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# CREATIVITY AND CO-CREATION IN HIGHER EDUCATION

## Ergonomics in the Design of Academic Spaces

ARBELÁEZ -BUSTOS, JUAN ANDRÉS [1], PALENCIA-TRIANA, CESAR AUGUSTO [2]
[1] Colombian College University Institution, Colombia
[2] University Foundation Los Libertadores, Colombia

**KEYWORDS**

*Co-Creation*
*Creativity*
*Space Design*
*Higher Education*
*Ergonomics.*

**ABSTRACT**

*Creative thinking is a key transversal skill in professional, educational, and personal contexts. While creativity has been widely studied in terms of its definitions, measurement, and training, few investigations have explored its relationship with space, ergonomics, and design. This research proposes the development of an instrument to analyze educational environments that foster creative thinking. Through a case study, data were collected to identify and assess physical-perceptual and sensory-perceptual aspects of educational spaces involved in creative activities. As a result, the Spatial-Perceptual Verification Matrix for Educational Experiences was designed. This tool allows for the evaluation and management of well-being conditions such as spatial flexibility and comfort. The matrix aims to contribute to the creation of environments that support creativity in the classroom, enhancing the development of creative thinking in both students and teachers through the intentional design of learning spaces.*

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## 1. Introduction. Ergonomics and Design: Environmental Conditions for the Development of Creative Thinking

The human drive to modify and recreate their environment is a constant, with the aim of enhancing their living experiences in accordance with their needs. This has contributed to the well-being of population groups within their daily, educational, and professional contexts, among others (Urdaneta Urdaneta & Terán Reales, 2020). Disciplines such as ergonomics and design significantly contribute to human well-being, collaboratively developing strategies to improve, facilitate, and promote user well-being. In this regard, in the pursuit of meaningful well-being experiences, ergonomics, as a generator of such, is defined as a:

> Scientific discipline concerned with understanding interactions between humans and other elements of a system, and the profession that applies theory, principles, data, and methods to design in order to optimise human well-being and overall system performance. (IEA, 2000)

Design, on the other hand, as a generator of interaction experiences between humans and object-space systems, is defined across various applied disciplines as an act of innovation and creation (Cross et al., 1982). It imbues designed products—whether understood as products, tools, spaces, or clothing —with formal, aesthetic, communicative, functional, and structural properties. Essentially, both design and ergonomics consider the relationships between humans and the elements of a system. This system comprises the space itself, environmental conditions, and the objects that constitute it, collectively giving meaning to a specific activity.

Initially, ergonomics focused on creating technical and instrumental criteria that primarily considered system productivity and human health, aiming to understand the relationships between humans, specifically concerning body dimensions, mobility angles, strength capacities, sensory-perceptual thresholds, and other factors, always in relation to the elements of a spatial system. The latter consists of the space itself as a category encompassing environmental conditions and the objects that form it, giving meaning to the work environment. Today, the ergonomic system, comprising individual and environmental factors, has evolved as a cornerstone of design, offering a wide range of approaches and proposals that can be integrated into daily life. These contribute significantly to the design of work and learning spaces, objects, and tools, enabling creative and multipurpose space adaptation, thereby enhancing human well-being in activities conducted across various spaces and in interaction with objects (Silva-Roquefort & Muñoz, 2019).

Ergonomics, recognised for its well-known principle of adapting work to humans rather than humans to work, is closely linked to design and, consequently, to future-oriented thinking. Its Anglo-Saxon, Nordic-French, and Eastern schools demonstrate this through their application in the design of products, services, and processes, where future-oriented thinking is an intellectual activity. Recent developments in ergonomics highlight its prospective nature, with theoretical areas such as Conceptual Ergonomics, Macroergonomics, and Anthropotechnology implicitly incorporating future-oriented thinking (Puentes-Lagos & García-Acosta, 2012, p. 127).

Understanding ergonomics as a fundamental pillar for generating human well-being, its integration into space design seeks to promote meaningful spatial experiences of productivity and interaction, expanding the designer's objectives to continuous reflection through a process of observation, analysis, and recognition of the context to be addressed. This positions the human as the central nucleus of society. In this regard, Kadefors notes that "any work environment, whether an office or a workshop, when well-designed, enhances not only the health and well-being of workers but also productivity and the quality of products" (Kadefors, 1998, pp. 29-61). While ergonomics in workplace design improves human well-being conditions (Costa & Villarouco, 2019), its application extends to any setting where humans are engaged in activity—daily routines, transport, educational spaces, rest, leisure, social interaction, and more. Other aspects, such as object-related and environmental factors, must also be considered, as these, depending on the activities performed, human capabilities, and the dynamics and demands of the activity, enable the fulfilment of the space's intended objectives for the well-being of its occupants.

Other authors, such as Édgar Pineda Cruz, Mauricio Sánchez Valencia, and Diego Amarilles Ospina, in their book *Objectual Languages*, argue that negentropy in object configuration, which can be generated

in an educational setting, enables the control and organisation of objects to support various activities that promote creative development, avoiding confusion in interaction or the space's purpose.

> They state that "the communicative capacity of the object and its rhetorical alternative propose the possibility of controlling semiological chaos through the object's configuration itself; by applying this control, a positioning is established that imposes order on the readings of that entropy… (Pineda et al., 1998, pp. 9-10).

The object-space configuration as a message aims to establish a dialogue with humans for more efficient use (Varas, 2018).

In this sense, fostering meaningful spatial experiences in educational environments where the development of individual and collective creativity is sought is pertinent, necessary, and fundamental to address in convergence with human well-being. Well-being encompasses physical and subjective conditions such as personal and environmental safety, good health, and social interactions, which are related to the freedom to make decisions and act (Sen, 1982). In this context, well-being is also addressed in the workplace, where the concept of optimal experience, as described by Csikszentmihalyi (1996), is associated with intrinsic motivation and the flow experienced by individuals during task performance and successful execution. This enables individuals to think creatively and strategically during the activity. From this perspective, well-being can be seen as a result of ergonomics applied to space and the optimal experience that enriches possibilities for creativity development, as this physical-mental state contributes to the creation of new orders, relationships, and meanings in various contexts and settings in which humans are immersed, transforming individuals into agents of their own transformation through the activity performed.

In this regard, the role of ergonomics in the current knowledge society, where soft skills for innovation, teamwork, and collaborative project management have become fundamental pillars for co-creation, relevance, and value generation through fostering creative thinking (Palencia, 2023), is significant. However, obstacles remain to the appropriation and development of this high-level cognitive skill. These challenges create a gap between the frequent emphasis on creativity and the actual implementation or experience of genuinely creative learning.

> Between the symbolic overstimulation of creativity and its personal and interpersonal realisation, unexpected shadows emerge. The vast majority of society experiences the hermeneutic appropriation of creativity in their local and global environments from a distance. Biography is narrated creatively in school, family, work, love, and sports, but this narrative often conceals a myriad of resistances and obstacles that distance individuals from a creative orientation in all these domains (Capdequi, 2021a, p. 9).

Current business system needs have focused on productivity and the value generated by innovation processes for both products and services (Castro, 2021). Therefore, creativity, as a foundational stage for innovation in productive systems, is a central element in the discussion. Addressing it through ergonomics is both a fundamental and critical factor for improving organisational success. As noted, "the increase in mental workload is a potential factor detrimental to workers' well-being. Given the complexity of understanding human cognition, despite the progress made, much remains to be explored. It is expected that ergonomics will expand its areas of specialisation, improving the organisational environment and creating new future scenarios" (Brilinger, Batiz, & de Oliveira, 2017).

Creativity is recognised as the ability to use knowledge in a novel and associative manner to find divergent solutions to problems (Monreal, 2000). Other authors define creativity as a mental and operational process of humans with a productive character (Jösch Krotki, 2023), meaning it stems from action and is constructed through the object-spatial elements with which the individual interacts. Creativity should not be attributed solely to individual skills but also to the influence of external and environmental factors in the space where the human is immersed (Alencar & Fleith, 2003). Csikszentmihalyi notes that individual creativity is more easily developed through favourable environmental conditions rather than forcing individual creative thinking (Csikszentmihalyi, 1996). Therefore, ergonomic criteria addressing human factors (anthropometry, biomechanics, perception)

and system elements or environmental factors (lighting, noise, temperature) translate into a resource that meets creativity needs in the space, enabling an educational experience that positively impacts the academic community.

Thus, the ergonomic approach in space design contributes significantly not only to the design of objects, tools, and environments but also to the analysis and intervention of human variables in activities conducted in educational spaces and interactions with objects. Hughes (2003) suggests that the challenge is to create an environment conducive to creativity, leveraging individuals with creative skills and helping them become even more creative.

Other authors, such as Edward T. Hall in his book *The Hidden Dimension*, reference a study by physician Humphry Osmond, who identified a relationship between certain spaces and people's behaviours, establishing two typologies of spaces: "sociofugal" and "sociopetal." Sociofugal spaces refer to environments that discourage or reduce human interrelations, communication, and co-creation encounters. Conversely, sociopetal spaces promote stable interpersonal relationships, dialogue, participation, communication, and co-creation among those sharing these environments (Hall, 2005). Both contribute significantly to the educational experience, as they allow for the establishment of spatial parameters and intentions for concentration, varying levels of communication, and teamwork by identifying the type of activities and needs of the space (Melo-Zamora et al., 2021).

The space, understood as the articulated constitution of objects for a specific function, with its aesthetic-functional properties, and ergonomics, with its functional-operative properties, within the framework of ongoing research, combined with the concept of meaningful learning, provide guidelines and criteria for learning, creation, and co-creation practices. The theory of meaningful learning, as defined by Cody Blair, refers to the impact certain activities in an academic space have on enhancing learning through the "learning pyramid" or "cone of experience." In this regard, in educational activities involving only listening (e.g., a lecture without audiovisual support), an individual recalls only 5% of the material presented. In activities prioritising reading, only 10% of the material is recalled. With audiovisual support, recall increases to 20%. These three correspond to the upper block of the pyramid, defined as passive learning.

In contrast, active learning, which includes activities such as demonstration (simulations), argumentation (exchange of ideas), practical exercises (case studies), and teaching others, results in retention rates of 30%, 50%, 75%, and up to 90% in the best scenarios. Active learning enables co-creation dynamics that strengthen interrelations and communication, which can translate into practices of creative exercise or the construction of knowledge management logics specific to a laboratory setting. The aim is not to discard passive learning, as it remains part of traditional teaching-learning contexts, but rather to provide strategies to strengthen learning and enrich the knowledge experiences of students and teachers within and beyond the classroom environment (Matas, 2020; Palencia, 2024).

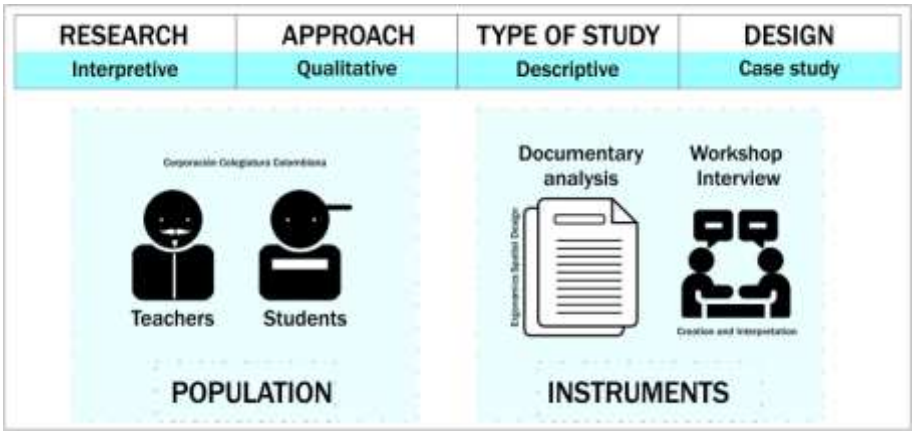
## 2. Methodology

The research conducted followed an interpretive logic, considering its focus on specific phenomena within a social context, in this case, the exercise of creativity in educational spaces. This approach facilitates the consensual creation of meanings through the collected data, whether visual, symbolic, or object related. Adopting a qualitative and descriptive approach, the study aimed to delve into the interpretations and perspectives that shape the reality of those who inhabit creative spaces in educational settings, in terms of well-being and creativity, through the design of a workshop-interview tailored to identify subjective variables. Additionally, data were collected and analysed regarding the criteria that constitute ergonomics and the design of spaces.

The research design centred on the use of primary and secondary sources through a literature review and engagement with users. These were analysed from a qualitative perspective to establish relationships that enable the identification of criteria associated with creativity and educational experiences from the standpoint of ergonomics and space design (Image 1). Regarding the units of analysis, interviews were conducted with teachers and students through a space creation workshop, alongside a documentary analysis of the technical requirements provided by ergonomics for the design of well-being-focused spaces.

To this end, the research was designed and developed in three stages: a) Literature review and content analysis, b) Creation workshop-interview, and c) Development of categories and analysis of results.

**Image 1.** Methodological design of the research work.



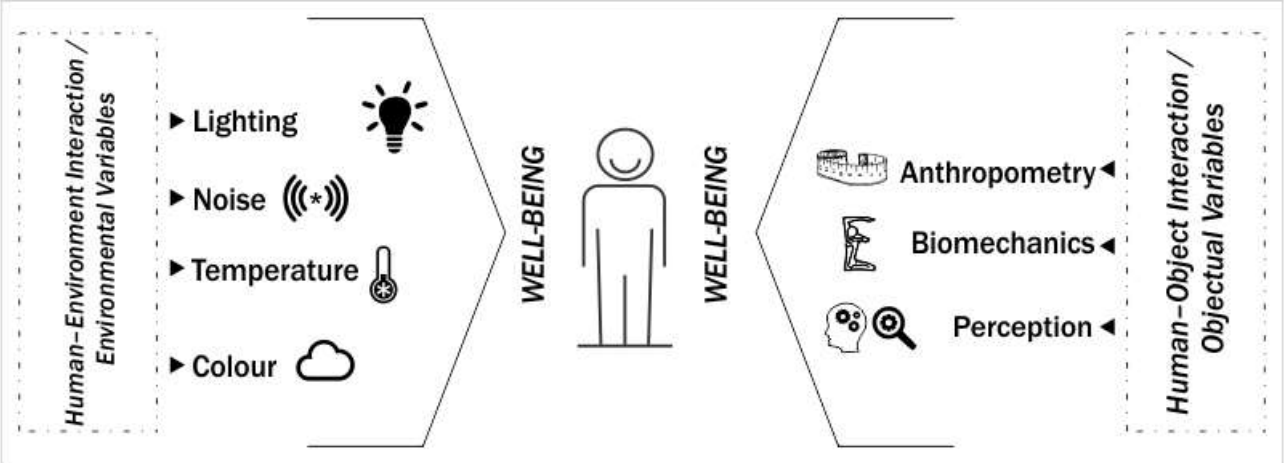

Source: Own elaboration, 2025.

## *2.1. Methodological Design by Stages*

### *2.1.1. Stage 1. Literature Review and Content Analysis*

Criteria related to ergonomics in the interaction between humans and their environment were identified, considering recommended conditions and values for lighting, noise, temperature, and colour to promote well-being in spaces. Additionally, criteria concerning the interaction between humans and objects were identified, taking into account conditions and values to ensure user health and productivity. These include anthropometry, biomechanics, and perception (Image 2).

**Image 2**. Interaction variables in space within the framework of ergonomics, environmental variables, and object-related variables.




Source: Own elaboration, 2025.

### *2.1.2. Stage 2. Creation-Interview Workshop*

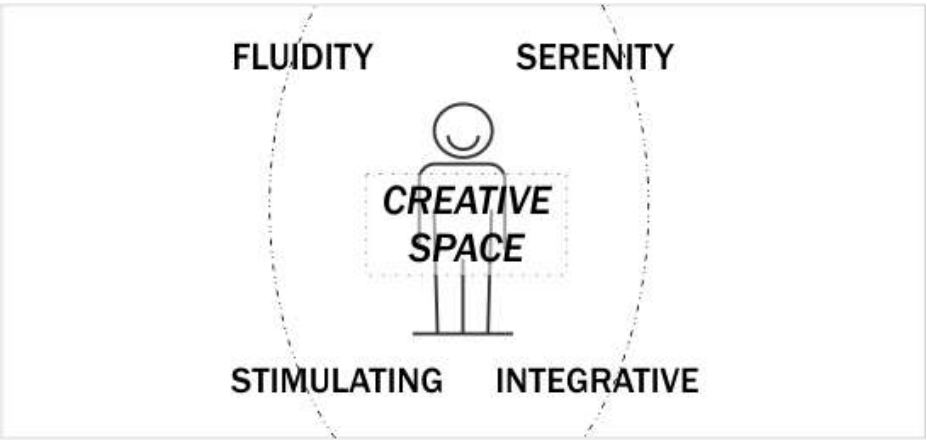
A creation workshop was conducted, which involved generating spatial proposals for fostering creative activities in educational settings. In this activity, teachers and students were provided with a three-dimensional scale model of a classroom and tokens representing different types of furniture (tables, chairs, stools, and boards) (Image 3). The workshop was carried out individually, with the objective of developing a conceptual construction of the perceptions and expectations of teachers and students regarding a space that stimulates and supports the creative process. During the workshop, participants expressed and justified their spatial design proposals for creativity, providing information that enabled

the identification of relevant criteria that an educational space should incorporate to facilitate creative activities (Image 4).

**Image 3.** Creation Workshop-Interview

Source: Own elaboration, 2025.

**Image 4.** Criteria associated with the creative exercise in the educational space.




Source: Own elaboration, 2025.

### *2.1.3. Stage 3. Development of Categories and Analysis of Results*

Following the data collected from the literature review and the workshop-interview, variables related to technical ergonomic criteria and subjective user variables were identified in relation to space, well-being, and creativity. The technical criteria associated with the educational experience for well-being are defined as physical-perceptual variables linked to human-object interaction, encompassing anthropometry, biomechanics, and human perception. On the other hand, sensory-perceptual variables related to human-environment interaction refer to lighting, noise, temperature, and colour of the space, to which the teacher-student system is exposed in the educational setting. Meanwhile, subjective criteria related to the educational experience for creativity include the notion that spaces should possess characteristics such as fluidity, stimulation, integration, and serenity, which are fostered through the technical variables of the objects and conditions that compose the space.

In this context, ergonomics, as a discipline that studies the interrelationship between humans and the elements of their system (objects and space) to provide well-being, productivity, and health to individuals using these spaces, serves as a starting point for generating optimal experiences in individuals. This is achieved through the design of work environments that enhance the predisposition to enter states of creativity and idea generation.

Furthermore, the aim is to integrate criteria from the ergonomic system, taking into account the contributions and reflections that this field of knowledge has generated regarding the body and its well-being, as well as the proprioceptive conditions that the brain gathers from stimuli captured by the

nervous system and skin receptors (e.g., hot-cold, rough-smooth, up-down, lying-sitting, etc.), to facilitate the appropriate design of spaces that promote creativity and well-being.

## *2.2. Analysed Variables*

The research is based on two main variables: Physical-Perceptual and Sensory-Perceptual, which are understood as follows:

### *2.2.1. Physical-Perceptual Variables*

These are associated with stimuli and interactions with the system of objects in relation to the human being. They enable an understanding of individual and collective dynamics in human-object interactions. They include information on:

- *Anthropometry*: This focuses on studying dimensional variations in human body measurements applied to the objects with which individuals interact. Anthropometry plays a significant role in object design, space design, clothing design, architecture, engineering, and other fields, as static data on human body dimensions are used to optimise spaces, tools, and specific tasks.
- *Biomechanics*: This involves understanding movement, forces, joint angles, and balance in living beings, with a focus on the mechanical structures of the human body and their relationship with the objects and spaces interacted with.
- *Perception*: This pertains to the integrative process of information received through the senses and the nervous system, as well as the brain's structuring of these stimuli. This process depends on the central nervous system, as well as individual experiences, mediated by personal interests and the social context.

These variables consider interactions based on the dimensions and movements of the human body, as well as the ability to perceive the function/functionality of the spaces and objects inhabited and interacted with. In this context, relevant objects include furniture (seats, work surfaces, storage), communication and work dynamics (individual and collective), and movements within the space.

### *2.2.2. Sensory-Perceptual Variables*

These are associated with stimuli from environmental conditions in relation to the human being. They facilitate adaptation and a sense of well-being through the reception of sensory stimuli. They include information on:

- *Lighting:* Visual information related to the ability to stimulate senses and emotional states. Lighting is directly linked to well-being and quality of life. It is defined as "lighting designed for the benefit of human health and well-being, in addition to meeting the requirements for workplace functionality in buildings" (Santos et al., 2017, p. 1).
- *Noise:* A physical auditory stimulus caused by sounds generated by people or external elements. Moderate or low sound pressure levels are optimal for abstract reasoning, do not significantly affect productivity, and may enhance creativity.
- *Temperature:* A haptic stimulus related to the sensation of cold or heat, influenced by the correlation between air temperature, velocity, and temperature. High or low temperatures (above 27°C or below 22°C) require greater thermoregulation efforts, reducing concentration capacity for creative processes.
- *Colour:* A visual stimulus that can calm, energise, or stimulate environmental conditions. The application of colour in space design plays a crucial role in fostering communication, creativity, and abstract thinking in work environments.

Current regulations in Colombia consider the interaction of humans with environmental elements, ensuring a state of well-being during academic activities, regardless of their nature. The relevant criteria for analysing well-being conditions include natural lighting, encompassing aspects such as environment, entry, glare, and shadows, as well as artificial lighting, which involves the lighting system, colour temperature, illumination level, Unified Glare Rating (UGR), and uniformity. Additionally, they address artificial noise from sources such as the city, people, vehicles, machines, and tools, alongside natural sounds from the environment. Ambient temperature, including high or low temperatures, and the

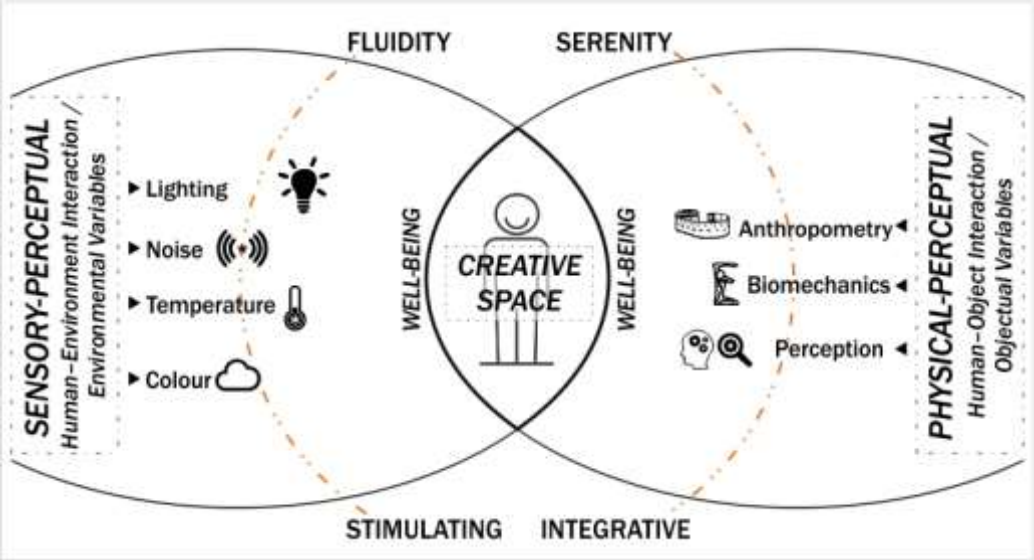
placement of the space in relation to environmental conditions, such as sun entry/exit, air currents, and artificial ventilation systems, are also considered.

Additionally, as a result of the workshop-interview with students and teachers at the institution, four criteria were defined—Fluidity, Stimulation, Integration, and Serenity—related to the qualities an educational experience should have to foster creative development. The interpretation of these criteria yields the following characteristics:

- The space should feature fluidity, ease of movement, and flexibility for interdisciplinary activities.
- Spaces should be adaptable based on environmental characteristics.
- The space should allow for diverse activities, such as reading, concentration, drawing, discussion, and other possibilities.
- The space should enable integration through the modulation and movement of objects or work tools, facilitating co-creation dynamics, sharing, communication, teamwork, observation, and learning from others, without obstacles limiting communication, and allowing creation on the same surface.
- The space should include sober, minimalist objects that convey tranquillity, order, and cleanliness.
- Static spaces for independent work should be available for activities requiring concentration or individual tasks.

Based on the Sensory-Perceptual (environmental) and Physical-Perceptual (object-related) variables, criteria were established that respond to the characteristics of Fluidity, Stimulation, Integration, and Serenity. These concepts encapsulate the teaching-learning system, with each referring to attributes that the educational experience should embody to foster creativity. Ultimately, these criteria contribute to establishing a state of well-being and creating a conducive environment for creativity in the educational context (Image 5).

**Image 5.** Technical and subjective criteria associated with creative activities in the educational space.




Source: Own elaboration, 2025.

## 3. Results

Based on the technical and subjective criteria associated with creative activities in the educational space, a verification matrix is proposed to assess conditions related to educational experiences for the development of creativity. A verification instrument is a tool that contains criteria or indicators used to measure and evaluate the characteristics of a study object, determining whether it meets the established attributes (Rodríguez Ruíz & Pérez Mergarejo, 2016). The verification matrix is fundamentally employed as part of the evaluative process of the space, enabling the identification of issues, deficient

aspects, or areas requiring more rigorous evaluation or adaptation of the space to meet the comfort and well-being needs of individuals (Contreras, 2009).

The verification matrix, as a tool for the design, development, and identification of spatial aspects for well-being and creative development, operates from both a preventive and corrective perspective. It is preventive when integrated into an early design process to identify the criteria or requirements that the setting/space must fulfil to foster creativity. It is also corrective, as institutions with existing spatial interventions can use it to assess and determine, both subjectively and technically, the current conditions of spaces designed for creative development.

The application of the matrix is not an end in itself; it serves as a tool to identify favourable and unfavourable aspects, which must be analysed to facilitate the development of a design or adaptation proposal.

> To create is to overflow, to transgress the given, to remember that no state of affairs is final or definitive. The world is pregnant with possibilities, some actualised, others yet to be realised in history. This tension lies at the heart of every society, whether acknowledged or not. (Capdequi, 2021b. p.2)

**Table 1.** Spatial-Perceptual Verification Matrix of Educational Experiences for Creation

| VARIABLES | CATEGORY | REQUIREMENTS | Evaluation (1 meets) - (0 does not meet) | OBSERVATIONS |
|---|---|---|---|---|
| SENSO-PERCEPTUAL VARIABLES | Lighting | The space allows the lighting conditions to be changed quickly and easily during the proposed activities (switching on or off different micro-lights). | | |
| | | The space has an average illumination level of 500lx, not less than 300lx, and not more than 750lx per square metre for learning spaces. | | |
| | | The space has a maximum unified glare index of 19 for classrooms. | | |
| | | The space has a uniformity factor greater than or equal to 0.6. | | |
| | | The location of the space avoids direct sunlight and has daylight blocking systems. | | |
| | | Lighting systems maintain a stable room temperature (avoid the use of analogue or incandescent bulbs). | | |
| | | The temperature is between 4000°K and 5500°K (neutral-cold). | | |
| | | The colour rendering index of the lighting systems is greater than or equal to 80% (CRI >80). | | |
| | | The space is naturally lit for most of the day. | | |
| | Temperature | The space does not require air conditioning to maintain a temperature between 22°C and 27°C. | | |
| | | The space has a humidity between 30° and 70°. | | |
| | | The space has windows that allow for circulation and renewal of air inside the classroom or space. | | |
| | | The space has cross ventilation systems or chimney effect. | | |

| | | | | |
|---|---|---|---|---|
| | **Noise** | The space for concentration activities has a sound pressure level on the NCB curve below 30. | | |
| | | The space for conversation activities has a sound pressure level on the NCB curve below 40. | | |
| | | The classroom has spaces for concentration (enclosures or spaces adapted for individual work). | | |
| | **Colour** | The space has object or spatial applications in blue. | | |
| | | The space has a higher percentage of white applications (façades, ceilings). | | |
| **PHYSICAL-PERCEPTUAL VARIABLES** | **Perception** | The space can be re-created or modified quickly and easily during the proposed activities. | | |
| | | The space allows possibilities for the development of individual activities. | | |
| | | The space allows possibilities for the development of collective activities. | | |
| | | The space allows different configurations for various academic, lecture, workshop-type activities. | | |
| | | The space allows for stimulating communication between students and teachers. | | |
| | | The space is perceived as clean or quiet for academic activities. | | |
| | | The space promotes communication between people, without obstacles or dividing panels. | | |
| | | The space allows electrical and wireless connectivity (WIFI) at different points in the classroom. | | |
| | **Anthropometry and Biomechanics** | The space allows movement for interaction between people (100cm wide aisles). | | |
| | | The space has storage systems to keep work surfaces free of objects (lockers, furniture, coat racks). | | |
| | | Seating takes into account the dimensional characteristics to ensure the comfort of people (chairs with ergonomic criteria). | | |
| | | The work surfaces take into account the dimensional characteristics to ensure the comfort of people (tables with ergonomic criteria). | | |
| | | The space allows for simulation activities, prototyping, development of models or manual activities for the execution of different activities. | | |
| | | The objects allow users to make postural changes. | | |
| | | The space allows easy movement of the furniture to generate work groups. | | |
| | | The space is accessible for population groups with physical disabilities (entrances, furniture). | | |
| | | Students and teachers are free to choose and modify the space where the academic activity takes place. | | |
| | | ***TOTAL SUM*** | | |

Source: Own elaboration, 2025.

**Table 2.** Range of fulfilment of spatial-perceptual conditions

| SCORE | LEVEL OF WELL-BEING | OBSERVATIONS |
|---|---|---|
| > 30 points | Very good | |
| Between 25 - 29 points | Good | |
| Between 19 - 24 points | Fair | |
| < 18 points | Poor | |

Source: Own elaboration, 2025.

## 4. Conclusions

In the development of any design process, from its conception to its execution, it is essential to have requirements or guidelines that provide designers and organisations with a reference framework. Through the verification matrix of conditions associated with educational experiences for creativity, it is possible to generate a proposal that addresses the creation of a space or setting conducive to the development and stimulation of creativity for those who inhabit academic and/or intellectually productive spaces. The matrix proposed in this research contributes to establishing criteria and requirements for the development, implementation, and adaptation of academic workspaces that foster creativity, as well as the enhancement or improvement of the spatial educational experience in both existing spaces and future spaces designed for use in learning experiences. These requirements aim to serve as opportunities for improving the spatial experience, achieving innovative and creative outcomes through various intervention perspectives.

Ergonomics, applied from its humanistic approach, places the human being at the centre of the system. The ultimate goal of this project is to enhance quality of life, promote well-being, and foster a creative state in individuals. Although the tool is developed based on guidelines and requirements related to environmental and object-related variables, these are the elements that shape the dynamics of a space and give it meaning. Thus, they remain closely tied to the goal of strengthening interactions between individuals, their communication, the exchange of ideas, and the freedom to choose and act within the space. From the perspective of subjective needs, these aspects are crucial for creative development, as no design should overlook the demands, goals, capacities, and limitations of the human being.

The matrix tool for assessing creative spaces not only aids in the construction and development of technical standards for spatial conditions that promote well-being and interaction in educational settings but also extends its application to work, leisure, and recreational environments. This recognises that the development of creativity is not solely an individual matter but is also influenced by the conditions of the space or setting where academic or professional activities take place. The intervention in these spaces contributes to strengthening individuals' creative thinking by promoting fluidity in the space and with the objects surrounding it. This becomes a significant factor in enhancing individual well-being and productivity across various personal, collective, and organisational processes.

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