

Drawing by embroidering: Social design embedded in the culture and traditions of the north of Portugal

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Inclusive Service Design
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Participatory design
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Workshops

Inclusive Service Design
Progetto di comunità
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Workshops

The accessibility of a product, service, or space is the extent to which it can be used by everyone, regardless of individual characteristics. Accessibility therefore requires a dedicated effort to design for diverse abilities and has traditionally been conceptualised through tangible features. However, for a person to interact with a product, service or space, in the first place presupposes their inclusion in contexts where such interactions are available to them. Accessibility and social inclusion therefore go hand in hand as designers seek to respond to societal challenges in appropriate and equitable ways. This symbiotic relationship between accessibility and inclusion was explored in a small-scale participatory design project undertaken with a community in the north of Portugal with the aim of investigating how design processes and tools can be applied to foster the social and professional integration of citizens who are unemployed. This paper provides a detailed description of the design process, alongside examples of the embroidery products created and insights into the participants' experiences, with a view to identifying the factors that led to its overall success. The discussion offers a list of recommendations based on this work, which we hope will benefit similar social innovation projects in the future.

L'accessibilità di un prodotto, di un servizio o di uno spazio è la misura in cui può essere utilizzato da tutti, indipendentemente dalle caratteristiche individuali. L'accessibilità richiede quindi uno sforzo dedicato alla progettazione per diverse abilità ed è stata tradizionalmente concettualizzata attraverso caratteristiche tangibili. Tuttavia, l'interazione di una persona con un prodotto, un servizio o uno spazio presuppone la sua inclusione in contesti in cui tali interazioni sono disponibili. L'accessibilità e l'inclusione sociale vanno quindi di pari passo, poiché i progettisti cercano di rispondere alle sfide della società in modo appropriato ed equo. Questa relazione simbiotica tra accessibilità e inclusione è stata esplorata in un progetto di design partecipativo su piccola scala intrapreso con una comunità del nord del Portogallo con l'obiettivo di indagare come i processi e gli strumenti di design possano essere applicati per favorire l'integrazione sociale e professionale dei cittadini disoccupati. Il presente documento fornisce una descrizione dettagliata del processo di progettazione, oltre a esempi di prodotti di ricamo creati e approfondimenti sulle esperienze dei partecipanti, con l'obiettivo di identificare i fattori che hanno portato al suo successo complessivo. La discussione offre un elenco di raccomandazioni basate su questo lavoro, che speriamo possano essere utili per progetti di innovazione sociale simili in futuro.

Introduction

Accessibility is the cornerstone principle for designing products, services, and spaces that can be used by a wide range of people. Its origins are closely linked to the disability rights movement, which has led to various significant legal measures being enacted over the last three decades [Persson et al. 2015]. This type of legislation, together with other public policies and international standards, has gone some way towards establishing the global importance of accessibility. And yet, in many instances, the promise of accessibility remains unfulfilled as people disengage from or reject accessible measures made available to them. This is the risk of designing based on standards and guidelines, rather than taking a user-sensitive approach to design [Newell, Gregor 2000]. Accessible features can sometimes be overt and othering, drawing unwanted attention to a user's individual characteristics. For example, while assistive technologies - which are designed with the explicit aim of supporting people with disabilities in their daily life - may indeed fulfil technical requirements of accessibility, they can be perceived as stigmatising and are frequently abandoned [Langley et al. 2020].

Design offers ways to ensure interventions are desirable as well as appropriate for intended users. Much of this is based on techniques for listening to and involving people throughout the design process, following human-centred approaches [Maguire 2001]. Human-centred design builds upon the need for accessibility and acknowledges the importance of context of use, where technical, physical, social and organisational factors can positively or negatively affect the use of what has been designed. Moreover, context itself can be a factor of exclusion if people face barriers to participation based on their individual characteristics. Thus, access to resources is another element to consider in the pursuit of inclusion. This has gained attention recently in the field of service design with the addition of a resource integration approach to inclusion [Huan et al. 2020]. Resources can be divided into two categories: those that are static, such as goods, are known as operand resources; and those that have the potential to affect other resources, such as knowledge

Cover image
Tests of the
embroidery workshop

and skills, are known as operant resources [Arnould et al. 2006]. Resource integration then involves actors sharing and combining resources, operating adaptively and as a network. This results in a service “in action” [Huan et al. 2020, p. 10] and it requires design to be dynamic, responding to actors’ behaviours and their perception of resource constraints and possibilities.

The fact that design work can happen in action makes it a powerful agent for social innovation, as it seeks to create innovative responses to complex social challenges [Manzini 2015; Mulgan 2006; Murray et al. 2010]. Social innovation builds on the notion that collaboration among stakeholders can generate solutions capable of affecting change in action and/or in social relations, even improving life in society [Centre de recherche sur les innovations 2022]. Manzini [2015] emphasises that designers must use their unique skills to find opportunities and support social innovation processes, to enhance their effectiveness, durability, accessibility, and recurrence. This paper explores these issues through a small community-based project, where participatory techniques were used in a regular workshop with unemployed citizens to promote better social and professional integration.

Context

The Drawing by Embroidering (DbE) workshop was part of a project called *Estação Guimarães - Sul (EG-S)*, under a Portuguese programme to promote social development through local initiatives (*Programa Contratos Locais de Desenvolvimento Social 4G - CLDS 4G*), funded by the *Social Inclusion and Employment* operational programme (*Programa Operacional Inclusão Social e Emprego - POISE*). EG-S was based in Guimarães, a city in the north of Portugal, and led by a local Private Institution of Social Solidarity (IPSS) called *Sol do Ave*, in partnership with a team of three designers and a visual artist. In line with the broader CLDS 4G aims, it sought to explore how design processes and tools could be applied to foster the social and professional integration of local citizens, while also celebrating the city’s culture and traditions.

Methods

The DbE workshop followed a participatory design approach. Participatory design advocates for the active involvement of participants in the design process and favours shared decision making amongst all stakeholders [Cortés, Cruz 2018]. Among the many participatory techniques, workshops are frequently used to develop new knowledge and experience through manual activities. However, following a traditional workshop model can limit participants' individual creativity and impose a production mindset [Ruyembe 2013]. This can be mitigated through the use of generative tools, which encourage participants to tap into their own needs and desires to generate relevant new ideas [Sanders 2002]. These recommendations informed our work.

The DbE workshop aimed to involve people of working age (under 65 years old) who were unemployed. Potential participants were identified and approached by *Sol do Ave* through local organisations. Although over 100 people attended the workshop presentation session, the numbers gradually fell throughout the various stages of recruitment and the final number of community participants who actively participated in the DbE workshop was just two men. This dramatic decrease in figures from initial interest to actual participation is a known challenge of such initiatives, which can be attributed to several factors. Notably, the logistics of regularly attending the workshop is a frequently cited factor in this area, which is geographically dispersed and underserved by public transport. It is also known that unemployment can be linked to mental health issues [Karsten, Moser 2009], which can in turn negatively impact the uptake of new activities.

Theme: Guimarães embroidery

The theme of this workshop - Guimarães embroidery - was decided through a participatory process, which involved several project stakeholders. Guimarães embroidery (fig. 1) is a certified regional Portuguese product, with a centuries-long tradition. Traditionally, it uses linen as the base fabric and has very characteristic motifs, in one of only six accepted colours

Fig. 1.
Example of
Guimarães
embroidery
[Fernandes, 2006,
pp. 152, 153].

Fig. 2.
Examples of different
elements for drawing
by embroidering: (A)
centres, (B) middles,
(C) ends, and (D)
corners [Fernandes,
2006, pp. 8, 18, 46,
91].



A



B



A



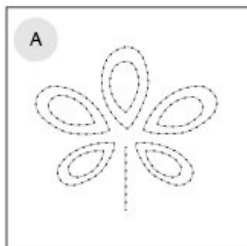
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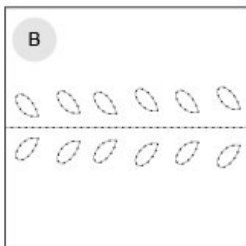
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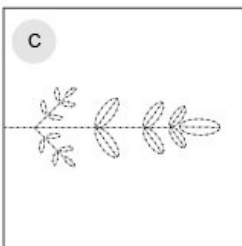
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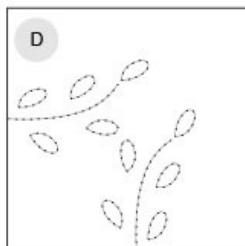
A



B



C



D

and using twenty-one stitches [Willem 2016]. This type of embroidery, often applied to table linen, is renowned for its intricacy [Fernandes 2006], which makes this a meticulous and time-consuming activity. Its practice persists thanks to local groups of embroiderers, including in the parish where the DbE workshop was held.

Process

Our process comprised four key moments: Planning, Proposal, Activity, and Products. These moments are briefly summarised in Table 1.

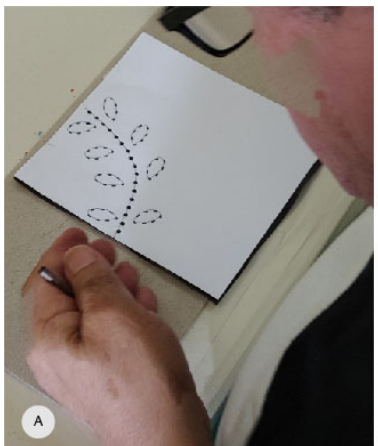
Phases	Actors	Actions	Duration
1. Planning	Design Team	Research and development of the theme; Module planning; Testing materials and techniques.	One month
2. Proposal	Design team; Representatives of the institutional stakeholders; Local community (focus on unemployed individuals)	Presenting the proposal; Participatory design demonstration; Participant registration	One four-hour session
3. Activity	Design team; Community participants.	Experimenting with various embroidery techniques and materials; Co-design and development of products	Six four-hour sessions
4. Products	Design team; Community participants; Friends and family; Local group of embroiderers;	Presentation of final products; Group reflection on the WbE workshop; Celebration.	One four-hour session

Table 1.
Summary of the four key moments of the WbE workshop.

Fig 3.
Results of the participatory design activity carried out during the Proposal (Source: Authors).

Fig 4.
Results of the first Activity session showing the different drawing and embroidering techniques (Source: Authors).

Fig. 5.
Embroidery technique developed by the participants (Source: Authors).



Planning was guided by two main concerns. First, the work plan needed to be accessible and achievable by any person, regardless of their characteristics, using simple design techniques and tools. Second, the materials needed to be affordable or free, and were sourced from local industry waste such as leather, paper, and cardboard. The design team - comprising three designers and a visual artist - explored how to simplify some traditional motifs used in Guimarães embroidery, to create modular elements that could be repeated and combined in a variety of ways. This modular approach was deemed suitable for a diverse audience, as well as versatile in terms of possible end products. The final modules were the size of traditional Portuguese ceramic tiles (15x15 cm) and comprised four types of elements: centres, middles, ends, and corners (fig. 2).

Proposal was a public presentation of the design team and project partners, with a view to recruiting participants for the subsequent workshop phases. For this kick-off session, the design team prepared a participatory design activity based on the story of a local historical figure. This participatory activity involved decorating a tablecloth by using various techniques to complete and colour in the modular elements previously created on paper, cardboard, and leather (fig. 3).

Activity comprised several weekly co-design sessions, which went through various stages until a final product was created. In the first session, participants continued the previous participatory design activity. They tried out all the techniques (fig. 4) and shared their preferences. This was crucial to establishing rapport between the design team and the community participants.

A new technique was introduced in the third session, which involved the use of a wooden base, nails, and a drawing to follow using different kinds of thread (fig. 6). Participants felt this was the least interesting technique for them, who favoured embroidery.

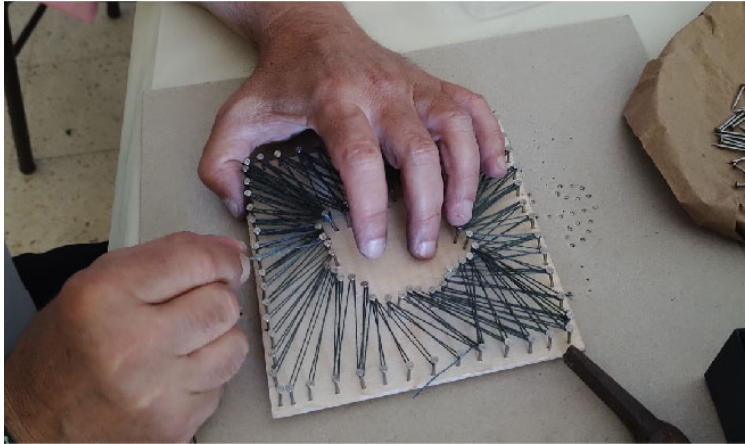
Products were presented in the final public-facing session. The whole group developed and delivered invitations for this event (fig. 7). During this session, in their reflections, participants highlighted the fact that they had been able to do things that they had not imagined they could.

The final set of products included three types of coasters (figs. 8, 9), placemats comprising six 15x15 cm squares, and a

Fig 6.
Participant trying a string art technique
(Source: Authors).

Fig 7.
Invitations created by the participants
(Source: Authors).

Fig 8.
Coasters that fit around the base of a glass, in leather with embroidery (Source: Authors).



A



B



A



B

table centrepiece comprising nine 15x15 cm squares (fig. 10), all decorated with the motifs from the earlier sessions.

Discussion

This paper describes a small-scale participatory design project undertaken with a local community of unemployed people, which aimed to investigate how design can be applied to promote better social and professional integration. We argue that design was integral to supporting effective and accessible social innovation processes, in line with the recommendation of Manzini [2015]. Accessibility was a core goal for the design team tasked with re-drawing traditional motifs used in Guimarães embroidery, who created simple modular elements that could be repeated and combined in a variety of ways. Care was taken to ensure accessibility requirements were met: they were easy to use, with clear outlines and strong contrast, as well as tactile elements being included in the drawings (embroidery). Design therefore facilitated accessibility through careful reinterpretation of established motifs and techniques. The planning and proposal of the workshop followed a user-centred [Maguire 2001] but also a user-sensitive design approach [Newell, Gregor 2000], which became increasingly more participatory as the work progressed. Participants were active contributors to the refinement of the embroidery techniques and the development of the final products.

Accessibility was also achieved in more nuanced ways. The choice of the theme - Guimarães embroidery - was anchored in local identity, which made the proposals immediately recognisable and relevant to the intended audience. This draws on operant resources [Arnould et al. 2006], shared by the local community, to break down perceived barriers to participation and thus encourage buy-in. The design team ensured the work plan was based on small and incremental steps, so the workshop became a service in action [Huan et al. 2020] where the various actors' resources were shared and integrated under the guidance of the design team. In terms of operand resources [Arnould et al. 2006], keeping the materials low (or no) cost was an additional accessibility factor, because it encouraged experimentation and reduced fear of making mistakes.

Fig 9.
Square and round coasters in cork, with embroidery (Source: Authors).

Fig 10.
On the left, a placemat in embroidered leather; on the right, a table centerpiece in embroidered leather (Source: Authors).



In conclusion, in this paper, we highlighted how drawing and design can be used to promote accessibility in multiple ways. While we acknowledge the limitations of the small scale of this project, we share our experiences here as our contribution to ongoing conversations on how to best conduct similar social innovation initiatives in the future.

Acknowledgments

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