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# Dematerialized meeting places and digital design for interaction and participation

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## ABSTRACT

Websites can be places of virtual interaction, the materials they are made of are digital but like physical places they must meet specific requirements in order to be used by communities of users. This contribution describes a design experience conducted by a group of young designers as part of a dissertation in Communication Design and summarizes how the new generations of web visual designers use design elements to create inclusive digital places and respond to the needs of interaction and participation.

**Keywords:** Webdesign · Community · Interaction and participation · Digital design · Accessibility

## INTRODUCTION

A website is a communication tool for an enterprise or an institution that aims at users with a diversified profile and with inhomogeneous digital skills. In the context of webdesign for public utility communication, when the main objective is not to realize a promotional showcase, the website becomes the virtual place for providing services and information. For this reason it must have some characteristics matching those of physical places: it must be easy to find, it must comply with accessibility criteria for all and allow users to feel at ease by giving them the certainty of receiving correct information. Users need to feel they are in a safe area while using a "digital place". For example the website of a museum or a university, like a physical place, needs to meet inclusion and sustainability criteria, it must be smart, flexible, adaptable, renewable and with features allowing energy saving. Even if dematerialized, the objects that make up a website must follow the rules of the real world in order to be understood and used without an instruction booklet. Visual design adapts to the laws of perception, and calibrates the elements of the design pattern, colors and font families on the principles of fruition for all users. Designers identify valuable design strategies based on inclusion criteria. This contribution describes a design experience conducted by a group of young designers as part of a dissertation in Communication Design. You'll be shown a summary of how the new generations of visual designers for the web can use two fundamental elements of design: digital materials and valuable strategies (Bottà, 2018), in order to achieve accessibility and inclusion objectives and allow the website to be easily recognized and remembered as a place to meet each other, learn, evaluate or compare information.

## DEMATERIALIZED MEETING PLACES

The subject is social design and services for community through visual design for website development. In particular we're analyzing the university department websites. For these types of institutions websites are used not only to provide services but also for multi-level communication, as they also have extremely diversified users. The many existing examples constitute a large set of case studies useful for understanding the state of the art. Students were asked to perform the analysis of the department website of their degree course both from the technical point of view, about the front-end development, and from the UX design point of view (J. Pasquini et al., 2018). They carried out the reconstruction of the project through a reverse engineering operation, by drawing the wireframes, the blueprint of a webdesign product with structure, information hierarchy, controls, and content (Saffer, 2007), and identifying the elements of the design pattern, which are a way of documenting a common solution to a design problem (UxPin 2015). At the same time they conducted a survey on the stakeholders and on the types of users to whom the site is aimed. If man is increasingly plural, thanks to technologies, this does not mean that this condition involves the spontaneous birth of a greater sense of collectivity as a direct

cause (Zannoni 2018). Can the virtual interaction space made available by a website be transformed into a place where virtual communities identify and meet? The main problem at the center of the student's analysis is not the way the existing site appears or planning its renovation, but understanding whether a generic university website can respond to three main needs: be a place for meeting and participation, be the place of disambiguation, be an accessible place.

### **Meeting and participation**

Among the users of a departmental website we find future students and students enrolled in various degree courses. One of the main problems identified by the analysis is the difficulty for new students to integrate into the university environment and to feel free to ask for advice or explanations from those with more experience. It is important for all students to have spaces for collaboration to organize themselves in laboratory activities and to share updates and information, to have easy access to information on their academic career, on bureaucratic steps, on obligations, on opportunities. And it is important to project outwards in order to be known and build contacts with the world of work. The spaces for virtual interaction that perform these functions are limited to notices and news on the web portals, the online system for accessing one's school career and booking exams. It is mainly information structured according to a logic that proceeds from top to bottom, providing the decisions of the department of which students are informed. The demand from users, also given the familiarity with messaging and social tools, is instead increasingly attracted to collaboration within homogeneous groups and online communities, the links between students of the same degree program and the interactions with the different types of university users, seem to approach the concept of a new idea of community suitable for a fluid and connected environment (Manzini 2018). The space offered by the communities is perceived as a safe place, where one can be listened and in turn can help depending on their skills. Within closed groups, I feel at ease and can interact, participate, be listened. The community, as a homogeneous group interacting online, lets everyone be on the same level and allows interaction based on clear rules.

### **Disambiguation**

Browsing websites is useful for research topics of interest but can lead to an overload of information. It involves all kinds of information (Wurman, 2001) regardless of whether it is conveyed by an online newspaper, by a site that offers professional services or by social media. This is a condition that also applies to information relating to degree courses and the activities of university departments, conveyed by the respective websites. In the orientation phase, future students must build their university career and choose a path. One of the main problems for students and their parents is being able to understand the contents and objectives of the multiple degree courses offered, in the same sector, by different institutions. Users have to invest a lot of time in reading websites and guides, participating in open days, finding out about

quality reports and ministerial rankings. The technical language used in the descriptions can be hostile, the training objectives and professional figures can have multiple nuances even within the same disciplinary sector. The consequence is the sense of frustration and inadequacy, the fear of making wrong choices, the impression of not having understood differences and opportunities. Universities currently tend to use social media as a vehicle for build their brand reputation (Massarotto, 2012) using a more informal language, and referring to the official website for further institutional information. Within the social networks, texts with less technicalities are used, the training objectives or the peculiarities of a path are presented with interviews with former students, or by choosing visuals, keywords and claims. Shortcuts and catchy phrases are used, applying the rules of commercial promotion of a generic product to what is instead a learning path for those who must learn how the university works and choose their own course of study. Users ask the web for a sequence of information, from the simplest to the most detailed. The ability to have an access point and follow a direction towards understanding through content that is clearly implemented. A website that structures its contents with these characteristics is more reliable, favors returning users and loyalty.

## **Accessibility**

The Italian legislation for the accessibility of institutional websites is particularly detailed and requires compliance with the Web Content Accessibility Guidelines (WCAG 2021). The main rules for the accessibility of websites are part of the checks carried out by students in the analysis phase and constitute a fundamental element of the website project. The quality of accessibility in the interaction and the value of sensory perception depends on various aspects such as, for example, the use of color, the font system, the geometric shapes used in the elements of interaction, significant sequences, videos, feedback, feedforwards, two-way forms of interaction such as filling in forms and entering data. The stakeholders of a university website are also teachers, researchers and the local area. The research is mainly collected in online catalogs that are difficult to consult and intended for professionals. The dissemination of knowledge is entrusted to scientific publications and conferences and only minimally uses the web as a resource. The same can be said for relations with companies and organizations which mainly organize dedicated events and meetings in order to collaborate with the research network. The dissemination of research and the relationship with companies are aspects that must find the right place in the online communication tools. The current method of searching for information and contacts suggests that a more intensive use of the web tool is necessary to obtain greater openness to the territory and to communicate the results of the research in order to position the university within a wider network, highlighting the characterizing and distinctive elements and encouraging interaction. With this objective, the weight of the accessibility issue is shifted from being a basic element to use the site to being a value strategy that makes researchers and companies autonomous in managing part of the content, with dedicated sections that can be implemented independently and

safely with clear rules and without the intervention of a webmaster. The website becomes a work and cooperation tool.

## ELEMENTS OF DIGITAL DESIGN

The university or department website must respond to cross-cutting needs. It must work for the orientation of future students, for the dissemination of research, for the placement of graduates. As a public administration site, it must safely perform administrative and bureaucratic tasks. The legal criteria regulate issues such as legal advertising, the processing of personal data, transparency, privacy, public communication as well as, as already mentioned, accessibility. How difficult it is to make all these functions converge is demonstrated for example by the fact that only one university in Italy, Università degli studi di Cagliari (<https://www.unica.it/unica/>), has adopted the design guidelines for public administration web services designed by the Agenzia per l'Italia Digitale. The Agency for Digital Italy is the technical agency of the Presidency of the Council which has the task of guaranteeing the achievement of the objectives of the Italian Digital Agenda and contributing to the spread of the use of information and communication technologies, promoting innovation and economic growth (AgID 2021). The working method followed by the students of the last year of the three-year design course in the communication design laboratory (University of G. d'Annunzio, Department of Architecture, Degree course in Design, AA 2020-2021, Media and Experience Design course) consists of three main phases. A first phase is the understanding of the context, in particular each student has been assigned the analysis (unfolding, wire-framing, elements of the interaction design, UX strategy) of two websites of a university department chosen from a given list, in addition to the website of the degree course where they are enrolled. Limited to the website of the department of their course of study, the students highlighted the stakeholders and identified the types of users through the construction of “personas” in order to represent their needs, objectives, aspirations, difficulties and frustrations. Subsequently they developed a design concept based on possible value strategies suitable for implementing functionalities on the site and responding to the identified criticalities (moodboard, ux strategy, visual design). In the last phase they focused on the content, on how to develop the project by elaborating the elements of the design pattern and the visual and interaction aspects (UI style guide). The two basic elements with which they have worked are in synthesis:

-digital materials, that is the design pattern used to build wireframe and visual layout

-valuable strategies, that is objectives, actions and content characterizing the website and generating valuable user experience.

They used both elements following the criteria of disambiguation, the creation of meeting and participation places and accessibility understood both as compliance with certain technical requirements and as a flexible tool to convey specific contents. Many design project proposals for new departmental website have identified valuable strategies to facilitate meeting and participation, suggesting the implementation of dedicated forums which allow students to interact, ask for information and advice

(see Figure 1). The user experience to which we refer is given by the social network “Reddit-Dive into anything, a network of communities where people can dive into their interests”: thus controlled by the community but useful for publishing content with the possibility of vertical deepening. Other strategies had as their focal point the activation of a university radio focused on the pole but networked with other university radios present in Italy.

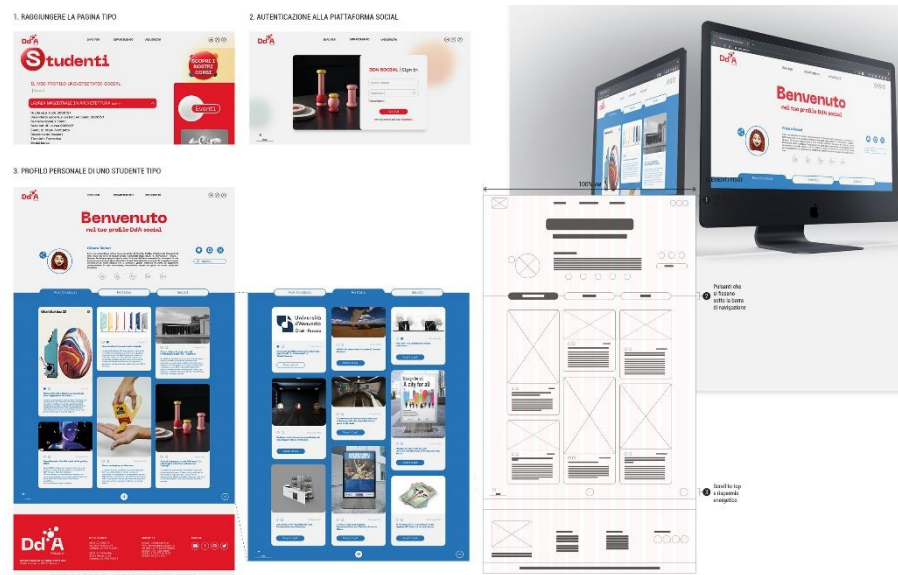


Fig. 1. Chiara Borsci: Evolution of the Department of Architecture website. A social platform to connect students, teachers and businesses.

Other strategies have focused on the aspect of disambiguation, proposing websites with step-by-step learning paths, organized with the criterion of way-finding inspired by the way subway networks are represented. Other proposals have provided for the chat activation with navigation assistance function, thinking of them not as a chat-bot based on the most frequently asked questions but as a visual element that discreetly accompanies you during the visit of the website, with contextual information according to the content portion the user is positioned on (see Figure 2). In other project proposals the students have hypothesized the creation of orientation paths for the choice of degree courses through aptitude tests that trace a first profile and then return the different nuances and possibilities through a personal orientation interview.

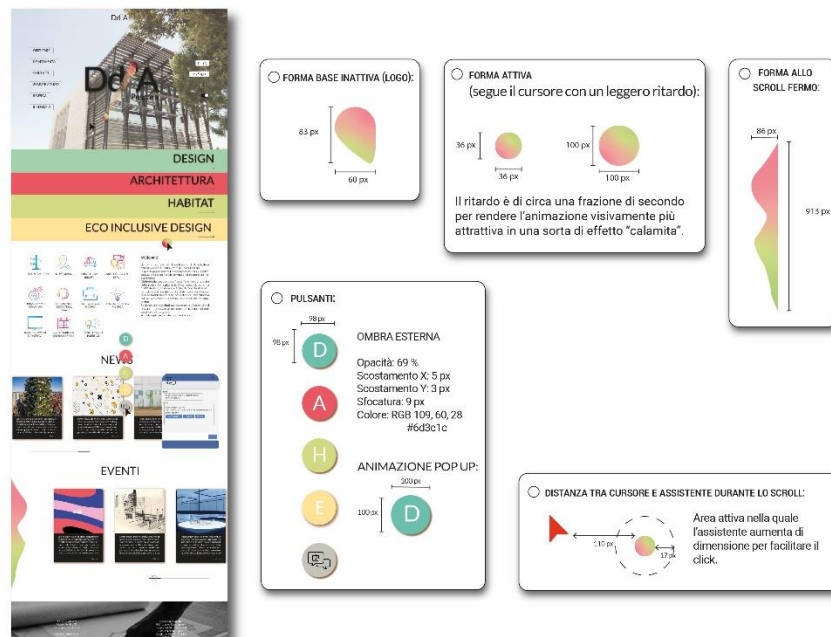


Fig. 2. Gaia Cimorelli Belfiore: UX design for the website of the DdA-Pescara: study of the graphic interface for the virtual assistant.

As for the accessibility criterion, as mentioned, two paths have been taken: some students have decided to dedicate the design study to the theme of accessibility for all types of users (Linee Guida sull'Accessibilità, 2021), studying particular aspects of visual design and interaction for users with disabilities. In this case, the valuable strategy was made to coincide with the technical solution. For example, the use of low-contrast color or the use of diversified feedback to emphasize the elements of interaction or even the use of highly readable fonts, become predominant visual elements. To make a parallel with the elements of accessibility for physical places, we could think, for example, of a ramp necessary to overcome a difference in height. We know that it can be placed next to a staircase in a more or less elegant way, but we also know that the ramp can become an architectural element and characterize the entire building. Similarly, the individual elements of the design for accessibility can be silently present in a more or less effective way and be structured in the UI style guide or be clearly visible and characterize the visual layout of the site itself.

The second method identified by the students was to let closed groups of users, communities, manage some contents independently, such as the possibility for recent graduates to manage their own portfolio online, the possibility for institutions or companies to have a showcase space within the website (see Figure 3), the possibility for university researchers to manage the communication of research products through



periodic bulletins (online magazine) or through crossroads that help users navigate among the search results by means of keywords and filters.

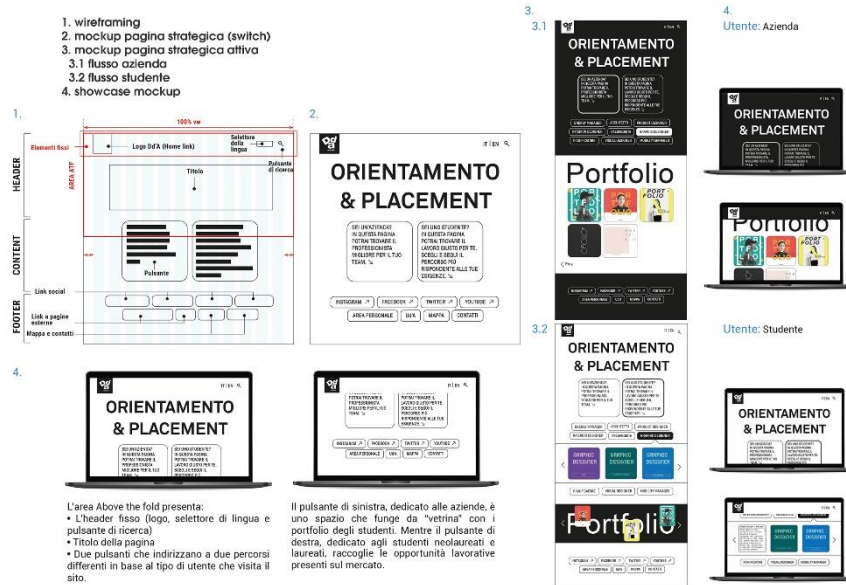


Fig. 3. Federica Iezzi: Students and companies meet. The DdA website as an interface for building a network. Thesis in design A.A. 20-21, tutor: R. Massaccesi

## CONCLUSIONS: DIGITAL DESIGN AND USER COMMUNITIES

In order to make a more performing website serving the communities it is addressed to, the first step is to understand which the communities are and how they are characterized. Designing for communities means designing not to meet the needs of individual users but to allow groups of users to interact. The place of interaction, even if virtual, must be accessible and protected. The design of a website can include areas of activity that allow groups of individuals, animated by a common purpose, to interact. The Diagram (see Figure 4) highlights some potential communities as identified by the studies conducted on the website of Department of Architecture in Pescara. The workflow involves the identification of user communities and meeting and participation criteria, the disambiguation of information by providing learning paths and the use and management of content and interfaces on the basis of accessibility principles.

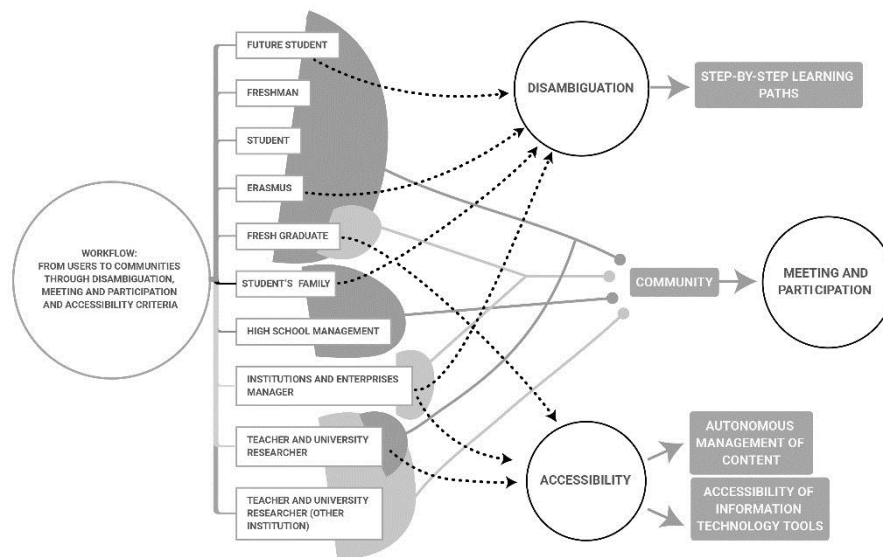


Fig. 4. workflow: from users to the community through criteria of disambiguation, meeting and participation and accessibility.

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