

Mapping the Awareness of a Place

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Abstract. A place branding project involves different phases, from the background research to reaching the final proposals. This paper presents results of a research developed in the context of learning focused on a project of Place branding concerning a Megalithic heritage. The project presented challenges in clearly communicating what a Megalithic heritage is (a heritage that displays a tenuous interpretation of its concepts) and the pace of a project developed in the scope of digital technology. This research, developed in the context of learning and training, proposes to introduce exploratory phases that promote reflexivity so that students can iteratively explore various codes and patterns of information. This research aims to answer how a visual map strategy can empower students to search for solutions in a place branding project. The study follows the methodology of a descriptive Case Study. The researchers were able to verify that based on the results, the use of a visual mapping strategy allowed students to reflect and develop several concepts based on contrasting relationships and interpretive bridges with a theme and a heritage of a culture that left no decipherable records.

Keywords: Visual Exploratory Strategies, Visual Maps, Learning Strategies, Place Branding.

1. Introduction

We must consider places as merely consumption products or organizations, and systematically implement branding strategies and various marketing tools and techniques according to their characteristics and specificities. This characterization is a simplistic approach to Place, which can influence the success of place branding strategy (Berrada, 2019).

According to Zenker & Braun (2010), the definition of place branding refers to the process undertaken by public administrations to establish place brands, networks of associations in the target groups' minds, using visual and verbal cues and behavioural expression of a place, embodied in the goals, communications, values, prevailing cultural norms, and overall place design of the stakeholders in the location. Place branding is a process which determines the place identity, defines its positioning, and strengthens its image to increase its brand equity and creates and assigns meaning to places by generating associations in the minds of target customers (Berrada,

2019). Place branding is directly related to brand association, which is a reference to anything that is linked to a brand in memory (Aaker et al., 2001). The three elements of a brand's identity are its name, logo, and tagline. Undoubtedly, the name is the most important, but a logo can be a beneficial tool.

Logos help a brand in two ways. First, they operate in conjunction with the name. A picture enhances the memory for accompanying words, and using a logo influences the recognition speed. The nonverbal elements—text and graphics—are processed simultaneously, whereas verbal processing follows a sequence. Pictorial representations are retrieved from memory much faster than non-pictorial ones. Second, logos can be used as replacement of the name when there is a space or time limitation (Kohli & Suri, 2002). So, a brand is a virtual context for consumption: it signifies a specific method of using an object, which allows for its proper consumption and the realization of a proper form of life (Arvidsson, 2005).

This research project, the Neolithic landmark in the Évora region, deals with a historical time frame that is challenging to frame, as well as how to create connections with visual codes understood by the public in general. The identity design of a historical heritage presents many challenges; these challenges are even more significant when the heritage is a megalithic one, with very few interpretative clues to allow bridging with contemporary.

Research suggests that many ruins of megalithic structures, and even some carefully crafted stones in ancient times, form structures that should be regarded as complex in the future, particularly by highlighting their placement in the landscape. This characterization would allow a better understanding of the organization and lifestyle of the society in those times, as well as finding directions on where to search for possible prehistoric settlements. According to Segli (2018), there is undoubtedly a connection to the local hydrological network for the monuments near Evora. Such large groups of geographically connected monuments relate to places where ancient water sources reached the surface. The stone surfaces of the Alamandres Cromlech and a menhir, both depict various images and signs. The preservation occurs in a rather fragmentary way. However, the number of signs can be measured in hundreds because practically all stones contain these fragments and images.

Various researchers have revised the decorations on the menhirs in Central Portugal during the last decades in a broader sense (Ferraz, 2009). Accordingly with Cerrillo-Cuenca et al. (2019), Almendres is one of the best-preserved prehistoric cromlechs in Western Europe and is formed by 95 menhirs. A study of the site concluded that most of these menhirs' elevation could have happened during the sixth millennium CAL BC. The site was discovered by Henrique Leonor Pina during the 1960s and excavated later by M. V. Gomes, who also published the decoration of some menhirs and stelae and undertook new documentation of the menhirs. Calado studied the site in a broader work that considered other proximate sites, cromlechs, and isolated menhirs (Cerrillo-Cuenca et al., 2019).

2. Research Question and Methodology

At the beginning of the research project, we put a question: how a visual map strategy can empower students to search for solutions in a place branding project?

The used methodology for this practical research was a descriptive Case Study. A descriptive case study is closely focused and in-depth; its initial hypotheses and queries concerning a phenomenon are carefully considered and stated (Descriptive Case Study, 2010). Case studies that are descriptive describe the underlying natural occurrences. Narrative case studies can be descriptive (McDonough & McDonough, 2016).

This research employs a cycle in which the problem or idea creates research questions that specify the study's scope and identifies research findings that, in turn, resolve the problem or idea at hand (Noble & Bestley, 2005).

According to Vygotsky (1989), learners employ cognitive skills to comprehend their surroundings and the outside world. These mental tools are products of one's society. Learning occurs in a social setting and is initially between the teacher and the student before becoming internalized. Students can benefit from the *Zone of Proximal Development* (ZPD), a theory from educational psychology. It stands for the area between what a student can accomplish without assistance and what he/she cannot accomplish even with assistance. It is the area in which the student is capable of performing, but only with assistance from a teacher or a peer who has more knowledge or experience (a "more knowledgeable other"). Another element of this theory is active involvement, which

provides a framework for discussion and exchanging ideas that result in advanced development (Shabani, 2010). To encourage learning and cognitive development, teachers can employ scaffolding to help the students to complete these tasks inside their zone of proximal development.

Teachers can accommodate students' varying levels of knowledge by using a range of scaffolds, according to Alibali (2006) and Belland (2016). Concept and mind maps, narratives and diagrams as charts and graphs, and techniques for emphasizing visual data are three typical scaffolds.

In order to analyse the textual information resulting from questionnaires, the authors use thematic analysis, one of the most common forms of analysis within qualitative research (Jnanathapaswi, 2021), a technique used by researchers to analyse content, generate ideas, communicate viewpoints, analyse textual messages, and recognize dominant themes (Lupton & Phillips, 2011).

3. Development

The authors of this study carried out the research in learning settings at the School of Arts, University of Evora, Course of Design of Corporative Identity, second curricular semester of 21/22.

The project started with a historical and scientific contextualization by the archaeological researcher Jorge de Oliveira, who is a professor of archaeology at the University of Evora. Although patent the importance of the Megalithic heritage, there is a difficulty in linking visual reasonings to the existent patrimony.

The visual map strategy focused on the *Menires Almendra Park*, location near Evora. Students started with simple assumptions previously stated in the former Historical/ context session. From those pieces of information, they draw contrast situations, day/ night, dry/wet human body cycles, woman/ man, young/ old, and birth/ death. After this phase, they draw the first maps and connections from those constants and binary relations. They further explored information gaps aimed at positioning their perception within the tangible of nature.

The project was developed from February to June 2022 and was divided into five phases, as chosen in table 1.

Table 1: Project phases

Source: Authors

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Briefing and contextualization	Exploratory mapping	Monitoring of visual synthesis of exploratory mapping	Project guidance	Refinement of design and final delivery.

Regarding the brand design project, specifically in the logo design stages, the authors adapted the structure presented by George Adir et al. (2012), which is composed of two stages. The first stage relates to the research and market projection, and the second one relates to the creative graphic work.

Table 2: Logo design Stages

Source: George Adir et al., 2012

Research and Market projection	➤	Creative graphic work
- To set the theme;		- To sketch some examples for the demanded logo;

- To identify existing logos in the gainer domain;		- To achieve a brainstorming session to obtain 2-3 solutions;
- To realize a competition study of existing logos in the market;		- To develop a SWOT analysis;
- To fix the target public of the presumptive logo;		- To set the best graphic-visual logo solution;
- To specify the support elements of the logo;		- To convey a first graphic print to the gainer;
- To analyse the creative graphic possibilities in the demanded domain.		- To create the computer graphic design logo;
		- To show this solution and to obtain the OK from the gainer.

The briefing and contextualization included the presentation of the Megalithic Heritage context presented by the expert and Professor Jorge de Oliveira.

Jorge de Oliveira is a professor in the History Department and director of the *Pinho Monteiro Archaeology Laboratory* of Evora University, Portugal. He has participated and led numerous archaeological excavations in the Alentejo territory. Through the study conducted by Jorge de Oliveira at the base of the *Menir da Meada* (the most impressive megalithic monument in the region of Castelo de Vide and the largest fully carved menhir in the entire Iberian Peninsula), it was possible to obtain a date older than expected. The community of archaeologists who study Neolithic always believed that funerary megalithism (Dolmen) was contemporary with the Menhirs. However, the dating studies revealed that these were about two thousand years older. This discovery contributed to better highlight the value of the Megalithic Heritage in Alentejo, underlining the patrimonial value of the Megalithic Circuit in Évora.



Fig. 1. Peninsular Menhires, and the Evora region marked with a circle.
Source: Oliveira, 2022

This project follows a transdisciplinary approach, bridging several areas. According to Findeli *et al.* (2008) a transdisciplinary project isn't a project of knowledge of the world (observation, description, interpretation, understanding), but that of its transformation. The perspective is projective/creative and requires knowledge to

be engaged in the project. The visual maps strategy allows encompassing transdisciplinary approaches into visual form.

Visual maps are representations ontologically independent of the represented phenomenon, and the raw data that structure them, and their elaboration, analysis, and interpretation are also a matter of reflexivity (Parmentier-Cajaiba & Cajaiba-Santana, 2020). Visual maps can accommodate different structures and different denominations. Teams can use physical visual boards, or "information radiators," as a central element for collaboration, coordination, and communication (Sharp & Robinson, 2010). These physical artifacts are easy to refer to, to annotate, and hard to ignore (Sharp et al., 2006). A physical board makes it easier to limit the amount of information. Such boards can give teams a shared mental model of the project. A visual board can be set up quickly by placing a board in a suitable location. It is essential to be visible to the development team and others who are interested in the team's work (Dybå et al., 2014).

Designers are responsible for creating communication which must be accessible and understandable by everybody. According to Noble and Bestley (2005), mapping is the systematic organization of complex information in a form that may be transported and reinterpreted. It involves collecting, editing, and representing information in a clear visual way. Research should be conducted into the target audience for a particular message to ascertain the quality and appropriateness of materials and visual language adopted, along with the range of interpretation contexts of the work.

The strategy adopted in the visual exploration followed the premise of the article by the authors Pilar Utrilla *et al.* (2009) who suggested that some engraved stone blocks found in the Abauntz Cave dated 13,660 years old could be interpreted as "maps" and "hunting plans," recording local landscape features and their relevant qualities, such as rivers, slopes, accessibility for animals and humans, or natural barriers. They provided helpful information about how the natural geography near the site, depicted in the maps, could relate to a strategic plan for hunt.

Due to changes in the land geography involving vast areas of agricultural exploitation, particularly the land surrounding Évora (example, the *Almendras park*), the land has undergone several changes over time. Thus, the authors defined more general and universal variables for visual exploration.

This paper's authors participated as facilitators, assisting the students in creating maps of meanings, which were created collectively. The strategy was to begin with an exploratory study in which the students explored a map consisting of contrasts (night, day) (east, west) (male, female) (new, old) seasons and phases of the moon, codes already discussed in the session carried out by archaeologist Pedro Oliveira (fig. 2).

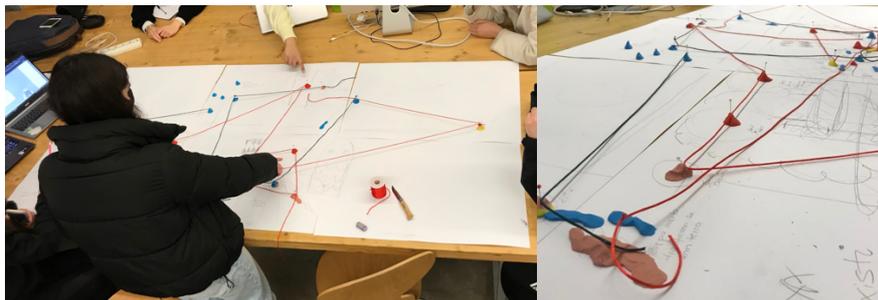


Fig. 2. Students discovering connections on the map.

Source: Authors

The students extracted a synthesis from the map design and the exploration of contrasts and associations between the elements. That allowed them to develop an approach to a "Universe so far from interpretative parameters that are familiar to us," as highlighted by Jorge de Oliveira (2022). In its exploration, the group drew, based on a map of contrasts, a diagram based on a horizontal lozenge, displaying in opposite corners of the moon and the sun and in the centre the cycle of time patterns related to life and death (fig. 3).

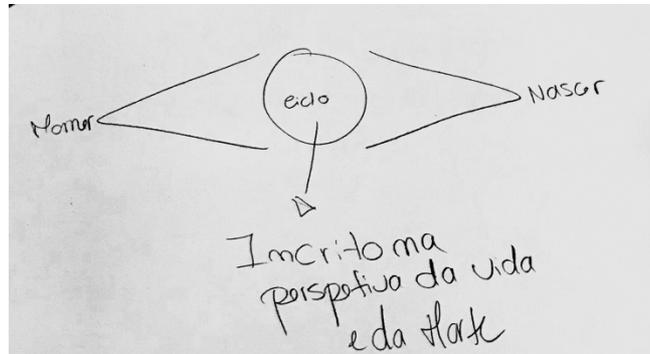


Fig. 3. Guiding structure extracted from the visual map.

Source: Students

Considering the perceptive limitations of this project and the perceptions of the target audience of this work, it became necessary to construct an understanding of the context, according to Noble and Bestley (2005). Once reached the target, the project's focus could be determined, and a working methodology defined. Primary research, which could include visual experimentation to test appropriate visual languages, was beneficial at this stage. The results of these preliminary visual and contextual experiments helped to define the specific project's aim.

When developing the brand design proposals, students started from the assumption that the final consumer feels responsible for intelligent consumption, but how does he/she make the best decisions if he/she does not experiment? Through this "experimentation," it is possible to acquire literacy on the specific subject of consumption. Otherwise, the consumer would have to support his/her decisions heavily on intuition. For this reason, consumers trust brands and their positioning, relieving their cognitive load of searching for different quality standards.

4. Results

Regarding the creation of place branding, and according to Zenker & Braun (2010), place brands are networks of associations in the target groups' minds. When creating an image that could promote associations with a place and heritage, problems arise in creating an identification link that could be understood by the public when the heritage (demoted idea) needs to be more specific and as information is still under scientific scrutiny.

Referring to different perspectives, one of the proposals represented terrain features correlated to an evolutionary form connected to the objectification of scientific discovery and cultural valuation carried out over time, (fig. 4).



Fig. 4. Terrain metaphor.

Source: Students

Students explored different solutions and strategies, displaying not only the idea of an ecosystem, but also a configuration identification under different perspectives. The majority of students, although representing recognizable symbols related to the landmark heritage in their work, displayed some difficulties in clearly depicting what could be considered a place branding proposal, (fig. 5).



Fig. 5. Examples of the graphic proposals developed by the students.
Source: Students

In what was considered the best final proposal, the student attempted to represent the lines of paths and routes while alluding to the concept of crystallization, synonymous with the landscape of time and the durability of an element simultaneously symbolic and structural, (fig. 6).



Fig. 6. Proposal depicting the intersection between routes and the concept of crystallization.
Source: Student

In order to evaluate the implementation of the experimental approach related to the research question, the authors followed a thematic analysis of the student's evaluation surveys, where students described their chosen concept and answered the question of how the first discovery maps helped them understand the focus of the project.

The teacher's detection of visual patterns in the final proposals complemented the final evaluation. This analysis evidenced in several proposals the allusion to representations of descriptive structures of an ecosystem that is an integrated structure in a surrounding environment. This is visible in examples portrayed in the third example, the first row, the examples displayed in the second row, and the proposal portrayed in fig. 6. The authors conclude that the visual mapping introductory to the project favoured the attempt to represent an ecosystem; however, the mediation influenced the results. The mediation implicitly expressed codes already discussed during the session carried out by archaeologist Jorge de Oliveira. According to Betts (2014), the design of structures facilitates a functional memorization of the object of study. The reasoning of interactions in the ancient landscape favoured the most elaborated concepts.

5. Conclusion

The result of this research could have been more perennial in establishing design lines but also defined a space for reflection in the inclusion of exploratory visual maps. This research aimed to develop a strategy that could contribute to the reflexivity into the project's conduction, creating a zone of proximal development (ZPD) and allowing the students to establish a space for reflection on the problem. It was not the objective of this research to develop "quick formulas" but to create suitable spaces of dialogue and exploration, using elements of physical interaction to reflect and empower the experimentation with different lines of thought in an iterative way.

Regarding the research question: How can a visual map strategy empower students in searching for solutions in a place branding project?

Although allowing a scaffolding of the project, it is clear that more than the use of a visual exploratory strategy per se, students need to identify visual languages within cultural frameworks and be able to build analogies in order to ensure the quality of the final project. The facilitation of visual maps also allowed the implicit introduction of codes consistent with the project context, guiding solutions' development. This information is evident in the thematic analysis performed on the students' answers, where the reference to the apprehension of different rhythms stands out.

Despite the cryptic nature of the project, the exploratory maps allowed the students to develop an interpretive bridge with the heritage location and geographical context. This connection benefited from the parallelism with exploring the concepts presented by Pillar Ultrilla (2009).

Regarding the effort in understanding and conciliating two imagined "realms," according to Dominique Bouchet (2015), in a cosmos devoid of meaning, humans invest in the world and make sense of it thanks to their imagination. The autonomy of the imagination characterizes the human psyche, the ability to formulate what is not there, to perceive, in just anything, what is not there.

In future projects related to place branding explicitly centred on the megalithic heritage, the authors propose, as a project support structure, the definition of two identification vectors.

The first vector relates to the identification of a material ecosystem, the tangible, evolutionary metaphors about the physical elements identified in the territory. Second, the intangible, that is, the possibility of identity harbouring evolutionary metaphors, referring to the evolution of knowledge about the past. This second vector relates to the identification of an ecosystem knowledge.

Various elements (geography, mythology, nature connection practices, transhumance practices) nourish a project of place branding where the project transfers the qualities of the individual with the place by association (Ashworth, 2009).

In order to apply these findings in future investigations, the authors will develop a new strategy of physical visual maps more adapted to some distinctive qualities of the didactic context, such as greater display exposure for broader reflection and subsequent signalling of new findings.

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6. References

- Aaker, J. L., Benet-Martínez, V., & Garolera, J. (2001). Consumption symbols as carriers of culture: A study of Japanese and Spanish brand personality constructs. *Journal of Personality and Social Psychology*, 81(3), 492–508. <https://doi.org/10.1037/0022-3514.81.3.492>
- Adir, G., Adir, V., & Pascu, N. E. (2012). Logo Design and the Corporate Identity. *Procedia - Social and Behavioral Sciences*, 51, 650–654. <https://doi.org/10.1016/j.sbspro.2012.08.218>
- Alibali. (2006). *Does Visual Scaffolding Facilitate Students' Mathematics Learning? Evidence From Early Algebra*. <https://ies.ed.gov/funding/grantsearch/details.asp?ID=54>
- Arvidsson, A. (2005). Brands: A critical perspective. *Journal of Consumer Culture*, 5(2), 235–258. <https://doi.org/10.1177/1469540505053093>
- Ashworth, G. J. (2009). The Instruments of Place Branding: How is it Done? *European Spatial Research and Policy*, 16(1), 9–22. <https://doi.org/10.2478/v10105-009-0001-9>
- Belland, B. R. (2016). *Instructional Scaffolding in STEM Education: Strategies and Efficacy Evidence*. Springer International Publishing.
- Berrada, M. (2019). Exploring Place Branding: State of the Art and Future Research Directions. *China-USA Business Review*, 18(2). <https://doi.org/10.17265/1537-1514/2019.02.003>
- Betts, S. (2014). Seeing Science. Developing Visualisation Skills for Science Students: A Cross-Disciplinary Project. *Drawing in the University Today*. P. L. B. Almeida, M. B. Duarte, & J. T. Barbosa (Eds.), 201–205. Research Institute in Art, Design and Society (I2ADS).
- Bouchet, D. (2015). The Specificity of Human Aesthetics. *Knowledge Cultures*, 3(3), 16–41.
- Cerrillo-Cuenca, E., Bueno-Ramírez, P., & de Balbín-Behrmann, R. (2019). 3DMeshTracings: A protocol for the digital recording of prehistoric art. Its application at Almendres cromlech (Évora, Portugal). *Journal of Archaeological Science: Reports*, 25, 171–183. <https://doi.org/10.1016/j.jasrep.2019.03.010>
- Descriptive Case Study (2010). *Encyclopedia of Case Study Research*. SAGE Publications, Inc. <https://doi.org/10.4135/9781412957397.n108>
- Dybå, T., Dingsøy, T., & Moe, N. B. (2014). Agile Project Management. *Software Project Management in a Changing World*, 277–300. Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-55035-5_11
- Ferraz, A. L. (2009). Approche méthodologique d'un ensemble de monolithesdécores Néolithiques de la région d'Évora (Alentejo-Portugal). *XXIII Valcamonica Symposium 2009*, 151–162.
- Findeli, A., Brouillet, D., Martin, S., Moineau, C., & Tarrago, R. (2008). Research Through Design and Transdisciplinarity: A Tentative Contribution to the Methodology of Design Research, Swiss Design Network (Ed.), *Focused—Current Design Research Projects and Methods*, 67–94. Swiss Design Network.
- Jnanathapaswi, S. (2021). *Thematic Analysis & Coding: An Overview of the Qualitative Paradigm*, 98–105.

<https://doi.org/10.6084/m9.figshare.17159249>

Kohli, C., & Suri, R. (2002). Creating effective logos: Insights from theory and practice. *Business Horizons*, 45(3), 58–64. [https://doi.org/10.1016/S0007-6813\(02\)00203-3](https://doi.org/10.1016/S0007-6813(02)00203-3)

Lupton, E., & Phillips, J. C. (2011). *Graphic Design Thinking: Beyond Brainstorming*, E. Lupton (Ed.). Princeton Architectural Press.

McDonough, J., & McDonough, S. (2016). *Research Methods for English Language Teachers*. Taylor & Francis Group.

Noble, I., & Bestley, R. (2005). *Visual research: an introduction to research methodologies in graphic design*. AVA Publishing (UK) Ltd.

Oliveira, J. de. (2022, February). Megalitismo no Alentejo. *Megalistimo*, 182.

Parmentier-Cajaiba, A., & Cajaiba-Santana, G. (2020). Visual Maps for Process Research: Displaying the Invisible. *M@n@gement*. <https://doi.org/10.37725/mgmt.v23i4.4501>

Seglins, V., Kukela, A., & Lazdina, B. (2018). Signs on megaliths in the environs of elva and evora in Portugal. *International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM*, 18(6.4), 805–820. <https://doi.org/10.5593/sgem2018V6.4/S10.099>

Shabani, K. (2010). *Vygotsky's Zone of Proximal Development: Instructional Implications and Teachers' Professional Development*. 3(4), 237–248.

Sharp, H., & Robinson, H. (2010). Three 'C's of Agile Practice: Collaboration, Co-ordination and Communication. *Agile Software Development*, 61–85. Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-12575-1_4

Sharp, H., Robinson, H., Segal, J., & Furniss, D. (2006). The Role of Story Cards and the Wall in XP teams: A Distributed Cognition Perspective. *AGILE 2006 (AGILE'06)*, 65–75. <https://doi.org/10.1109/AGILE.2006.56>

Utrilla, P., Mazo, C., Sopena, M. C., Martínez-Bea, M., & Domingo, R. (2009). A palaeolithic map from 13,660 calBP: engraved stone blocks from the Late Magdalenian in Abauntz Cave (Navarra, Spain). *Journal of Human Evolution*, 57(2), 99–111. <https://doi.org/10.1016/j.jhevol.2009.05.005>

Zenker, S., & Braun, E. (2010). The Place Brand Centre – A Conceptual Approach for the Brand Management of Places. 1. *Research Gate*. https://www.researchgate.net/publication/228462416_The_Place_Brand_Centre-A_Conceptual_Approach_for_the_Brand_Management_of_Places