia-nacional-de-educacao-para-cidadania

Escola Secundária Marquês de Pombal. (n.d.). *Apresentação da Escola*. Retrieved September 13, 2024, from https://esmp.pt/apresentacao-da-escola/

George, T. (2023, janeiro 27). *What is action research? | Definition & Examples*. Scribbr. Retrieved September 13, 2024, from https://www.scribbr.com/methodology/action-research/

Green, S. (2021). *Eres un artista: Retos para dejar volar tu imaginación*. SUMA de letras.

Heijnen, E., & Bremmer, M. (Eds.). (2020). *Wicked arts assignments: Practicing creativity in contemporary arts education*. Valiz. ISBN 978-94-92095-75-6

Herr, C. M. (2017). Action research as a research method in architecture and design. Proceedings of the 59th Annual Meeting of the ISSS - 2015 Berlin, *Germany*, 1(1).

Leavy, P. (2008). Method meets art. Guilford Publications.

Leavy, P. (2017). R*esearch design: Quantitative, qualitative, mixed methods, arts–based, and community—based participatory research approaches*. The Guilford Press.

Louro, M. (2024). *Manual para 2º ciclo: Educação para um território sustentável: Compreender e transformar o espaço à nossa volta*. Programa Paisagem e Arquiteturas Sustentáveis.

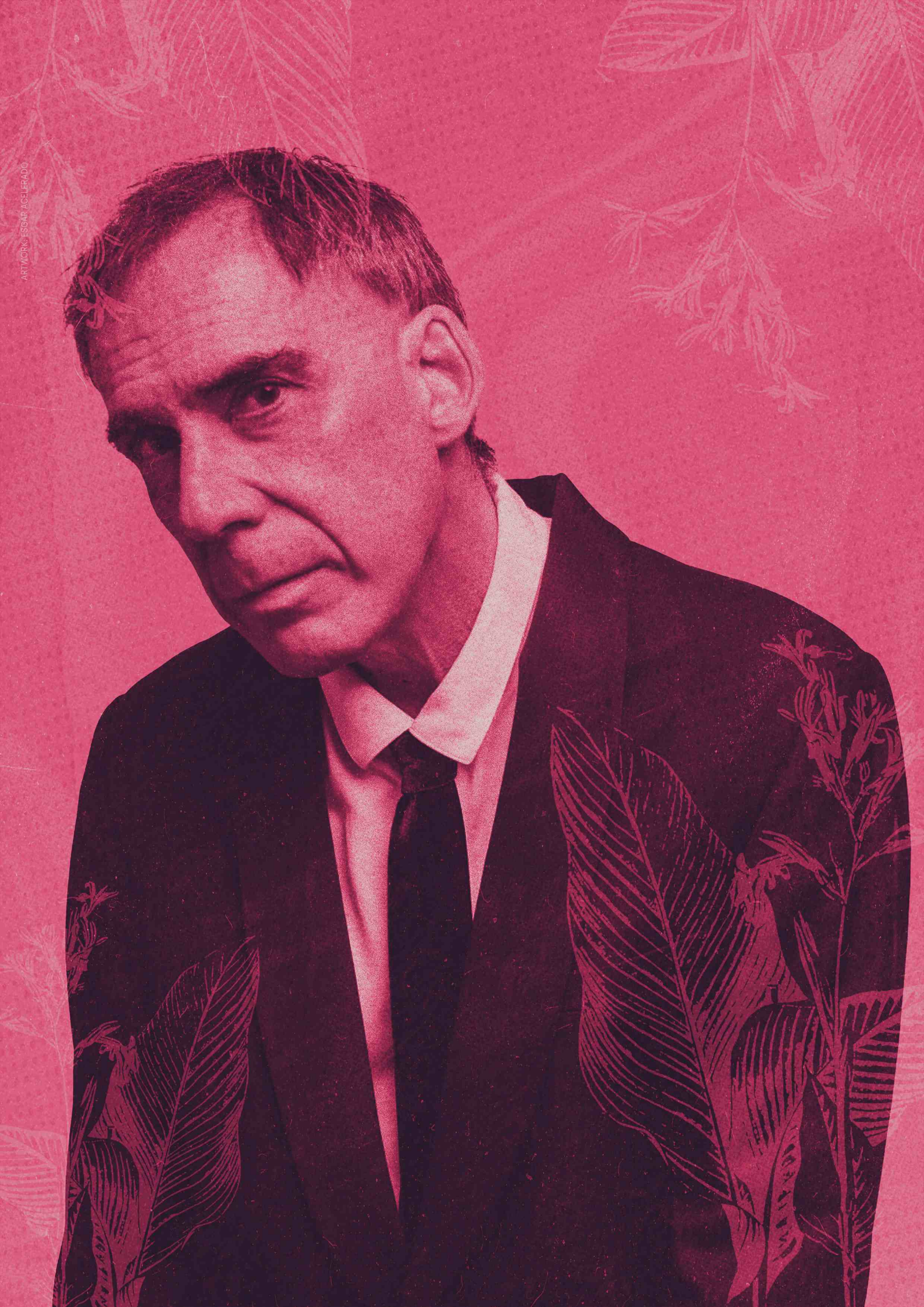
Moon, B. L. (2003). *Essentials of art therapy education and practice*. Charles C Thomas Publisher.

Rendell, J. (2008). *Critical spatial practice*. Kunstmuseet Koge Skitsesamling.

Henrique S. Andrade, DINÂMIA´CET, Iscte, Portugal

E-mail. henrique_andrade@iscte-iul.pt

DOI: https://doi.org/10.21747/9789899082908O/v4a20


ARTWORK: EDGAR ACEVERADO

