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Design for Well-Being: A workshop-based approach to non-formal education and Autism Spectrum Disorder

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Abstract: This study aims to investigate the role of Design for Well-Being in the creation of tools that support individuals with Autism Spectrum Disorder (ASD) within non-formal education contexts. The research is based in a workshop approach methodology, where participatory design practices are used to co-develop inclusive and accessible strategies in collaboration with spaces such as cultural centers, museums, support schools, and other non-formal educational environments. By positioning workshops as both instruments of inquiry and collaborative creation, the project advances innovative methods for translating complex knowledge into practical didactic resources.

The work is organized into successive phases: (i) mapping and prioritizing non-formal education spaces in the city of Belo Horizonte (MG- Brazil), (ii) strengthening institutional engagement through targeted communication strategies, (iii) executing intensive cycles of workshops, and (iv) analyzing and disseminating results in academic and professional forums. Data collection includes visual records, questionnaires, and collaborative outputs generated during the workshops, which will be systematically organized for thematic analysis.

Preliminary results indicate that the workshops have been effective in promoting engagement, producing adaptable educational tools, and fostering dialogue between design and education. By integrating well-being, design, and education, the research contributes to the consolidation of flexible and collaborative educational ecosystems, reinforcing the potential of design methodologies to democratize knowledge and address the specific needs of ASD populations in non-formal learning contexts.

Keywords: Design for Well-Being - Autism Spectrum Disorder (ASD) - Non-Formal Education - Participatory Design - Workshop Methodology - Inclusive Design - Accessible Strategies - Collaborative Creation - Educational Tools - Knowledge Translation

[Resúmenes en castellano y en portugués en las páginas 187-188]

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Introduction

This research originated within the author's doctoral thesis, titled "Design and Well-Being: Contributions of Positive Design for Children within the Autism Spectrum." That earlier investigation examined how design practices could support and enhance the quality of life of children diagnosed with Autism Spectrum Disorder (ASD). As a guiding thread, the study adopted a project-based knowledge-construction approach grounded in the field of Design for Well-Being, with particular emphasis on the theoretical and methodological propositions of Positive Design developed at Delft University of Technology (Netherlands). Central to this orientation was the *possibility driven design*, formulated by Pieter Desmet and colleagues, which frames design as a means of identifying, amplifying, and operationalizing opportunities that foster human flourishing.

During the research process, it became necessary to adapt the *possibility driven design* framework to the specific lived realities of autistic children. This adaptation resulted in the development of a specialized design approach—Design for Well-Being (D.BE)—which integrates principles of design, emotion, sensory processing, and well-being. To validate the newly proposed methodology, a pilot project was developed and tested, demonstrating the potential of design as a tool for inclusion, autonomy building, and the promotion of emotionally and sensorially meaningful experiences for ASD children and their parents/guardians.

In a subsequent phase, the scope of the research expanded into a broader project aimed at contributing to the inclusion of autistic children and adolescents within learning environments. The focus shifted from individual experience toward strategies that could foster independence, participation, and meaningful engagement in educational contexts.

As the research evolved, it became evident that the investigation needed to move beyond the boundaries of formal educational institutions. This realization led to the establishment of partnerships with multidisciplinary non-formal learning environments that offer individualized support to children and adolescents, including services highly aligned with the research objectives. However, due to time constraints, it was not possible to explore additional non-formal environments that could have enriched the data set.
Consequently, a new research project was proposed—one that is the focus of the present article. The overarching goal of this ongoing study is to examine the feasibility and potential of applying the D.BE model within Non-Formal Education (NFE) spaces by engaging educators, facilitators, docents and support professionals in the co-creation of strategies and tools designed to assist autistic individuals. The intent is to democratize scientific knowledge, strengthen citizenship, and promote inclusion through creative, collaborative, and sensory-aware design practices.

Autism, Education, and Design

Autism Spectrum Disorder is a relatively recent diagnostic construct, formally delineated in the DSM-5-TR (2022) and the ICD-11 (2022). Both classifications define ASD as a neurodevelopmental condition characterized by persistent challenges in social communication and interaction, accompanied by restricted or repetitive behaviors, interests, or activities. These characteristics manifest across a spectrum of intensities, with individuals demonstrating diverse profiles of strengths, sensitivities, and adaptive functioning.
The DSM-5-TR categorizes ASD into three levels of support needs—Level 1 (requiring support), Level 2 (requiring substantial support), and Level 3 (requiring very substantial support). Similarly, the ICD-11 describes ASD in terms of support levels while additionally distinguishing cases with or without intellectual impairment and language impairment.
A multinational study conducted by Paula *et al.* (2020), analyzing challenges and priorities among families of autistic individuals across six Latin American countries (Argentina, Brazil, Chile, Mexico, Peru, and Uruguay), revealed that one of the most pressing concerns among caregivers is access to adequate education. This issue is consistent with global discussions regarding the right to inclusive education and the persistent structural, pedagogical, and attitudinal barriers that hinder its realization.
Gonzaga (2019) highlights a considerable increase over time in the enrollment of autistic children and adolescents in mainstream schools in Brazil, with a notable concentration in the early years of elementary education. However, the author also reports high dropout rates and significant challenges in maintaining the participation and progression of these students.
According to Santos *et al.* (2020), education should be understood as a lifelong process of teaching and learning that occurs across multiple environments and through diverse forms of engagement. These authors identify three major educational modalities: formal, informal, and non-formal education. Given the focus of this research, attention is directed toward NFE spaces — contexts that include museums, cultural centers, community

organizations, and specialized learning environments that provide structured yet flexible opportunities for knowledge construction.

A study by Gomes and Mendes (2010) investigating the profile of autistic students enrolled in Belo Horizonte (Brazil) revealed that 90% of the participating students were unable to follow the pedagogical content presented in schools. The authors also reported low rates of engagement with activities, whether adapted or not. While access to schooling had improved, participation, social interaction, and meaningful learning remained significantly compromised.

Within this context, Tressa and Veiga (2020) argue that non-formal learning environments carry enormous potential for amplifying learning due to their flexibility, diversity of multimodal presentations of scientific concepts, and capacity to promote inclusive, contextualized, and meaningful learning experiences. These spaces often employ sensory, experiential, and interactive approaches that align naturally with the learning needs of autistic individuals.

Therefore, the central proposal of this research is to equip NFE professionals to develop practical tools that support the inclusion of autistic individuals through creative workshops grounded in the D.BE methodology.

Design for Well-Being (D.BE)

The D.BE methodology is conceptualized as an extension of Positive Design and the possibilities-driven design. It provides a structured yet flexible framework for design processes aimed at promoting well-being among autistic individuals. This methodology does not merely apply well-being theories in a procedural manner; rather, it integrates a broadened understanding of sensory processing, widely recognized as a central pillar of autistic experience (Ayres, (2015).

Sensory processing refers to the nervous system's ability to receive, organize, interpret, and respond to environmental stimuli. For autistic individuals, sensory experiences — whether hypo-responsive or hyper-responsive — play a decisive role in shaping perceptions of safety, comfort, overload, pleasure, or distress. Consequently, a design approach intending to promote well-being must take sensory diversity as a foundational design variable.

In the D.BE framework, sensory profiles guide every stage of the process, ensuring that design outcomes are aligned with the lived experiences of autistic users. The methodology is structured into five interdependent phases: 1) Identification of Possibilities; 2) Selection of Possibilities; 3) Pattern Generation; 4) Macro-Concept Development and 5) Ideation.

This trajectory moves from broad exploration to the development of tangible design propositions, while maintaining a continuous commitment to the emotional and sensory well-being of users.

• Phase 1: Identification of Possibilities

The first stage of the methodology consists in mapping positive contexts of well-being drawn from "positive models" observed in the everyday lives of autistic children and adolescents. This phase relies on both simple observation and participant observation, allowing designers and the workshop's participants to identify emotional and sensory nuances expressed in real-life interactions, such as moments of calm, curiosity, focus, overstimulation, or discomfort.

Importantly, the sensory reading conducted during this stage functions not merely as a form of supplementary analysis but as an interpretive lens foundational to the entire approach. By highlighting patterns of sensory modulation, this phase seeks to recognize how the individual establishes connections with their environment, how they respond to stimuli, and which experiences support or hinder the emergence of well-being.

• Phase 2: Selection of Possibilities

Once positive models are mapped, the next step is to group and analyze them using variables derived from well-being theories (such as Seligman's PERMA framework, Desmet's emotional granularity theory, and Ryff's multidimensional model), human experience design, and predefined mood states. Throughout this phase, sensory processing remains a core analytical axis: the grouping of positive models is refined according to the nature, intensity, and quality of the sensory stimuli involved.

This analytical process helps to determine which contexts of well-being demonstrate long-term potential and which require compensatory strategies to remain supportive. By identifying clusters of meaningful experiences, the methodology establishes clearer boundaries around opportunities for design intervention.

• Phase 3: Pattern Identification

The third phase centers on identifying emergent patterns across the grouped positive models. Through comparative analysis, recurring themes are identified, specifically those that articulate emotional–sensory dynamics central to autistic well-being.

Among the recurrent patterns are: predictability: environments or routines with clear structure, visual cues, and consistent expectations; sensory consistency: contexts where sensory input remains stable, controlled, or adjustable; stimulus modulation: opportunities to increase or decrease stimulation as needed; autonomy-promoting contexts: spaces and tools that allow the individual to make choices, self-regulate, and engage at their own pace. These patterns serve as essential design guidelines that shape and inform subsequent phases of the methodology.

• Phase 4 and 5: Development of Macro-Concepts and Ideation

From these patterns, broader macro-concepts are generated to synthesize project directions aimed at supporting well-being. Each concept bridges emotional needs, social dynamics, and, above all, sensory characteristics. They operate as high-level design principles that transform empirical evidence and theoretical references into tangible, implementable frameworks.

At the fourth stage, sensory integration plays a strategic role, informing decisions related to form, materiality, interactivity, sensory input, accessibility, and complexity levels. These macro-concepts thus provide a conceptual bridge between user understanding and project development.
The final stage consists of generating and exploring project alternatives grounded in the macro-concepts. From the outset, these proposals incorporate the emotional and sensory requirements identified earlier. This ensures coherence between intention, method, and outcome.
The interactive nature of this stage allows participants to revisit earlier phases when necessary, preserving the open-ended and exploratory spirit characteristic of the Design for Possibilities approach. Ideation, therefore, unfolds not as a linear process but as a dynamic, reflective, and participatory cycle.

Collaborative creation

In the design field, understanding how different actors construct knowledge, share experiences, and influence project decisions is critical for distinguishing collaborative processes from other modes of participation. The intersection of collaboration, co-creation, and participatory design constitutes a vibrant and complex area that fuels innovation, social engagement, and transformation.
As this research evolved, it became evident that collaborative creation is not merely a methodological choice but a foundational principle governing how project practices take shape, how decisions are distributed, and how meaning is collectively constructed.
Although terms such as collaborative design, co-design, and participatory design are frequently used interchangeably, theoretical distinctions remain relevant. The work of Leith, Vogel, and Mehta (2022), The Participatory Design Spectrum: Design For, With, and By, offers significant conceptual clarity. The authors propose a spectrum of participation defined by three modalities: design for users: designers maintain primary control but are informed by user-need.; design with users (co-design): designers and participants share decision-making responsibilities; design by users: participants assume leading roles, generating requirements and solutions independently.
This spectrum illustrates that participatory processes vary in depth, agency, and impact. It challenges designers to reflect on the ethical and relational implications of participation, including power distribution, authorship, and the responsibilities associated with designing with people rather than for them.
Building on these ideas, Steen (2013) emphasizes that co-design is inherently a joint process of inquiry and imagination. For Steen, the value of co-design lies not in producing universal representations of reality but in creating shared spaces where participants can explore, experiment, learn, negotiate meaning, and generate change.
Steen also argues that co-design is fundamentally ethical because it involves: sharing personal experiences, cultivating empathy, discussing current social or structural challenges, imagining desirable futures, evaluating proposed solutions, and making collective decisions.

These ethical dimensions highlight participation not merely as a technique but as a relational practice grounded in care, respect, mutual learning, and the recognition of participants' agency.
Therefore, when structuring the workshop component of this research, careful attention was given to aligning its stages with the ethical and conceptual principles presented above. The workshop was envisioned as a space where participants could explore possibilities, articulate their experiences, construct shared meaning, and co-create solutions transparently and equitably.

Creative workshop: structure, stages, and dynamics

The workshop was introduced after establishing the conceptual relevance of non-formal education within the scope of the research. The first step involved mapping NFE Spaces in Belo Horizonte (Brazil). This stage included identifying potential organizations, building a systematic spreadsheet, and conducting document-based analyses through websites, social media, and public institutional materials.
These analyses allowed the researcher to understand institutional profiles, target audiences, accessibility conditions, and thematic alignment with the D.BE methodology.
Based on these findings, NFE institutions most aligned with the research goals were selected using criteria such as: relevance of service offerings, professional interest in participating, alignment with ASD-related activities, logistical viability, and availability of staff.
Initial contact was made via email to invite institutions to participate. Once interest was confirmed, tailored arrangements were established to accommodate the unique needs and schedules of each NFE institution the participation was then formalized.
After scheduling the workshop with each institution's educational team, the D.BE Creative Workshop was implemented. The workshop focused on developing visual or material resources aimed at supporting autistic individuals, using D.BE principles to structure project thinking.
The workshop was designed as an intensive, immersive three-hour experience comprising: Introduction of the researcher and project; a guided practical experiment demonstrating each phase of the methodology; Self-organization of participants into small groups (up to four members); Presentation of well-being dimensions, project challenge, and target audience; Hands-on navigation through each methodological stage; support and facilitation by the researcher; Final reflections and questionnaire.
Participants were supported with visual resources, personas developed specifically for the workshop, and examples illustrating each phase. A recurring challenge observed during the workshops was participants' concern about project feasibility, particularly financial constraints. Many participants prematurely filtered their ideas through the lens of budget limitations. As a facilitator, the researcher intervened to temporarily suspend financial constraints, encouraging participants to first broaden their conceptual horizons. Only after idea expansion were they instructed to revise solutions realistically.

At the end of the workshop, participants were invited to complete a physical questionnaire composed of four closed-ended questions and one open-ended question. The choice of a paper-based format stemmed from previous unsuccessful experiences with online forms, which resulted in lower engagement and less meaningful responses.

Construction of the data collection instrument

The instrument used to assess participants' experience with the Design for Well-Being (D.BE) methodology was a structured questionnaire created specifically for this study. The primary goal of the instrument was to capture participants' perceptions regarding the comprehension, usefulness, user experience, applicability, and subjective evaluation of the methodology after its practical application.

Given that each workshop lasted approximately three hours and involved intensive hands-on activities, the choice was made to develop a short questionnaire consisting of four closed-ended questions and one open-ended question, focusing on: enabling immediate and effortless responses at the end of the session; avoiding participant fatigue; ensuring spontaneous and authentic feedback; maximizing response rates (higher than typically obtained through online forms).

The first closed-ended question assessed the ease or difficulty of understanding the D.BE methodology, and used as a response scale: very easy, easy, difficult, very difficult. This item evaluates instructional clarity and conceptual accessibility.

The second question examining whether the methodology was considered useful for generating design solutions aimed at well-being. As a response scale was used: very useful, partially useful, not very useful, not useful. This is a key indicator of the practical relevance of the method.

The follow question explored how the participants perceived the process of applying the methodology and the response categories were: clear and smooth; interesting, but a bit confusing; required considerable effort; I did not identify with it. This item aims to reveal the balance between engagement, cognitive load, and process fluidity.

The last closed-ended question assessing whether participants believe the methodology can be used in other environments, such as schools, workplaces, or personal projects. The answers options were: yes, maybe, no. The purpose of this question was to identifies perceptions of scalability and methodological versatility.

In the Open-ended question, the participants were asked to summarize their experience in one short sentence. Through this qualitative item we aimed to capture nuances, emotions, and insights not addressed by the closed-ended questions, enriching the overall analysis with descriptive evidence.

These results contributed to strengthening the empirical foundation of the research, informing operational adjustments, and indicating pathways for future applications in educational, cultural, and community environments. The data collected through this questionnaire, paired with participant observation, served as the basis for analyzing the preliminary results discussed in the next section.

Preliminary results

An important step in the development and refinement of the D.BE methodology was the opportunity to test and iterate the approach first with undergraduate students from the Design program at the State University of Minas Gerais during the first semester of 2024, through an elective course. This initial academic application provided valuable insight that strengthened the methodological foundations and informed the subsequent implementation of workshops within NFE institutions.

The preliminary results discussed in this section were drawn from the first two workshop applications conducted in distinct locations: Centro Cultural UFMG and Palácio da Liberdade, both situated in Belo Horizonte, Brazil. These locations, while distinct in structure, audience, and mission, share a commitment to cultural dissemination, accessibility, and educational engagement—characteristics that made them fertile sites for testing and observing the adaptability of the D.BE framework.

The preliminary results suggest a generally positive reception of the D.BE methodology, particularly regarding its conceptual clarity, relevance, and perceived usefulness. Most participants rated the methodology as "Easy" or "Very easy to understand," indicating that the theoretical underpinnings were accessible even for those without prior exposure to design frameworks or autism-related research.

However, the identification of cases in which participants described the methodology as "Difficult" or "Interesting, but a little confusing" is equally important. Notably, some participants who evaluated the methodology as "Very easy" simultaneously reported moments of confusion during application. This paradox suggests that while the overarching logic of the approach is comprehensible, certain operational steps—especially transitional moments between phases—may require clearer scaffolding or more explicit examples.

Such ambiguity may partially arise from the methodological core of D.BE itself: as a *possibility driven design* approach, the framework intentionally avoids prescriptive linearity, which can generate uncertainty for participants accustomed to more structured or deterministic workflows. While this openness is a central strength, it also demands thoughtful facilitation to prevent cognitive overload or interpretive ambiguity.

Usefulness emerged as one of the most compelling indicators within the preliminary data set. Approximately 84% of participants rated the methodology as "Very useful," with no respondent selecting "Little useful" or "Not useful." This strong consensus reinforces the perception that D.BE provides practical, meaningful support for reflective thinking, sensory-aware analysis, and design decision-making.

The high perceived usefulness also aligns with global literature on positive design, inclusive design, and sensory-informed environments, which emphasize that structured frameworks can empower educators and designers to reinterpret challenges, articulate needs with greater precision, and generate more empathetic and effective solutions.

Regarding user experience, responses revealed a noteworthy distribution: around 42% of participants described the methodology as "Clear and fluid," while close to 37% classified it as "Interesting but a little confusing." No responses associated the experience with "High cognitive effort" or negative emotional load.

This polarity suggests that the methodology is engaging, successfully maintaining participants' cognitive and emotional involvement, while also stimulating curiosity—a highly desirable outcome in creative and collaborative design processes. At the same time, it points to specific areas where the processes could be refined to reduce confusion, likely through the implementation of enhanced visual aids, simplified transitions, or more reinforced facilitator involvement.

This equilibrium between clarity and confusion mirrors findings in research on design pedagogy. Studies by Lawson (2005), Cross (2011), and Dorst (2015) highlight that productive confusion is often a hallmark of creative practice: it suggests participants are navigating frontier spaces between known concepts and unfamiliar approaches.

One of the strongest indicators of the methodology's potential impact is the measure of applicability. Approximately 89.5% of respondents affirmed that the D.BE methodology could be applied in other contexts beyond the specific workshop scenario. No participants indicated that the methodology was inapplicable.

This reinforces several important conclusions: the D.BE framework is adaptable across different institutional environments, its structure accommodates participants with varying levels of expertise, it demonstrates strong potential for scalability across educational, therapeutic, cultural, and community-based settings, and it aligns with contemporary global discussions on inclusive design, neurodiversity-affirming practices, and multisensory learning strategies.

Qualitative responses offered rich insights into how participants interpreted, experienced, and emotionally connected with the D.BE methodology. Beyond the structured indicators provided by closed-ended questions, these open responses illuminated deeper layers of meaning and provided nuance to the quantitative findings.

A recurring theme was the recognition that D.BE responds to a genuine need experienced by participants in their professional practice. Many expressed that they lacked structured frameworks for thinking about sensory inclusion, emotional well-being, or design approaches suitable for neurodiverse learners.

Participants described D.BE as: a mental compass; a map of clarity; a tool that organizes thinking; a resource that brings safety and direction. Such terminology echoes research in positive design, suggesting that tools that combine structure with interpretive flexibility are particularly valued by educators and practitioners working with complex, heterogeneous populations.

One of the most significant qualitative findings concerns the perceived balance between structure and flexibility. Participants did not view D.BE as restrictive; instead, they described it as a supportive scaffold that simultaneously enables and empowers creative exploration.

This assessment aligns with theoretical literature on design frameworks. Desmet and Pohlmeyer (2013) argue that positive design requires a delicate balance between guidance and autonomy: too much structure inhibits creativity; too little structure leads to confusion or superficiality. D.BE appears to achieve this balance in practice.

Participants reported that the methodology significantly expanded their horizons, enabled deeper reflection, supported intuitive leaps, and encouraged more daring imaginative proposals. This unique combination of freedom-within-structure is a particularly valuable

attribute for non-design professionals, who often rely on such frameworks to effectively navigate the inherent uncertainty of creative processes.
Another important dimension emerging from qualitative responses is the perceived impact of the methodology on participants' professional outlook. Words such as "enriching," "intense," "transformative," and "comprehensive" appeared frequently across open-ended responses.
Participants described how the workshop challenged them to rethink their assumptions, notice details previously overlooked, reinterpret familiar challenges through sensory and emotional lenses, approach design tasks with more empathy and intentionality.
This transformation aligns with the aims of both positive design and inclusive design: to shift not only outputs but mindsets, enabling practitioners to make more informed, compassionate, and evidence-based decisions.
An especially meaningful insight emerged from a participant with ADHD (Attention-Deficit/Hyperactivity Disorder), who stated:

> *"I have ADHD and feel that the methodology will help me even in my personal life. I felt it organized my thoughts, gave me clarity and safety to propose ideas. I felt comfortable, which I usually find difficult." (translated by the author)*

This comment highlights the broader neurodiversity affirming potential of the methodology. While designed with autistic individuals in mind, D.BE appears to support neurodivergent cognition more broadly by providing structure to organize complex thought, reducing cognitive overload, facilitating clarity during problem-solving, enabling safe and guided exploration.
In summary, qualitative responses consistently position D.BE as more than a step-by-step framework. Participants understood it as a cognitive and emotional lens—a way of seeing, thinking, and interpreting project challenges differently.
From this perspective, D.BE serves three fundamental functions: amplifying focus and mental organization; expanding the field of creative possibilities; and enhancing the design process through empathy and sensory awareness
This triangulation of structure, imagination, and human sensitivity appears to be one of the most distinctive and appreciated aspects of the methodology.

Final reflections: toward a design ethos of care, possibility and inclusion

The preliminary results of this research reinforce, in a highly positive way, the centrality of collective construction within design processes—particularly when the aim is to promote well-being for autistic individuals. Through the workshops conducted in NFE institutions, it became clear that developing design solutions oriented toward well-being requires the ongoing integration of diverse forms of knowledge, situated experiences, and multi-layered repertoires of practice.

These findings substantiate an essential question: *Is design for inclusion inherently collaborative?* Does it quality depends on how effectively it mobilizes the voices and perspectives of those involved in the environment it seeks to transform? In this sense, several fundamental questions emerge: Where does the designer's expertise end and the participant's agency begin? At what point does a process shift from consultation to co-design? How can facilitators ensure that power is distributed ethically and transparently across participants? Such questions not only shaped the methodological refinement of this research but also align with contemporary debates in human-centered design, critical disability studies, and participatory methodologies. Scholars such as Sanders and Stappers (2008), Spinuzzi (2005), and DiSalvo (2012) emphasize that collaborative design must continually negotiate power relations, authorship, and decision-making—particularly in contexts involving marginalized or vulnerable groups.

The workshops conducted with ENFE professionals demonstrate that collaborative creation strengthens when participants assume active roles in meaning-making and decision formation. The interaction between ENFE staff and the researcher highlighted that collaborative design is not simply an aggregation of tools; rather, it is a relational process built on dialogue, empathy, and distributed agency.

Participation, therefore, is not merely instrumental. It is ethical. Participants did not contribute passively. They engaged in shared reasoning, exchanged sensory-based interpretations of autistic experiences, challenged assumptions, and negotiated project directions. These processes resonate with Steen's (2013) proposal that co-design constitutes a form of "moral inquiry," in which participants collectively explore dilemmas, imagine possibilities, and co-construct pathways toward change.

This moral dimension reinforces the understanding that collaborative design must not be reduced to tokenistic practices or superficial involvement. Its legitimacy emerges when participants feel that their contributions matter, influence decisions, and shape outcomes. This principle was consistently affirmed during the workshops, as participants reported feelings of agency, clarity, and empowerment.

The D.BE methodology demonstrated strong potential as a mediating framework within the workshop environment. Guided by its structure—yet flexible in application—participants found support in navigating the cognitive and emotional complexity inherent in designing for autistic individuals.

Participants valued its balance of direction and freedom, perceiving it as a scaffold that organizes thought without imposing rigid constraints. This aligns with global research trends that emphasize the importance of frameworks that support creativity without stifling innovation (Dorst, 2015; Brown, 2009; Kolko, 2010).

Moreover, because D.BE integrates sensory and emotional variables as core design considerations, it resonates strongly with contemporary neurodiversity-affirming approaches. Literature on inclusive design (Pullin, 2009; Frauenberger, 2019) emphasizes that sensory differences should not be treated as deficits but as integral dimensions of human experience. By embedding sensory processing as a structural element in every phase, D.BE reinforces this paradigm shift.

Another important finding concerns the methodological emphasis on sensory integration—a core dimension of autistic experience that is often overlooked in conventional

design frameworks. By grounding itself in principles drawn from Sensory Integration Theory (Ayres, 2015) and contemporary neurocognitive research, the D.BE methodology addresses the lived realities of autistic individuals with nuance and respect.

By weaving these insights into the design process, D.BE reinforces that inclusive design must go far beyond physical accessibility; it must engage with sensory, emotional, cognitive, and relational dimensions.

This research reinforces that design for well-being is an ethics-driven practice, one that necessitates humility, reflexivity, and active engagement with the realities of individuals whose voices have historically been marginalized.

The D.BE methodology, with its emphasis on sensory awareness, emotional sensitivity, creative exploration, and shared agency, represents a promising step toward establishing a more compassionate and inclusive ethos in design practice. By structuring design processes around the lived experiences of autistic individuals, D.BE invites designers, educators, and facilitators to see well-being not merely as an outcome but as an ongoing relational process.

As the research progresses into subsequent phases, we reaffirm the potential of design—particularly when grounded in collaborative, multi-sensory, and human-centered approaches—to expand opportunities, dismantle barriers, and contribute to more just, equitable, and joyful learning environments for autistic individuals.

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Resumen: Este estudio tiene como objetivo investigar el papel del Diseño para el Bienestar en la creación de herramientas que apoyen a personas con Trastorno del Espectro Autista (TEA) en contextos de educación no formal. La investigación se basa en una metodología de enfoque taller, en la que se emplean prácticas de diseño participativo para codesarrollar estrategias inclusivas y accesibles en colaboración con espacios como centros culturales, museos, escuelas de apoyo y otros entornos educativos no formales. Al posicionar los talleres tanto como instrumentos de indagación como de creación colaborativa, el proyecto avanza en métodos innovadores para la traducción de conocimientos complejos en recursos didácticos prácticos.
El trabajo se organiza en fases sucesivas: (i) mapeo y priorización de espacios de educación no formal en la ciudad de Belo Horizonte (MG, Brasil); (ii) fortalecimiento del vínculo institucional mediante estrategias de comunicación focalizadas; (iii) ejecución de ciclos intensivos de talleres; y (iv) análisis y difusión de los resultados en ámbitos académicos y profesionales. La recolección de datos incluye registros visuales, cuestionarios y producciones colaborativas generadas durante los talleres, las cuales serán organizadas de manera sistemática para su análisis temático.
Los resultados preliminares indican que los talleres han sido efectivos para promover la participación, generar herramientas educativas adaptables y fomentar el diálogo entre el diseño y la educación. Al integrar bienestar, diseño y educación, la investigación contribuye a la consolidación de ecosistemas educativos flexibles y colaborativos, reforzando el potencial de las metodologías de diseño para democratizar el conocimiento y atender las necesidades específicas de las poblaciones con TEA en contextos de aprendizaje no formal.

Palabras clave: Diseño para el Bienestar - Trastorno del Espectro Autista (TEA) - Educación No Formal - Diseño Participativo - Metodología de Taller - Diseño Inclusivo - Estrategias Accesibles - Creación Colaborativa - Herramientas Educativas - Traducción del Conocimiento

Resumo: Este estudo tem como objetivo investigar o papel do Design para o Bem-Estar na criação de ferramentas de apoio a pessoas com Transtorno do Espectro Autista (TEA) em contextos de educação não formal. A pesquisa fundamenta-se em uma metodologia de abordagem por oficinas, na qual práticas de design participativo são utilizadas para o co-desenvolvimento de estratégias inclusivas e acessíveis, em colaboração com espaços como centros culturais, museus, escolas de apoio e outros ambientes educacionais não formais. Ao posicionar as oficinas tanto como instrumentos de investigação quanto de criação colaborativa, o projeto avança em métodos inovadores de tradução de conhecimentos complexos em recursos didáticos práticos.
O trabalho está organizado em fases sucessivas: (i) mapeamento e priorização de espaços de educação não formal na cidade de Belo Horizonte (MG, Brasil); (ii) fortalecimento do engajamento institucional por meio de estratégias de comunicação direcionadas; (iii) realização de ciclos intensivos de oficinas; e (iv) análise e disseminação dos resultados em

fóruns acadêmicos e profissionais. A coleta de dados inclui registros visuais, questionários e produções colaborativas geradas durante as oficinas, que serão sistematicamente organizadas para análise temática.
Os resultados preliminares indicam que as oficinas têm sido eficazes na promoção do engajamento, na produção de ferramentas educacionais adaptáveis e no estímulo ao diálogo entre design e educação. Ao integrar bem-estar, design e educação, a pesquisa contribui para a consolidação de ecossistemas educacionais flexíveis e colaborativos, reforçando o potencial das metodologias de design para democratizar o conhecimento e atender às necessidades específicas das populações com TEA em contextos de aprendizagem não formal.

Palavras-chave: Design para o Bem-Estar - Transtorno do Espectro Autista (TEA) - Educação Não Formal - Design Participativo - Metodologia de Oficinas - Design Inclusivo - Estratégias Acessíveis - Criação Colaborativa - Ferramentas Educacionai - Tradução do Conhecimento