

Flows: How a group of people connects from information and emergencies to designing for communities. Reflections from an educational experience.

Flows: Como um grupo de pessoas se conecta de informações e emergências para projetar para comunidades. Reflexões de uma experiência educacional.

Flows: Cómo un grupo de personas conecta desde la información y las emergencias hasta el diseño para las comunidades. Reflexiones desde una experiencia educativa.

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Information Design, community, transdisciplinarity, generative conversation, educational experience

Today, how we interpret and present data is critical for learning. As technology advances, our learning systems must also embrace new processes to turn data into knowledge (Antonelli, 2021). In this context, Information Design (ID) is not an aesthetic endeavor but an essential component of educational frameworks, promoting intuitive and analytical understanding. At the same time, emergencies and communities constitute critical aspects to be addressed by design. This article explores the role of education in ID, highlighting the intrinsic relevance of a dynamic and collaborative design community, introducing two international experiences. When communities dialogue it can challenge our established notions.

Design de informação, comunidade, transdisciplinaridade, conversação generativa, experiência educacional.

Hoje, como interpretamos e apresentamos dados é crítico para o aprendizado. À medida que a tecnologia avança, nossos sistemas de aprendizado também devem adotar novos processos para transformar dados em conhecimento (Antonelli, 2021). Nesse contexto, o Design de Informação (DI) não é um esforço estético, mas um componente essencial de estruturas educacionais, promovendo compreensão intuitiva e analítica. Ao mesmo tempo, emergências e comunidades constituem aspectos críticos a serem abordados pelo design. Este artigo explora o papel da educação no DI, destacando a relevância intrínseca de uma comunidade de design dinâmica e colaborativa, apresentando duas experiências internacionais. Quando as comunidades dialogam, isso pode desafiar noções estabelecidas.

Diseño de información, comunidad, transdisciplinariedad, conversación generativa, experiencia educativa.

Hoy en día, la forma en que interpretamos y presentamos los datos es crucial para el aprendizaje. A medida que la tecnología avanza, nuestros sistemas de aprendizaje también deben adoptar nuevos procesos para convertir los datos en conocimiento (Antonelli, 2021). En este contexto, el Diseño de Información (DI) no es una tarea estética, sino un componente esencial de los marcos educativos, que promueve la comprensión intuitiva y analítica. Al mismo tiempo, las emergencias y las comunidades constituyen aspectos críticos que el diseño debe abordar. Este artículo explora el papel de la educación en el DI, destacando la relevancia intrínseca de una comunidad de diseño dinámica y colaborativa, y presentando dos experiencias internacionales. Cuando las comunidades dialogan pueden desafiar nociones establecidas.

1 Introduction

This paper develops an interchange experience expressed as a workshop and a later conference, conducted by two instances: Flows, 2024 and Flows 2, 2025. It presents how a community is being formed in its own ways to manage an emergency. Here, Information Design (ID) becomes a connector, with different origins going in different directions. It is not an aesthetic endeavor but an essential component of educational frameworks that promote intuitive and analytical understanding. We called our activity 'Flows', because it was originally conformed by two common thematic threads: Design for Visual Communication and Information Design, with a connection in the identity, cultural and territorial fields: Three aspects always dynamic, and adapting to new scenarios.

To conduct such a process, we apply the conceptual framework «See > Understand > Apply» (Allard et al 2014), in order to design information to explore and transform critical experiences. Specifically, this framework allows to create dialogue instances about experiences that transform critical insights into actionable visual communication proposals for participants. Therefore, this paper is also about how a community itself is formed in its own ways to manage emergencies. In this flow, a casual invitation involved an information designer and researcher to move from Chile to Sicily, Italy, to be part of a series of academic experiences driven by ID.

2 The Role of Information Design Education

Disaster Risk Reduction (DRR) and Disaster Risk Management (DRM) are theoretical frameworks for emergencies that are slowly changing the paradigm: from response to management. For instance, the Sendai Framework for DRR (2015) defines seven targets and four priorities for action, among them communicating and understanding risks (Doyle et al, 2022).

On the other hand, ID has been defined as a multidisciplinary field that embraces different topics related to effectiveness in communication applying visual methods, (Horn, 1999; Barrat & Walker 2005; idX, 2007; Allard, Briones et al 2014). ID can be also defined as the practice of presenting information in an accessible and effective manner (Ramirez, 2021). In the educational context, it goes beyond aesthetics, becoming a valid learning driver. Visualization, in particular, is not just an aesthetic tool but a transformative process that redefines learning experiences. As Drucker (2004) emphasizes, visualization should not be relegated to the presentation phase, after the work of analysis has been put into the content model, data

structure, or processing algorithm, but integrated into all data collection and analysis stages in order to enhance comprehension and retention.

Changing the paradigm from reaction towards management, orientates emergency as a challenging content. Then, visualizing information constitutes a medium for analysis and presenting problems, in order to engage into discussion and be approached as a project. Here, ID might be a key facilitator for safe actions (Ramírez, 2020). Both theoretical concepts constitute a central approach for the Flows concepts: To enhance the comprehension and management of emergencies, using frameworks such as DRM and ID. For example in the workshop, the DRM framework is used as a before – during – after timeline to represent different demands that involve a critical event to be addressed by ID.

In ID education, it is important to integrate contextual variables and user needs in order to teach students how to create visual pieces that embrace complexity, providing a clear path for understanding the nature of challenges they face as designers. Oversimplification can diminish educational value, whereas design-driven visualization encourages deeper engagement and understanding. Translating abstract data into meaningful visual forms requires observation, careful information analysis and an understanding of visual perception and communication principles. This aims to develop students' critical thinking and analytical skills.

3 The Concept and Importance of Design Communities

Constituting multiple communities in Design should be taken for granted, as the discipline deploys in many fields of practice. However, the question is whether designers should be merely problem-solvers. As Bonsiepe (2022) and Dubberly (2022) point out:

[We] use design to explore the degree of elasticity and tolerance within the current set of given sociopolitical and economic conditions [...]. How can design change society? Such a question obviously runs the risk of loading disproportionate expectations onto the shoulders of the discipline and thus of remaining limited to verbal declaration and manifestos (Bonsiepe, 2022, pp. 264-265).

The framing of design as problem-solving emerged with the industrial age; it has roots in mass production, which requires that plans be nearly perfect because mistakes are expensive [...] A final plan leads to a distorted view of the design process having an endpoint (Dubberly, 2022, p. 283).

We define a design community as a group of individuals who share a common interest in design, collaborate, support each other, exchange knowledge, and work together to generate changes (Antonelli, 2021). Education should actively promote this sense of community among

students and professionals. Group projects, collective critique sessions, and creating discussion and collaborative spaces are essential for fostering inclusivity.

In this “community-centered” approach, designers are enablers, facilitators, and resources, helping broader communities meet their design needs. This implies a shift in perspective for the designer, who is no longer solely a problem-solver but also a someone who develops new tools, systems, and methods for participatory design, transforming the designer’s role into a mediator. In this frame, Bonsiepe introduces the concept of Design Humanism defined as “the exercise of design activities in order to interpret the needs of social groups, and to develop viable emancipative proposals in the form of material and semiotic artifacts” (Bonsiepe, 2022).

Building and maintaining a design community presents challenges and opportunities. The proliferation of fake news and distorted opinions make it difficult to understand the actual state of our world and its many systems. An informed and critical design community can promote literacy and understanding in this context. Digital platform cooperatives, where participants own their platform, represent an interesting model for building more equitable and participatory online communities. In other words, these platforms directly belong to the community, where participants produce and consume values simultaneously. According to Drucker (2013): “the idea of a user-consumer is replaced by a maker-producer, a performer, whose performance changes the game.”

The next section will introduce two case studies in order to show how ID contributes to creating communities’ interaction.

4 Case studies

1. Flows Workshop, Information Design per le Emergenze

As shown, emergencies and information can constitute a critical matter for design. Emergencies involve critical experiences, both individual and collective. They usually generate large demands for information, which when escalated, also affect organizations, communication, and decision-making (van Manen et al, 2023). Emergencies require information tools for identifying risk, learning about hazards, mitigating disaster effects, managing recovery situations, among other situations. In this case, Flows becomes a workshop on ID for Emergencies developed in different directions.

The purpose is to observe, reflect, and act on the experience of communities in emergencies (Jaenichen et al, 2019). Therefore, a key is considering the emergency as an experience that might be designed to meet their information needs. Thus, such experiences constitute

challenges to be addressed through a visual information project, facilitating and making shareable, transferable experiences that participants bring to the workshop.

Participants were students from different levels (i.e. undergraduate and master - postgraduate) of the Dipartimento di Architettura, University of Palermo (DARCH - UNIPA). The first version (2024), was oriented to the topic of humanitarian emergencies, working together with Centro di Ateneo Migrare, a migration institute inside the UNIPA. In the 2025 version, after deciding to amplify the focus on climate emergencies, it included the eventual problem of water emergencies (i.e., rains, floods, and drought, among others).

The Flows workshop is composed of a sequence of five tasks:

1. Dialoguing about the Experience

Workshop participants start working with an experience map, developed as a component of the Design for Emergency initiative toolkit (d4emergency.org, 2023). Such a device facilitates approaching the topic through a team dialogue, starting with a conversation from individual experiences in an emergency. Then, different dimensions allow participants to complete the map observing problems and identifying challenges. Such tasks are conducted to define a context called a scenario, listing potential problems in emergency experiences to be addressed later in the design phase.

2. Defining users and contexts

After completing the discussion using the map, the teams define a context and user group, to address them in a visual communication project. Here, empathize with a specific group, identifying their needs and profiling them to include in their proposals. Also, they observe how they use information devices, such as maps, icons, and signs, to imagine their experience, working in a co-creative approach. Figure 1 illustrates such dialogue and definitions processes.

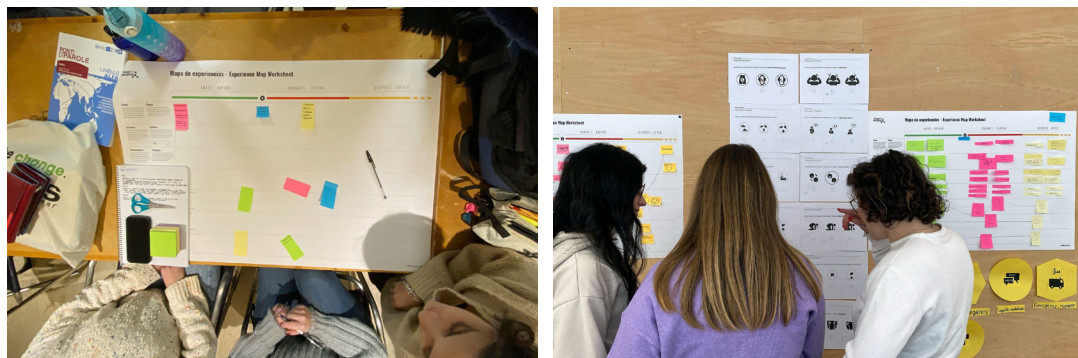


Figure 1: A creative dialogue for approaching emergency scenarios.

3. Exploring a visual approach: Developing graphic messages

The next step is oriented to explore graphic elements, using the Guemil Icons system (2020) as a base for developing and testing. Through a process that articulates contexts and needs, participants can connect their research with actionable visual proposals. ID principles contribute to informing and helping. Figure 2 illustrates the co-creative process.



Figure 2: Exploring a visual approach processes.

4. Developing support: A visual information device proposal.

Here, participants devise a solution that transforms the experience. In a traditional process of ideation, exploring, and prototyping such development becomes a visible, understandable, and applicable visual tool. In parallel to development, testing allows working with others. Here, testing methodologies from Guemil Icons are applied to conduct different evaluations of participants' proposals, following an internal and external collaborative process.

5. Presenting results: The exhibition

After participants have developed and tested their proposals during the final stage, the Flows workshop outcomes consider a product, service or experience proposal that contributes to transforming the emergency experience through Information Design. With such results, the exhibition constitutes a new instance of dialogue, in order to present results and the process. Other participants such as the Migrare Institute team or colleagues in the field, joined this instance to conduct a feedback process extending their future applications. Figure 2 shows the exhibition event in 2024.



Figure 2: Flows, Information Design per le Emergenze Exhibition (2024)

2. Design for/to/with/in/by/from/as Communities Conference

The next step for the Flows event was organizing a community event. During the second version this was shaped as a hybrid conference in February 2025. For the conversation generated in this event there are different perspectives to face the eventual challenges that emergencies pose. Such an experience is a demonstration of how Information Design can cover many different thematic territories.

After an internal brainstorming process, we called the event as Design for/to/with/in/by/from/as Communities, as an open space where every participant could talk in an open manner about their own experiences integrating design and communities, using ID principles to engage, create awareness and imagine how design can contribute.

Scholars and professionals from different backgrounds from Chile, Colombia, the USA, the Netherlands, Italy, and India shared a variety of topics that revealed the event's richness and high value. The experience has put a community closer: designers as practitioners, teachers interested in knowing more about ID, and students. All of them were exposed to topics that suggested how pivotal it is to revise the educational approach in the design field today, and how we must counter methods that have become empty trends and are not as inclusive and iterative as they are supposed to be.

Below, we list just a few raised thoughts that underline the limitations of these trends and other criticisms and analyze the relationships between design and community in educational, academic, and professional contexts. We organized them as questions for future discussions:

1. How can we define design?

"Design is an intentional act. We are shaping something. We are shaping the world around us. We are shaping how we or those we design for can interact with the world around us. That means design is also a political act. [...] What can I do to not impose my perspective? [...] Communities are not homogeneous. They never are." (van Manen, 2025).

2. What is the designer's role?

"Design needs to be different. [...] I realized that most of what I've been doing and designing was at this level which Manzini talks about being a place where change happens by regulation. And it's a large scale level. It's when we regulate things. And our role as designers oftentimes is to inform and persuade people to live by those changes, those regulations. I realized that didn't work right." (Carlson, 2025).

“ID allows anticipation by generating clear, understandable, and actionable messages. Also, ID principles can be integrated into Emergency Management, contributing to engage communities. This is an opportunity to mitigate critical experiences”. (Ramírez, 2025)

3. How can we counter bias and bridge the gap between communities?

“Usually, people consider data boring or very complex. Or maybe they consider data not related to them or irrelevant. So there is a huge gap between people, usually between common people and people who are enthusiastic about collecting and using data and can access and know how to use that data [...] The goal is to create a community that uses data and gives it to the community's leaders to trigger conversations”. (Duarte, 2025).

4. How can we think more and not less about leveraging AI?

“ID plays a key role in taking complex findings and making them accessible. Instead of replacing human observers with algorithms, the goal is to augment human capabilities by tracking and sharing human's reasoning processes. Students need to deeply understand the processes underlined by the AI algorithms and how to interpret their outcomes. The final goal is to slow down and not speed up our flows.” (Costa, 2025).

5. Are there alternative approaches?

“Design should respond to a crisis by imagining that I'm preparing for future challenges, and I use speculative design to question some paradigms and envision an alternative. [...] The world is in crisis, and design is in crisis too. Design is in the heart of the problem” (Allard, 2025)

“Instead of visualizing, we made data tangible through installation in public space. [...] People are invited to participate and facilitate a conversation in order to collect data that emerged during the conversation. It's interesting to notice that this kind of process no longer produces products in the fields of user experience and ID. These fields are blending together in a unique experience that obviously makes data relatable and what we would like to explore more is how to design the post experience.” (Moretti, 2025).

These excerpts underline the need for a continuous reshaping of curricula and community practices through conversation. Sparking conversations is a way to approach design not from the problem-solving frame (find the problem, fix it, and deliver a product), but from a perspective that helps provide alternatives to meet the “variety” and “diversity” of communities to maintain a constant dialogue. In this case, we talk about “generative conversations” (Dubberly, 2022). Generative conversations within the design community are essential for professional growth, knowledge sharing, and the advancement of the discipline. A community becomes a platform for collaboration, mutual support, and critical discourse; it can tackle complex challenges, promote accessibility and inclusion, and drive innovation responsibly and humanely.

5 Challenges and Future Directions

As has been presented, designing for emergencies constitutes an invitation to dialogue, through ID, deconstructing experiences, sharing common approaches (i.e. everyday living and living at risk), imagining their possible actions, defining steps and collaboratively strategies for future emergencies. Today, new designers might find areas to generate conversations within a community. The Flows experiences have brought new ways to understand the formation and practice of design.

A strong design community is not just beneficial, but essential for addressing complex and interconnected societal issues. The design community becomes a platform, virtual and real, for sharing knowledge and best practices, accelerating learning, and the evolution of the discipline and of the community for whom it is designing. Participating in the community requires being literate in both emergencies and design.

We usually refer to literacy as the ability to read and write. However, literacy goes beyond these competencies. According to UNESCO definition:

“Literacy is the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society.”

As this definition suggests, literacy involves several competencies that require transdisciplinarity as a powerful means of knowledge building and exchange. Data science and algorithmic analysis are shaping today's societies. Therefore, creative professionals, media researchers, and humanists must acquire scientific data literacy to understand the fundamental principles of data analysis, machine learning, and predictive analytics.

Transdisciplinarity is necessary because it combines these multiple disciplines to define a new generative context for producing collaborative conversations. As an interchangeable concept, Flows allowed participants involved to raise new research questions, developing an experience that generates also an experiential knowledge.

Design, if understood not just as style but as a process of change, has the potential and power to generate significant social change. Thus, design communities can act as catalysts for this change, addressing socially relevant issues for the future. Such experiences spark new questions: How can a community problem be addressed efficiently and effectively? How to deal with cultural differences? How to raise awareness? How to transfer messages into actions?

How to facilitate containment without replacing professional assistance? and How to approach special needs by Information Design?

6 Conclusion

ID education, practicing and working with communities can afford many approaches and cover multiple scenarios. It becomes paramount in training people to interpret the vast data that characterizes our era. As has been presented, the idea of Flowing is an interchangeable concept that becomes ubiquitous, and applicable to different needs and challenges. Mainly, generating the chance to develop new ways to understand the formative role of design in an international scope. Integrating humanistic principles and technical skills, fostering critical thinking and deep understanding is an important factor for expanding collaboration.

The future of design learning and practice promises to be one in which information is not merely absorbed or extracted but actively shaped by learners, professionals and participants within a collaborative context. Through rigorous ID education and active engagement in dynamic design communities, we can forge pathways to knowledge that are as limitless as the information we explore, contributing to a more informed, creative, and profoundly human future.

Going for more answers to questions such as: Might be a Design for Territories and Design for Emergencies a Design with Communities? This is a potential challenge for co-constructing future knowledge. All these constitute ongoing projects that may change and adapt their orientations. New topics to come, introduce, for example, emergency management experience creating ID projects for travelling or displacement.

A gathering in presence, specifically the conference might help to create a new organ of dialogue in a global context.

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