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Design and craftsmanship

A reflection on the value of local heritage and the transmission of knowledge

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Abstract

This paper examines key conceptual and practical approaches that have historically defined, and continue to shape, the relationship between design and craftsmanship in the Italian context. It highlights the interplay between design, production processes and innovation capacity, not only in relation to the product itself but also in terms of its connection to the territories from which it originates. The study then addresses the challenge of transmitting saper fare (know-how) and considers how this heritage can evolve, not only in response to new technologies but above all in relation to emerging social and environmental needs. Finally, it presents an educational research project conducted within two undergraduate programmes, in which students engaged with the production systems of two distinct yet comparable regions, both of which use natural plant fibres as their primary raw material.

Introduction

The affective object in the development of the design process between craftsmanship and industry

The specificity of contemporary Italian design lies in its historical and cultural roots, grounded in a strong connection with manufacturing and craft traditions. Among the figures who have interpreted the transformations of design from both productive and cultural perspectives, Ettore Sottsass stands out for emphasising the foundational role of the crafted object within Italian design culture. Sottsass (2002) argues that a large part of Italian design draws inspiration from the handmade object, understood as the result of widespread technical and cultural knowledge deeply rooted in local contexts. In this view, craft practices do not represent a marginal alternative to design; rather, they constitute one of its fundamental matrices, as they embody values of care, expertise and affective meaning associated with craftsmanship. Particularly emblematic is his observation that, from the 1930s onwards, it is difficult to identify an Italian designer who has not, at least implicitly, referred to the image of a handcrafted object “made with love,” intended for everyday use.

This perspective highlights several structural elements of Italian design culture. On the one hand, it emphasises the centrality of the functional object as a means of improving individual and collective quality of life. On the other, it recognises the symbolic and affective value of objects, which acquire cultural and identity-related significance.

This culture has been regarded as a form of heritage on which to develop industrial production projects with a strong innovative component. Artisanal production practices were considered to be in the process of being superseded, in anticipation of a transformation of production structures that, in reality, never fully occurred.

A form of mediation nevertheless emerged between design for industry and design for artisanal enterprises. This mediation took the form of incremental rather than radical innovation, finding continuity within existing processes and contributing to their gradual evolution. It was expressed through a sensitive interpretation of environmental, social and territorial needs linked to places of production.

Although this approach has at times been interpreted negatively (Maldonado, 2008), it can now be reassessed as a form of "gentle transformation", capable of gradually accompanying the transition of Italian society from an agricultural to an urban-industrial model. In this sense, design products played an interpretative and adaptive role, updating pre-existing objects of use, particularly in the field of furniture, rather than inventing entirely new ones. This design attitude preserved the connection between objects and localised forms of knowledge, fostering greater accessibility and intelligibility for users (Crawford, 2010).

Today, the relationship between design and craft engages a significant part of design culture, taking on characteristics that differ from those of the past. It is no longer understood merely as a form of historical legacy, but rather as a set of processes capable of generating pathways of productive and social innovation (Rawsthorn, 2025). In this regard, the Craft Hub project has emphasised the potential contributions of craft practices, and the values of craftsmanship they embody, to improving people's quality of life.

Craft practices and the transmission of knowledge

The Italian craft landscape is structured around two main matrices. The first is rural, based on the transformation of natural resources with low economic value, while the second is urban and more closely connected to complex mechanical processes and the working of high-value materials. With the rise of industry, particularly in the post-war period, urban craft found new fields of action, contributing significantly to the development of prototypes, tooling and the final stages of serial production. In this context, as noted by Stefano Micelli (2011), hybrid figures such as "translator artisans" or "adaptive artisans" emerged, capable of adding value to otherwise standardised objects by integrating technical expertise with design.

From the 1980s onward, profound social and economic transformations progressively weakened the transmission of knowledge linked to manufacturing, particularly that associated with agricultural production. Against this backdrop of discontinuity, Enzo Mari, in the introduction to the catalogue of the exhibition *Dov'è l'artigiano?* (Florence, 1981), proposes a relational interpretation of the figures involved in production, emphasising that their interactions cannot be rigidly reduced to a single model but instead take shape in a fluid and multifaceted manner (Mari, 1981).

Recent definitions within the field of design suggest that the differences between designing for craft and designing for industry lie less in technical aspects than in a set of contents and competencies that form part of the designer's educational and cultural background. Such competencies cannot be limited to theoretical knowledge alone, but must also include practical skills rooted in experience and direct engagement.

The progressive loss of knowledge and competencies connected to craft culture, particularly those of agricultural origin, has often been perceived as an inevitable consequence of economic development and of the improvement of social conditions that characterised the post-war period. However, this loss has had profound implications for the transmission of technical and manual knowledge.

A substantial distinction between rural and urban craft lies in their different modes of knowledge transmission. As early as the late nineteenth century, professional education centres had developed within the urban and industrial context, complementing traditional forms of learning that took place in workshops, laboratories, and craft studios. These schools, whether technical or artistic in orientation and characterised by a strong applied focus, provided essential support for the transmission and evolution of craft knowledge.

By contrast, in Italy, craft culture of agricultural origin did not undergo a structured renewal of intergenerational transmission models, as occurred in other European contexts such as France (Jacquet, 2020). Even today, where the transmission of this knowledge persists, it takes place primarily through informal practices. The issue of transmitting manual knowledge, and its connection to local contexts, has been repeatedly highlighted in both academic and professional discourse. In this sense, Ugo La Pietra (2018) critically observes that design schools in Italy, from architecture to design, have long tended to prioritise an education centred on the "philosophy of design", while neglecting the "culture of making." According to La Pietra, it is essential for educational institutions to position themselves in an active relationship with local resources, especially when addressing teaching in the fields of craft and the arts.

This distinction is also useful for analysing the current position of design in relation to craft and education. In Italy, this relationship has been explored through initial field investigations, which reveal several significant patterns. Generations born between the First and Second World Wars possessed basic material skills. Although these did not amount to full artisanal mastery, such proto-artisanal competencies, referring to forms of physical knowledge (Roberts, 2020), derived from direct engagement with materials and everyday practices. From early childhood, both family and school contributed to the formation of this knowledge, which showed little variation between urban and rural contexts (Trivellin et al.,

2021). This constituted a body of tacit and embodied knowledge, rarely articulated in theoretical terms yet deeply rooted in practice.

From the post-war period onward, these basic material competencies progressively declined, particularly among younger generations. More recently, however, a renewed interest in such forms of knowledge has emerged, not as a professional pathway but as an element of cultural and identity formation. This interest represents an opportunity to rethink educational trajectories in relation to the evolving needs of younger generations and the territorial contexts in which they live (Follesa, 2021).

In light of these reflections, two fundamental issues emerge today that require particular attention. These concern the transformation of the relationship between design and craft and the education of new designers in relation to material and immaterial heritages that are often marginalised or at risk of disappearance. These two dimensions constitute priority areas for research and intervention, within a responsible, culturally aware and territorially grounded approach to design.

Within this framework, it becomes crucial to question the current role of design and the meaning of innovation in the context of practices and products that, in some cases, have remained formally unchanged for centuries. The central issue concerns the very nature of innovation itself, and how design can generate value within material and cultural systems deeply rooted in tradition. What margins of transformation can be identified without compromising the historical coherence and sustainability of craft heritage? The urgency of these questions points to the need for a methodological rethinking of design practice, oriented not towards rupture but towards a conscious and regenerative valorisation of tradition.

To address these issues, an initial analytical phase was undertaken, structured around three areas of investigation. This was followed by a phase of transfer and validation within an educational context, aimed at identifying the specific characteristics of design teaching when oriented towards industrial production as opposed to artisanal production.

The research areas

The valorisation of territorial contexts and knowledge of material culture

From a theoretical perspective, it is essential to reflect on how the discipline of design adapts to different productive contexts, whether industrial or artisanal in nature. Within the Italian landscape, the relationship between design and craft takes shape as a both enduring and continuously evolving. In recent decades, this interaction has intensified through

numerous initiatives aimed at strengthening collaborative practices between designers and artisans, with the goal of systematising approaches and operational models.

Contemporary discourse indicated a growing interest in Italian craftsmanship, as evidenced by institutional actors such as the Cologni Foundation, which promotes cultural and scientific projects in support of master crafts. Among its most significant initiatives are *Doppia Firma*, which brings together the work of designers and artisans, and *Wellmade*, a digital platform dedicated to the discovery and promotion of excellence in craftsmanship. Events such as *Homo Faber* in Venice and *Artigianato e Palazzo* in Florence further contribute to the dissemination and legitimation of the value of artisanal making.

This growing valorization raises crucial questions about the future of territories, conceived as dynamic and transformative entities in which communities continuously redefine relationships and values (Wenger, 1998).

In a context marked by globalisation and the increasing homogenisation of productive processes and cultural meanings, it is necessary to question which model of local economy can reconcile material production with the construction of identity (De Giorgi et al., 2008).

The case of Murano artistic glass production in Venice offers an emblematic example of how a material heritage can progressively lose its meaning and identity value. Factors such as rising costs, generational crisis, the lack of cooperative strategies and the proliferation of counterfeit products have reduced Murano's historic excellence to a form of production that is now largely touristic and commercial.

Within this perspective, design is called upon to contribute to processes of cultural and productive regeneration, as suggested by Carullo and Labalestra (2019), through a relational system in which innovation in meaning reanimates the cultural traces of popular civilisations by grafting them onto contemporary languages.

Beyond this, it is necessary to reflect on the meaning that the concept of tradition can continue to hold. From anthropology, tradition and innovation are not regarded as opposing categories. In this sense, it is useful to refer to Gérard Lenclud's essay, which defines tradition in relation to the present. Tradition appears as the product of a filtering action of the past that acquires significance in the present. It can thus be understood as a process of recognising lineage or authorship (Lenclud, 2015).

This perspective calls for the development of new design and educational approaches capable of engaging with local material culture through a systemic vision that encompasses not only the artefact itself, but also the socio-territorial relationships it activates (Gaiardo et

al., 2022). Such reflections are particularly relevant within educational contexts, as they point to the need to update tools and methods for training future generations of designers.

Environmental and social sustainability

The early decades of the twenty-first century have been marked by a growing awareness of the unsustainability of the economic, social and cultural models that developed during the second half of the twentieth century. The capitalist paradigm, increasingly oriented towards finance and less attentive to issues of production and labour, has generated widening inequalities, despite technological and scientific advances.

Globalisation, while facilitating market expansion and the interconnection of information networks, has also exposed the environmental, social and economic limits of this form of development. As Marc Augé (2020) emphasises, globalisation today entails a planetary awareness of the fragilities of our system, bringing to the fore the idea of a planetary "community of destiny" (Morin, 2000).

This new collective consciousness, further reinforced by the effects of the COVID-19 pandemic, has generated renewed attention to development models grounded in environmental sustainability, social justice, and the valorisation of territorial specificities. Within this framework, inner areas and local production systems have been rediscovered as fundamental resources for both public policy and academic research in the field of design.

Within a design approach oriented towards sustainability and territorial regeneration, local materials play a crucial role, as they are directly connected to craft knowledge and material culture. However, many territories have experienced the gradual disappearance of parts of their heritage over time, as a result of environmental transformations, market dynamics and global economic logics.

Emblematic examples include the disappearance of marsh plants due to land reclamation practices; the importation of materials such as weaving straw, formerly widely available locally; the marginalisation of indigenous wool in favour of foreign products more closely aligned with fashion market demands; and the replacement of natural materials such as willow, rush, or *Typha* with synthetic fibres, often sourced from abroad.

As noted above, at the European level the notion of integrated development has become established, grounded in the active role of local actors and in participatory approaches that valorise territorial specificities. Within this scenario, design projects aimed at enhancing local resources must be conceived as relational and inclusive devices, capable of engaging diverse stakeholders operating at multiple levels and pursuing different objectives (Villari, 2012).

Regenerating craft production and promoting the use of indigenous materials does not merely constitute an aesthetic or productive practice, but rather a strategic act oriented towards the construction of an equitable, sustainable and culturally rooted future. As Magnaghi (2000) argues, territory is a “work of art” generated by the encounter between nature and culture; it is therefore the responsibility of design to recognise its value and to contribute actively to its regeneration.

Field of application: interactions between rural craft, material culture and design practices

Among the most widespread non-professional practices, often deeply rooted in territorial contexts, are textile and weaving practices. These forms of knowledge are concrete and materially grounded, capable of defining the identity of a place. One of the central methodological premises of this research lies in recognising weaving and textile-making as both a formal and conceptual paradigm for design practice. These practices allow for the direct exploration of principles such as order, measure, orientation and repetition, which are foundational to design. In particular, weaving enables a coherent transition from the two-dimensional plane to three-dimensional construction, representing a practice in which form, function and process are literally intertwined (see Gombrich, 2000; Semper, 1992).

Historically, these techniques have contributed to the formation of territorial identities through diverse craft and technical practices. The variety of usable plant species and the multiple modes of processing have generated a wide range of local cultural expressions, establishing fibre-based know-how as a structural element of material culture in many regions of the world.

Although this form of craftsmanship has a clearly rural origin, in many cases the working of vegetal fibres gave rise to articulated and widely distributed productive systems, capable of activating complex supply chains involving not only specialised enterprises but also extensive networks of domestic workers. Historically, these systems integrated all phases of the supply chain within the same territory, from plant cultivation and raw material harvesting to material processing and the production of semi-finished and finished artefacts.

This configuration reveals a form of craftsmanship that, as early as the late nineteenth century, shared structural characteristics with the emerging industrial system in terms of work organisation and product functionality, while maintaining its territorial and manual specificity. It is therefore a form of craftsmanship that remains extraneous to the logic of the artistic object understood as an end in itself. Production is oriented towards utility and the fulfilment of concrete needs, characterised by a functional and sober aesthetic.

One of the distinctive features of Italian craftsmanship lies in its strong functional vocation. Weaving is never an act devoid of purpose, and even when employed for expressive or artistic ends, the boundaries between use and aesthetic research remain clearly defined and recognisable. This relationship between aesthetics and function can be observed in an experimental project (Fig. 1) developed by the design studio FaberHama. As the designers explain, “wicker weaving and decorated ceramic surfaces involve different materials and processes, through which tradition is reinterpreted as a field of identification, engaging with diversity and promoting innovation".

Figure 1

Experimental project “&Ability”. (Credits: Project Faberhama. Photos Alessandro Guerriero)



This approach is also confirmed by a critical reading of major events dedicated to craftsmanship, such as the Mostra Internazionale dell’Artigianato in Florence, which reached its eighty-ninth edition in 2025. On these occasions, the functional dimension of objects tends to prevail over formal or experimental research, reflecting a design tradition oriented towards practical use.

Further testimony comes from the young artisan Martina Nocentini, who, after learning vegetal weaving techniques in France, returned to Italy to continue her practice. Nocentini observes that, although in other European countries the craft sector is more structured from

an organisational standpoint, Italian artisans maintain a clear focus on objects of use, distinguishing themselves from approaches more oriented toward artistic experimentation (interview with the author, 26 April 2025, MIDA, Mostra Internazionale dell'Artigianato).

Teaching method and the transfer of research into educational practice

Within a pedagogical framework oriented toward the design of an artisanal artefact, an exploratory, experiential, pragmatic, concrete and participatory approach proves not only preferable but almost indispensable. Given that the students involved initially lacked both familiarity with, and specific manual skills related to, the selected natural materials, as well as the technical expertise and mastery characteristic of experienced artisans, it became clear that the educational pathway could not be limited to a purely theoretical elaboration of the project. It was therefore necessary to complement cognitive activities of analysis, conceptualisation and design with operative moments of direct interaction with materials and production processes. This integration aimed to foster a form of embodied and practical understanding characteristic of learning within craft practices. From this perspective, "thinking through making" emerges as a dialogic and dynamic process between reflection and action, marked by a rhythmic alternation between the formulation of solutions and the emergence of new problems (Sennett, 2013; Ingold, 2013).

In designing the laboratory activities, a methodological framework inspired by theories of experiential learning was adopted. In particular, reference was made to the approach theorised in the early decades of the twentieth century by the American educator John Dewey (1916), who, within the tradition of progressive education, promoted the principle of learning by doing, recognising "making" as a privileged channel for the acquisition of knowledge and skills through an inductive process grounded in operative reality. However, rather than adopting an instrumental view of action, experience is understood here as an ordering and foundational element of the logical structure of learning (Reggio, 2014; Montessori, 1999; Focillon, 1943). This conception is effectively articulated by Patrick Geddes, who summarised the stages of the educational process through the three Hs, namely Heart, referring to emotion and wonder towards matter as the starting point of learning, Hand, the development of practical skills through making and exercise, and Head, the reflective dimension focused on theory and abstract knowledge (Geddes, 1919).

Among active teaching methodologies, Inquiry-Based Learning (IBL), a learning model centred on investigation and discovery, was adopted. This approach, promoted at the European level by the *Rocard Report* (2007), aims to foster students' active participation in the construction of knowledge

by encouraging learning through experimentation, critical thinking and problem-solving. More specifically, the structure of the educational activities was developed in accordance with the guidelines of the Teaching and Learning Centre of the University of Genoa (UTLC, 2022), which is distinguished by its commitment to educational innovation and faculty development.

The methodological framework adopted summarises the overall organisation of IBL activities, which are based on investigation and an exploratory approach. The level of complexity of the proposed inquiry varies according to the degree of autonomy granted to students in defining problems, analytical methods and potential solutions (Table 1).

Table 1 *Methodological framework for the organisation of IBL activities.*

TYPE OF INVESTIGATION	CONFIRMATION INQUIRY	STRUCTURED INQUIRY	GUIDED INQUIRY	OPEN/PROJECT BASED INQUIRY
	> > > INCREASING COMPLEXITY > > >			
RESEARCH QUESTIONS	DEFINED	DEFINED	DEFINED	STRUCTURED BY STUDENTS
PROCEDURE OR METHOD	DEFINED	DEFINED	DEFINED	DESIGNED BY STUDENTS
RESULT OR SOLUTION	DEFINED	DEFINED	INVESTIGATED	INVESTIGATED BY STUDENTS

The IBL learning methodology is not univocal and can be adapted to the specific educational context in which it is applied. The instructional model selected to organise the teaching activities is the 5E model, comprising Engage, Explore, Explain, Elaborate and Evaluate, which represents a progressive learning cycle supporting the active and reflective construction of knowledge (Bybee et al., 1990) (Table 2).

Table 2

The 5E educational model and the phases implemented in both courses.

CYCLICAL	EVALUATION	FORMATIVE FEEDBACK and self-assessment sessions
PHASE 4	ELABORATION	ACTIVE EXPERIMENTATION with newly acquired knowledge skills
PHASE 3	EXPLANATION	CRITICAL DISCASSION of acquired knowledge and skills and definition of a shared framework
PHASE 2	EXPLORATION	EXPERIMENTAL PHASE of manipulation and application of acquired knowledge
PHASE 1	ENGAGEMENT	OBSERVATION AND INVESTIGATION: history, materials, craft techniques, types of products, etc.

Figure 2

Eco-museum of Bassa Romagna displaying historical craft products made from local marsh grasses.



Figure 3

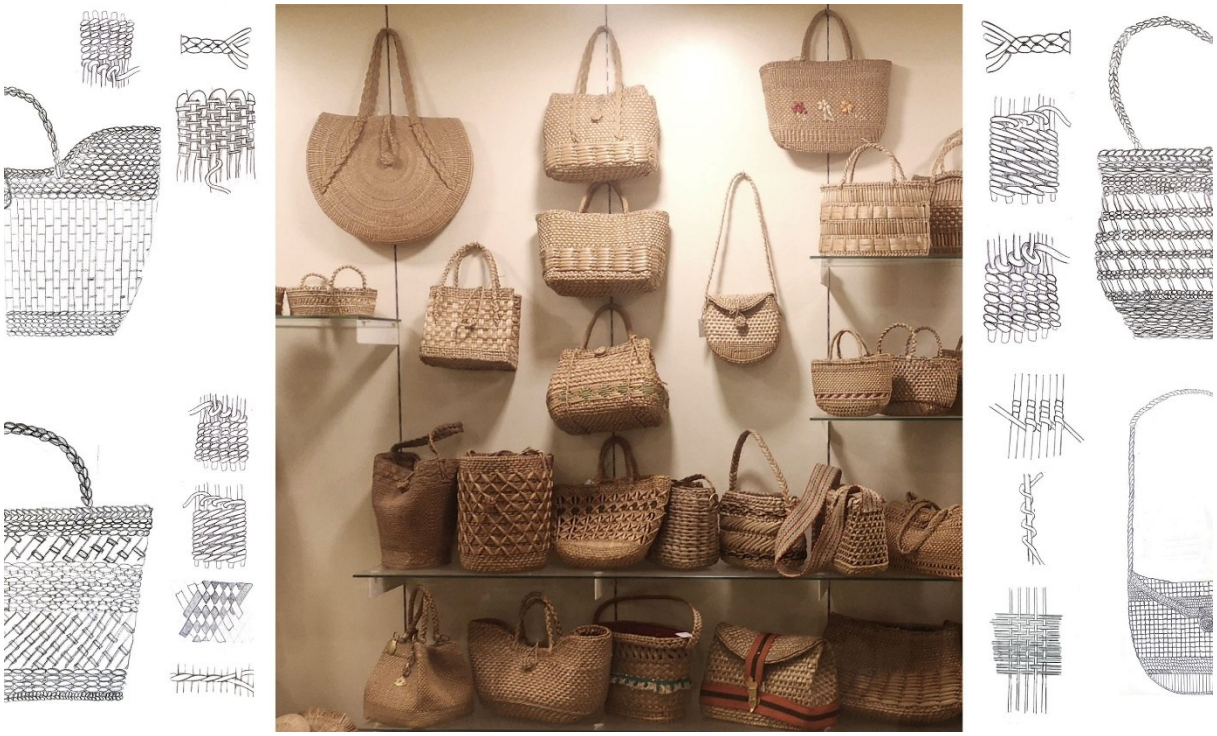
Signa Civic Straw Museum, Florence. (Credits: Project Salvatore Spataro. Photos Max Lisi).



As suggested by the IBL methodology, the work was organised in a laboratory-based format. Students were divided into groups, and activities alternated between presentations and lectures, and group work involving both manual and design tasks. These activities were carried out either independently or under the supervision of faculty, and included moments of self-assessment by the students.

Figure 4

Graphic transcriptions of woven structures.



The two design studios within the degree programmes at the University of Ferrara and the University of San Marino focused on two historically distinct areas, each characterised by an artisanal tradition closely connected to specific natural fibres native to the region (Brignoni et al., 2024). The wetlands north of the city of Ravenna, known as Bassa Romagna, historically supported a flourishing artisanal production based on marsh plants and hemp. Today, this heritage is preserved and valorised through an eco-museum dedicated to these themes (Fig. 2).

The area of Signa, located west of Florence and also known as the “city of straw”, historically developed as an artisanal production district specialising in straw, particularly in the manufacture of straw hats. Here too, a museum preserves products and machinery related to this traditional craft (Fig. 3).

Although focused on different fields, the two laboratories worked in close collaboration through shared online meetings, jointly discussing all phases of the research and visiting the reference sites relevant to their respective projects.

The analysis, initially documented through graphic representations (Fig. 4), was followed by a phase in which students manually experimented with the observed techniques, producing woven samples using materials similar to the traditional ones (Fig. 5). This activity fostered a

concrete understanding of the techniques and supported design experimentation, enabling students to translate acquired skills into original concepts, in which traditional materials, forms and techniques were reinterpreted within contemporary contexts of use (Fig. 6).

Figure 5

Acquisition of artisanal techniques and understanding of the properties and interweaving potential of selected materials.



Figure 6

Design concepts for everyday objects.



The design process was structured around three main trajectories, namely the relationship between local context and traditional knowledge, the valorisation of material culture connected to specific territories, and principles of environmental sustainability and the circular economy.

With regard to the local context and proximity, the educational framework was conceived to emphasise the territorial dimension as a space for direct investigation. The approach combined desk-based methodologies with in situ observation, interviews with knowledge holders and material analyses of artefacts. Weaving and interlacing practices using non-spun vegetal materials, widely diffused in the Bassa Romagna area and the Po Delta, are closely linked to the material culture of rural civilisation. A survey of regional ethnographic

museums was conducted, leading to the selection of a single reference ecomuseum in order to ensure analytical coherence and consistency in didactic comparison.

With regard to the second trajectory, namely the valorisation of material culture connected to territories of belonging, the laboratory activities also provided an opportunity to reinterpret and enhance a marginalised productive tradition that has progressively declined as a result of agricultural industrialisation. More specifically, significant historical documents (De Mori, 1931; Formenti, 1915) were consulted, attesting to an early interest in the processing of so-called minor fibres and offering a basis for contemporary design reinterpretations. The artefacts under investigation, including containers, baskets, hats, and footwear, were selected for their functional relevance, particularly in relation to themes of transport and containment.

Finally, attention to materials prioritised the use of spontaneous vegetal resources, characterised by rapid growth cycles and low-impact transformation processes. Unlike wood or textile fibres, these materials are embedded in simplified craft supply chains, offering new design opportunities in terms of application and dissemination, albeit with reduced durability. The possibility of activating local micro-supply chains was explored, capable of producing objects with low technical complexity but with a high potential impact on circular economy practices and patterns of use.

For these reasons, the final prototyping phase should be regarded not merely as a design exercise, but as a critical moment for validating the knowledge and principles acquired throughout the process. Through the realisation of artefacts, it was possible to consolidate the centrality of learning through making, reflect on traditional production processes and explore their design reinterpretation. The final proposals focused on material transformation, technical innovation, formal research and the functional redefinition of objects, in coherence with the design sensibilities and interests expressed by the students.

Educational experience at the University of San Marino

The second studio experience aimed to explore the innovative potential within the artisanal production chain dedicated to hats made from spirally sewn straw braid. The focus of the project was not on the finished product itself, but on a critical examination of the semi-finished material, namely the straw braid, considered as a material and morphological unit to be manipulated, restructured and reimagined from a design perspective.

The traditional process of hat production involves the creation of flat, continuous braided straw ribbons, which are then sewn in a spiral to generate a surface that grows radially, allowing the formation of the three-dimensional volume of the hat (Fig. 7).

Figure 7

Straw braid and hat-making process.



After a phase of manual shaping and steam humidification, the form is stabilised through pressing in heated male-female moulds. Due to the intrinsic fragility of the material, this process has never been fully automated, thus preserving a strong artisanal dimension. Today, the braid often imported from Asia, is machine-sewn, but the construction of the hat remains largely similar to the historical method.

Within the studio context, attention focused on the design potential of the braid, considered as a base material for new formal, typological and technical experiments, beyond its canonical use in hat-making. Students were engaged in an inductive and iterative educational pathway that explored new methods of manipulating and aggregating the braid, from alternative surface configurations to the generation of complex three-dimensional volumes. The initial phase introduced key content and production references, supported by collaboration with the artisanal company Grevi Mode (active since 1875 in the Signa district), which provided a practical overview of techniques and processes.

This theoretical introduction was followed by an initial manual activity in which students were asked to reproduce various types of weaving, intentionally unrelated to hat-making, in order to facilitate a first material and design-oriented approach. The subsequent experimental phases were organised with increasing levels of complexity, leading students to explore the formal and spatial possibilities of the straw braid, first as a manipulable planar material and then as a three-dimensional constructive element. Each exercise was followed by collective moments of evaluation and critical discussion.

The main experiments included the following:

- First inquiry: exploration of new planar assembly geometries, alternative to the traditional spiral arrangement (Fig. 8).

- Second inquiry: development of three-dimensional textures in the plane through aggregated modules or continuous braid paths (Fig. 8).

- Third inquiry: design and creation of complex three-dimensional volumes using the braid exclusively as a construction material (Fig. 8).

These activities enabled students to acquire both manual and critical skills, essential for understanding the limitations and potential of the material and for approaching the subsequent design phase with greater awareness. The final stage of the studio represented a moment of design synthesis, in which the acquired skills were translated into the creation of new functional objects. Students were asked to imagine and develop new types of artefacts within the macro-categories of containment and transporting, critically reinterpreting the use of the straw braid (Fig. 9).

Figure 8

From left to right, part of the experimentation on two-dimensional textures, three-dimensional textures and volumetric compositions.



Figure 9

Design concepts for everyday objects.



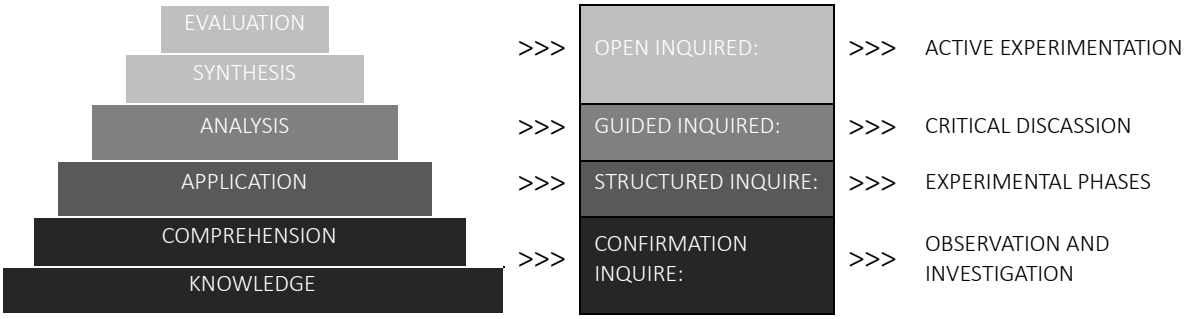
Theoretical and applied outcomes of the two educational experiences

The educational pathway in both courses was structured to allow for progressive deepening through the assignment of guiding themes for the exploration of new compositional possibilities, with exploratory inquiries of increasing complexity conducted independently. The design outcomes demonstrated a solid technical and linguistic awareness, confirming the validity of a teaching approach based on experimentation, active learning and the centrality of doing as a knowledge-generating process.

By combining the types of inquiry inherent to IBL activities (Table 1) with Benjamin Bloom's taxonomy of educational objectives (Bloom, 1956) (Table 3), it shows that in both courses teaching activities progress from guided to open inquiries, enabling students to move progressively through Bloom's taxonomy. This progression allows them to acquire the necessary skills and knowledge, including the manual and practical abilities typical of artisanal making, and ultimately reach the final stage of the studio and independently design new types of functional objects.

Table 3

Types of inquiry in relation to Bloom´s taxonomy of educational objectives.



The two educational experiences focused on territorial contexts that, in the past, gave rise to significant craft productions involving entire local communities and established an active relationship with the resources of their respective territories, as advocated by Ugo La Pietra (2018). The work carried out in the two courses made it possible to initiate a dialogue with these contexts and, through renewed interpretations, to indirectly rethink the territories themselves as a form of "design of the territory" (Parente and Sedini, 2017), understood as a dynamic and transformative entity in which communities continuously redefine relationships and values (Wenger, 1998).

The synergy created among natural materials, artisanal production chains, local communities and design inevitably opened up the issue of relocalisation, understood as a strategy based on the territory, or more precisely on the conception of local reality as a field of interaction

among social actors, the physical environment and local heritage (Latouche, 2008). Local communities, can be understood as a useful paradigm for responding to the need to relocalise production, contributing to the creation of networks of competencies aimed at identifying strategic local supply chains, an environment especially conducive to the development of design-oriented actions and policies focused on rediscovering and fostering material cultures and craft traditions (De Giorgi & Coraglia, 2019).

Indeed, over recent decades, and in support of national policies, the concept of integrated development has become firmly established within European cohesion policies. This approach places the territory at the centre of action strategies, focusing on the safeguarding of environmental heritage and the needs and identities of local communities.

Beyond exploring a pedagogical approach oriented towards a “culture of artisanal making”, the two experiences also highlighted the social and environmental dimensions of economic development. By engaging in the safeguarding of local heritage and resources, they underscored the impact of design activities on communities and territorial contexts. Such a model of local development, attentive to the preservation of specificities and the conservation of complexity, can be pursued through “acts of territorialisation that promote a non-destructive use of resources, enabling the continuous production and reproduction of local identities and the ongoing attribution of new values and meanings to the milieu as the basis for the reproduction of the local system” (Governa, 1997).

Conclusion

Analysis of the evolution of the definitions of the design discipline from its origins to the present reveals a progressive expansion of the contexts in which design is applied. This extension has had significant repercussions in the field of education, where an increasingly interdisciplinary dialogue is required, particularly with knowledge from other fields.

For a long time, craftsmanship was primarily considered an operational tool, functional to broader production processes rather than as a specific area of design. Today, this view is outdated. The shift of design attention from industrial to artisanal production implies the need for close engagement with disciplines such as ethnology, history, anthropology and sociology, which are essential for understanding and valorising the cultural and social contexts in which design practices take place.

At the same time, engagement with new forms of craftsmanship requires a critical revision of the concept of tradition, which can no longer be understood in opposition to innovation. In this regard, the contribution of Gérard Lenclud (1987) is particularly relevant, as he

proposes a relational reading of tradition grounded in the present, overcoming historically entrenched dichotomies.

From a general perspective, the various dimensions of the physicality of design constitute a fundamental element in the transmission of knowledge within artisanal design. This physicality is manifested both in the selection and processing of materials, which carry territorial values and promote circular economic models, and in the use of the “intelligence of the hands”, understood as an expression of tacit and operational knowledge.

The renewed interest in craftsmanship has also contributed to overcoming the historic dichotomy between artisanal and industrial production models. Just as the coexistence of serial production and unique pieces is now widely acknowledged, a similar reconciliation may be envisaged between the material dimension inherent to artisanal and manufacturing design and the tendency towards dematerialisation typical of large sectors of industrial design. These approaches, far from being irreconcilable, can interact productively, generating reciprocal contaminations without necessarily privileging the industrial model.

In a context where knowledge transmission processes are rapidly evolving, the educational objective is to identify and communicate elements that retain significant relevance. This perspective has guided our work to date, and we believe it represents a meaningful contribution to the education of students.

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