

Craft Design Collaboration: Exploring a Locally Inspired Motif for the Tasikmalaya Embroidery

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How to cite: Martono, J., Puspita, E. A., & Batik, I. R. (2025). Craft Design Collaboration: Exploring a Locally Inspired Motif for the Tasikmalaya Embroidery. *Gorga : Jurnal Seni Rupa*, 14 (1), 60-68 . <https://dx.doi.org/10.24114/gr.v14i1.64493>

Article History : Received: January 11, 2024. Revised: March 10, 2025. Accepted: June 30, 2025

ABSTRACT

Traditional crafts are important for exposing regional identity. Lack of originality in the way crafts represent regional characteristics will expose them to imitation, trap them in a competitive market, and eventually threaten their sustainability in a creative economy. Consumer trends are certainly important for traditional craft growth, but so is the intangible dimension, which is typically shaped by economic, cultural, and technological factors. The potential economic value of culture-based enterprises is revealed by attempts to commercialize the distinctive intangible creativity, just like in creative industries, by highlighting the distinctiveness of locale. The purpose of this study was to explore the creative potentials that show the distinctiveness of the local Tasikmalayan embroidery craft. Since designers are taught to consider collective factors while making design decisions, design intervention is required for this endeavor. Thus, Tung's craft and design collaboration model will be used for the research, which encourages Tasikmalayan embroidery designers and craftsmen to work together from the beginning to the end. A team of designers will work together with Gallery Kiwari, a Tasikmalayan embroidery craft MSME, to create new embroidery craft motifs that promote local identity. Although the research yielded two prototypes that reflected the location and the character of the artisans, the collaborative method also gave the craftsmen opportunities to learn and create designs that supported local richness. Through the experience, it is anticipated that the craftsmen will be able to develop their future original ideas and elevate the variety of embroidery crafts that symbolize the local value of Tasikmalaya.

KEYWORDS

Craft
Design
Locally-inspired
Traditional
Tasikmalaya embroidery

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INTRODUCTION

One of the sectors with the most economic growth in Indonesia is the craft sector, which employs 97% of the country's workers and contributes up to 61% of GDP (Hidranto, 2024). The growth of the craft industry activity in Indonesia is expected because nearly every Indonesian region has unique traditional crafts that reflect the circumstances of local communities and their surroundings, such as resources, cultural history, intellectualism, and local wisdom, (Sudana & Mohamad, 2023). In terms of tradition, traditional crafts show holistic thought, specifically the information that has been passed down from one generation to the next about the environment and nature, as well as the particular socioeconomic circumstances of a community group in a region (Zbucnea, 2022). Traditional crafts were also recognized by the UNESCO Convention of 2003 in Paris as an intangible cultural property that not only demonstrates the diversity of creativity but also fosters intercultural tolerance (Nic Craith et al., 2018). Additionally, traditional crafts are claimed to

be significant in fostering sustainability, which also appears to make them a distinctive medium that reveals community identity and represents the relationship between history, culture, tradition, and the environment (Brown & Vacca, 2022). Given that it create revenue streams for local communities and raise awareness of traditional cultural values, crafts that exhibit regional identity are crucial to a region's sustainable development particularly in preserving environmental and social harmony, (Bellver et al., 2023).

One area in Indonesia's West Java province that is rich in different kinds of craft industries is Tasikmalaya, which has 2,032 craft business units in the form of Micro, Small, and Medium Enterprises (MSMEs) (Dumamika et al., 2023). One trade that has long flourished in Tasikmalaya and is most well-known for dominating the region's craft industry today is embroidery (Darusman, 2016). The general public tends to be interested in Tasikmalaya embroidery crafts due to their reasonable costs and the range of embroidery motif designs that are easy to incorporate into different fashion items, such as geometric and naturalistic motifs; which are the outcome of Chinese cultural acculturation (Bastaman & Fadliani, 2020). Nevertheless, it was discovered that numerous motifs of Tasikmalaya embroidery crafts lacked a unique symbolic value since they were typically created to just convey shifts in customer preferences (Loita & Husen, 2018). The insignificant creativity in expressing local characteristics in Tasikmalaya embroidery crafts will make the industry susceptible to duplication, trapped in competition for economic value, and ultimately threaten the sustainability of the cultural value of Tasikmalaya embroidery crafts, even though adjustments to consumer tastes are undoubtedly necessary. In addition, general variables such as the development of multicultural culture, combined with specific factors, such as new idea to respond to market changes, can also influence the shifting of people's attitudes and allegiance to this craft culture (Nero et al., 2019)

In a economic development, creativity is a key factor because a product's original concept of creativity can give it a competitive edge, specifically the non-material dimension, which is formed from considerations of economic, cultural, technological, and scientific aspects (Woolley et al., 2015). As with creative industries, attempts to monetize unique creativity also give rise to the potential economic worth of culture-based industries, by expressing creative cultural values (Throsby, 2000 & Woolley et al., 2015). As a result, in the modern globalized world, locally inspired crafts must exhibit distinct inventiveness in order to compete. The development of the craft business requires optimization efforts to respond to changes in consumer interest trends, despite the fact that traditional crafts have been shown to offer a number of positive potentials. By pursuing creative potential that may convey the distinctiveness of the Tasikmalaya region and culture, the Tasikmalaya embroidery crafts enterprises—increase its competitiveness.

The unique character that distinguishes the local is one significant and essential element that makes traditional craft valuable in the face of globalization. Through the use of digital technology, Putri et al. (2024) demonstrated in "Transformation of East Kalimantan Batik into Ready-to-Wear Fashion with Augmented Reality for Creative Economy," how traditional crafts can become more competitive by using augmented reality in order to draw in younger clients. It is worth noted in his research, the traditional batik craft already captures the distinctiveness and quirks of the East Kalimantan region, underscoring the need to create new batik crafts in order to maintain the local way of life in the modern, globalized world. Zukhrufa et al. (2024) research, Exploring Java-China Fusion in Interior Design of Beauty Spa and Wellness Senopati, also demonstrated how the tangible components of Javanese design communicate intangible aspects of Javanese culture. Its social, cultural, and economic facets demonstrate the traditional community's worth and justify its preservation to contemporary society. Thus the cultural heritage is combined with modern culture to enhance the user's cultural experience. It acts as an example of cross-cultural communication and encourages worldwide cultural connectivity. Additionally, Anisa & Bahri (2024) hope to revive Dayak jewelry crafts, which have been supplanted by jewelry in the current style. "Designing Enggang Bungas Jewelry as a Cultural Expression of the Dayaknese in Kalimantan" discusses how to rejuvenate Dayak jewelry with a modern touch in order to preserve the tradition, since it is a decorative craft that embodies the distinctive nature and traditions of Kalimantan. Moreover, In Development of Motifs: Designing the *Barapan Kebo* Motif in *Kre Alang*, Deni & Abdurrozaq (2024) presents motifs that depict local culture. He claims that creating designs that highlight the

distinctiveness of Sumba's culture and geography, such as *barapan kebo*, is one method to revitalize traditional crafts, particularly the *Kre Alang* woven cloth that is owned by the Sumba people. It is evident from earlier studies that the intangible values are what make traditional craft so special. By fusing local content with contemporary components such as trends or digital technology, these four studies aim to strengthen the competitiveness of traditional crafts in the face of contemporary advancements. All of the crafts in the research, however, obviously contain unique local content that we wish to continue expressing to the wider community.

However, Tasikmalaya embroidery crafts do not yet have this unique local content since the creation of motifs is a result of customer demand. To support the sustainability of Tasikmalaya embroidery crafts and boost their competitiveness in the current global era, this research aims to explore motifs inspired by local content and explore creative potential that communicates the uniqueness of the Tasikmalaya. Optimizing the capacity of Tasikmalayan embroidered craft MSMEs is the aim of this study. Design interventions are used in all traditional craft development programs, as demonstrated by the four examples of related research previously discussed. Design intervention is necessary for optimization efforts, as designers are typically trained to process collective aspects in design decisions to generate solutions (Broadley & Mcara, 2013). Collaborating design and crafts can empower local artisans and provide them with new, beneficial possibilities to acquire design skills, in addition to yielding innovative solutions (Nitsche & Zheng, 2018). Therefore, the process of examining the creative potential of Tasikmalaya embroidery crafts will be conducted out through collaboration on designs and crafts based on Tung (2012) collaboration model; encouraging Tasikmalayan embroidery craftsmen and designers to collaborate and create new innovations. One such innovation is the exploration of Tasikmalaya embroidery craft motifs that aligned with the local identity and the craftsmen's character. As an illustration of a case study, this research works with a group of designers with an academic background in design and one MSME of Tasikmalayan embroidery craft, Kiwari Gallery. The production method will combine the skills of craftsmen in material processing to create a variety of embroidery designs, utilizing designers' advantages to uncover potential elements and challenges in creating new motifs that embody Tasikmalaya. It is anticipated that this research will generate examples of output, particularly motifs for embroidery crafts, that convey regional peculiarities based on the craft and design collaboration. It is also envisaged that this practice-based research will have a number of advantages, including enhancing Tasikmalayan embroidery craftsmen's ability to convey local features and expanding designers' understanding of creation processes based on local expertise.

METHOD

In order to improve the capacities of Tasikmalaya embroidery craft MSMEs, the goal of this practice-based study is to identify the creative potential of motifs that convey the uniqueness of the Tasikmalaya region and culture. The inquiry method will create regionally inspired themes through three stages—the fuzzy front-end stage, the design development process, and the shared experience and knowledge—by utilizing Tung's design and craft collaboration model. A group of designers with academic backgrounds from the Institute Technology Bandung (ITB), Faculty of Fine Arts and Design, as well as one MSME that produces Tasikmalaya embroidery, the Gallery Kiwari in Cihideung Tasikmalaya, will also be involved in this six-month collaborative process, namely from 23 July 2024 to 23 November 2024.

The collaborative craft and design model of Tung (2012) was inspired by co-creation concept of Sanders & Stappers (2008) which specifies a design creation process based on collective creativity. Sanders and Stappers (2008) argued that collective creativity, which is generated through the involvement of all actors affected by design decisions, is able to provide solutions to complex challenges. Inspired by the co-creation idea, Tung (2012) developed a craft and design collaboration model to produce output that is not only innovative for designers but also appropriate to the conditions of the local communities involved.

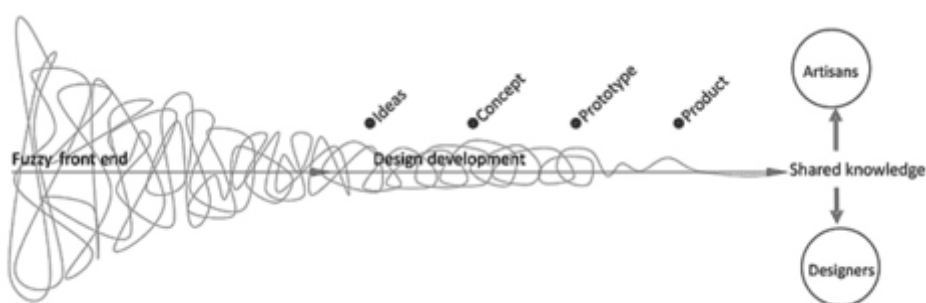


Figure 1. Craft and Design Collaboration Inspired by Sanders & Stappers (2008), (Source: Tung, 2012)

Referring to Figure 1., Tung (2012) explained that the involvement of the actors begins in the initial stage and continues to the final stage, namely:

The fuzzy front-end stage involves introducing each craftsman's and designer's conditions in order to research and determine local conditions, material properties, craft production methods, application products, and the craftsmen's objectives and interests. To reduce disparities in practice or concept exploration, this first stage—which is often complex—is necessary to establish a shared understanding between the two parties.

The design development process is a collaborative effort between craftspeople and designers. Each participant collaborates to decide on the design concept's course and execute prototyping. Given the iterative nature of this design development process, designers and craftsmen will frequently interact, assess one another, and offer suggestions. This procedure is broken down into two primary phases: the primary concept exploration phase, which is supported by a conversation and sketching phase. The next step is prototyping, which is the process of bringing concepts to life and showcasing the final product. Prototypes allow designers and craftsmen communicate and assess each other, which makes the prototyping phase of the design development process crucial.

Shared experience and knowledge is a stage that reveals the significance of teamwork. In addition to creating innovative products, the collaboration offers designers and craftspeople beneficial possibilities for learning. The craftsmen's perspective on design advancements and how to adapt to the target market's diversity is made possible by this collaborative approach. In the meantime, the design team, who also serve as supports for the growth of craftsmen, enhances their design knowledge with local resources, culture, and wisdom—all of which are typically only accessible through direct communication with local cultural preservers.

RESULT AND DISCUSSION

1. Fuzzy Front-end stage

The fuzzy front-end stage indicates the state of the Gallery Kiwari MSME, which employs ten craftsmen divided into three categories of expertise: experts in embroidering letters and basic shapes, experts in embroidering naturalistic floral motifs, and experts in making embroidery with any shapes. Although most of the employees are skilled craftsmen, Kiwari Gallery can also create wearable product, which are made in partnership with regional tailors. These craftspeople are skilled at creating goods, but they are limited in their ability to create original themes or apparel designs. Additionally, Gallery Kiwari uses a wide variety of fabric materials, from polyester to natural fabrics, and all of the threads are polyester. All of the thread and fabric materials are imported goods that may be found in Bandung or Tasikmalaya. The design team responded to this by researching the characteristics of the different materials used by Gallery Kiwari as well as the many kinds of embroidery that the gallery processes, including filled, full graded, and embossed embroidery.



Figure 2. Embroidery Crafts of Gallery Kiwari, (Source: Authors, 2024)

Figure 2. shows that Gallery Kiwari was also able to create unusual needlework, including popular wayang and animal designs, which were used on apparel and accessories for women between the ages of 25 and 45 who were of reproductive age. Gallery Kiwari caters to two distinct demographics of female customers: office-working ladies and older women from the hijab community. Tasikmalaya embroidery crafts, which historically adhere closely to Muslim standards—namely, avoiding figurative themes and targeting Muslim fashion items for both men and women—have undergone a transition, as evidenced by the crafts produced. The designer's response to these circumstances provided insight into the variety of target market types, both in terms of demographics and psychographics, as well as the range of shifts in consumer interest in the Gallery Kiwari. In addition, designers and craftsmen talk about the impact of color composition and color attributes to user experiences and preferences.



Figure 3. Discussion Process of Designer and Gallery Kiwari, (Source: Authors, 2024)

2. Design Development Process

All actors involved, including MSME Galery Kiwari and the design team, decided that naturalist themes inspired by local endemics were motifs that should be further investigated because most customers found them to be attractive. Moreover, it is envisaged that naturalist motifs will be easily incorporated into a variety of semi-formal everyday women's attire, age range 25-35 years old, including both working women who love practicality and the hijab community who love romantic appearance. The Tasikmalaya region is developing the cultivation of kecombrang plants as a raw material for healthy drinks, and kecombrang plants are a typical spice of the popular traditional Tasikmalaya food, namely *rujak honje*. For these reasons, the motif chosen to represent local conditions is inspired by traditional plants like kecombrang, which is known as *honje* in the local language. Additionally, the Gallery Kiwari MSME requires an alternative material initiative as well as the utilization of fabric waste and thread leftover from the ever-increasing production of garments and embroidery crafts. In response to these diverse factors, the design team suggested a number of trend-shifting themes that might appeal to today's target audience (see Qurated: Trend Forecast SS 2025). One such theme is Etheral, which showcases processed collage materials with delicate hues and multisensory textures. In this regards, the kecombrang inspired motif is further developed to respond the Etheral trend by utilizing the fabric and thread waste. The design development discussion process is made simpler by common designer creation tools including moodboards, reference studies,

and sketches as seen in Figure 4.



Figure 4. Design Development Process, (Source: Authors, 2024)



Figure 5. Discussion-Design Development Process, (Source: Authors, 2024)

Designers and craftsmen must constantly communicate with one another to share ideas and assess each other's work because the design development process must be iterative. Following the creation of concept ideas and designs, the craftsmen start the exploration phase to bring the design concepts to life, whether they take the shape of motifs or explore the recycled materials. Realizing the shape of a kecombrang-inspired pattern was the first step in the investigation, which then moved on to investigating the processing of fabric and thread waste. Ultimately, the final prototype will incorporate the motif and the processed material. Referring to Figure 6. it is evident that at this point, the exploration process is carried out through repeated trial and error, even modifying the design multiple times to accommodate the craftsmen's capabilities, until the desired shape is eventually achieved and incorporated into the final product design.



Figure 6. Prototyping- Design Development Process, (Source: Authors, 2024)

It is possible for designers and craftsmen to disagree during the prototyping process. A design plan can be agreed upon by all parties, but the actualization process usually presents a number of technical difficulties, such as unexpected material properties, a lack of technical abilities. The

Craftsmen struggle to execute manufacturing procedures they have never utilized before, particularly when processing embroidery on repurposed scrap fabric. The designer responds to technical limitations and attainment goals by adjusting the design plan accordingly. Figure 7. shows that two different kinds of prototypes—the organized and the organic abstract motifs—are being created for Tasikmalaya embroidery crafts that are inspired by the native kecombrang plant. The two types of prototypes serve to illustrate the processing technique that might be applied in various scenarios, such as the need for design functions and the availability of scrap materials. Additionally, Figure 8. is designer's representation of how the new motif design that the craftsmen have agreed upon would be implemented in response to trend and the target market character.

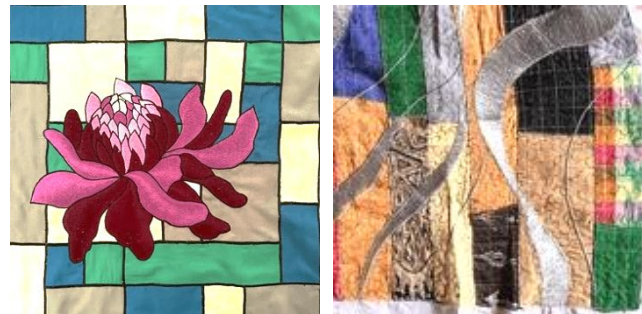


Figure 7 . Prototype of Embroidery Motifs Inspired by Tasikmalaya Kecombrang, (Source: Authors, 2024)

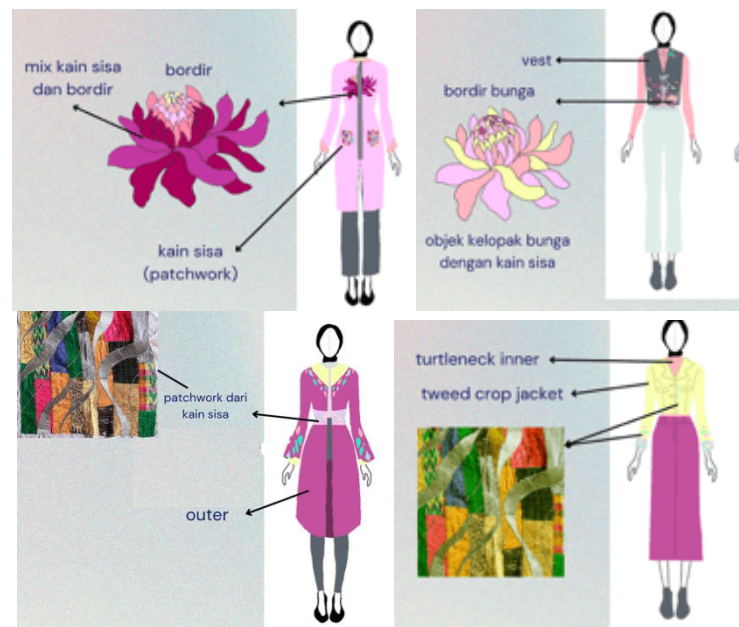


Figure 8 . Product Design Illustrations, (Source: Authors, 2024)

3. Shared Experience and Knowledge

The practice of collaboration provides learning chances that improve the capabilities of both designers or craftsmen. It is evident from the collaborative craft and design approach used in this study that the craftsmen developed an ability to generate concepts of creations that were influenced by the circumstance. Through constant dialogue with designers, the craftsmen are aware that certain elements, such as color choice, shape, and execution, must be taken into account while producing motifs. Moreover, craftsmen are becoming more aware of the variety of consumer personalities and the shifts in consumer trends and preferences. In contrast to Tasikmalaya embroidery products, which frequently use embroidery motifs at the edge of clothing designs, the product design depicted in Figure 8. demonstrates the improvement of the craftsmen's design sense by accepting the idea to apply the embroidery creation dynamically to represent the personality of the target consumer. In addition,

the ability of the craftsmen to create new embroidered designs is being tested, even when it comes to processing strange motif shapes and materials made from their production's waste.

In the meantime, designers have the opportunity to learn more about local richness, especially by researching traditional craft industry that are connected to local populations. Incorporating craftsmen skills into the development process is another experience that designers acquire. Despite the numerous disagreements and difficulties in reaching a shared understanding, collaboration between craft and design gives designers the chance to broaden the scope of their expertise, which was previously limited to product creation and now serves as a catalyst for the advancement of craftsmen's abilities. According to the outcomes of this creative project, design and craft collaboration can provide a constructive collaborative process; it progressively fosters the growth of craftsmen's individual creative abilities, which in turn promotes the establishment of sustainable values and practices of the Tasikmalaya embroidery craft tradition.

CONCLUSIONS

This project explores embroidery craft motifs using a collaborative craft and design process to find creative potential that communicates the uniqueness of the Tasikmalaya region and culture. The process was finished collaboratively, adhering to Tung's (2012) paradigm of craft and design collaboration, which promotes efficient communication and eventually enables designers and craftsmen to establish common perspectives. The prototyping phase, however, is the most intricate step. Although designers and craftsmen have undoubtedly agreed on concepts, there are difficulties in putting the work into practice. The ability of designers and craftsmen to work together is often impacted by technical difficulties, which may result in modifications to the timeframe or even the design. Accordingly, further research is required to help designers and craftsmen work together to create prototypes of their designs.

Furthermore, it is undeniable that the research collaboration process has not yielded ideal outcomes; however, it can be presumed that the craftsmen have acquired valuable knowledge and experience in processing new embroidery crafts that improve local conditions. After completing this collaborative experience, it is expected that each craftsman will be able to generate their own ideas and enhance the range of embroidery crafts that embody Tasikmalaya's personality, particularly through motif development. Additionally, craftsmen are also expected to be able to employ theoretical design knowledge, such as the connection between color composition and consumer trends, in their future creative endeavors. In regards, additional research is required to monitor the growth of artisans' abilities following this joint craft and design initiative.

REFERENCES

- Anisa, A., & Bahri, N. F. (2024). Designing Enggang Bungas Jewelry as a Cultural Expression of the Dayaknese in Kalimantan. *Gorga : Jurnal Seni Rupa*, 13(2), 771-779. <https://dx.doi.org/10.24114/gr.v13i2.62888>
- Bastaman, W. N. U., & Fadliani, T. N. I. (2020). Pengembangan Motif Bordir Kerancang Tasikmalaya Dengan Software JBatik. *Dinamika Kerajinan dan Batik: Majalah Ilmiah*, 37(2), 135. <https://doi.org/10.22322/dkb.v37i2.6125>
- Bellver, D.F, Prados-Peña, M. B., García-López, A. M., & Molina-Moreno, V. (2023). Crafts as a key factor in local development: Bibliometric analysis. *Heliyon*, 9(1), e13039. <https://doi.org/10.1016/j.heliyon.2023.e13039>
- Broadley, C., & Mcara, M. (2013). Making, using and interpreting design probes: How subjective is participation?
- Brown, S., & Vacca, F. (2022). Cultural sustainability in fashion: Reflections on craft and sustainable development models. *Sustainability: Science, Practice and Policy*, 18(1), 590–600. <https://doi.org/10.1080/15487733.2022.2100102>
- Darusman, Y. (2016). Kearifan Lokal Kerajinan Bordir Tasikmalaya Sebagai Ekonomi Kreatif Terbuka Untuk Modern. *Journal of Nonformal Education*, 2(2), 107–119.

- Deni, G. R. & Abdurrozaq, A. (2024). Development of Motifs: Designing the Barapan Kebo Motif in Kre Alang. *Gorga : Jurnal Seni Rupa*, 13(2), 496-504. <https://dx.doi.org/10.24114/gr.v13i2.63184>
- Dumamika, T. A., Asisah, R., Aldhitama, F., & Belasunda, R. (2023). Strategi Perancangan Desain Motif Sebagai Identitas Bordir Tasikmalaya. *Gorga : Jurnal Seni Rupa*, 12(2), 394. <https://doi.org/10.24114/gr.v12i2.50990>
- Firman Hidranto. (2024, July 29). Industri Kerajinan Tangan Indonesia Menembus Pasar Internasional. <https://Indonesia.Go.Id/>. <https://indonesia.go.id/>
- Loita, A., & Husen, W. R. (2018). Variasi Bentuk dan Makna Motif Bordir di Sentra Bordir Kecamatan Kawalu Kota Tasikmalaya. *Jurnal Pendidikan dan Kajian Seni*, 3(2). <https://doi.org/10.30870/jpks.v3i2.4579>
- Nitsche, M., & Zheng, C. (2018, June 28). Combining Practices in Craft and Design. Design Research Society Conference 2018. <https://doi.org/10.21606/drs.2018.537>
- Nero, A., Sofianto, K., Sutirman, M., & Suganda, D. (2019). SENI BORDIR TASIKMALAYA DALAM KONSTELASI ESTETIK DAN IDENTITAS. *Patanjala : Jurnal Penelitian Sejarah dan Budaya*, 11(1), 81. <https://doi.org/10.30959/patanjala.v11i1.476>
- Nic Craith, M., Kockel, U., & Lloyd, K. (2018). The Convention for the Safeguarding of the Intangible Cultural Heritage. In N. Akagawa & L. Smith (Eds.), *Safeguarding Intangible Heritage* (1st ed., pp. 118–132). Routledge. <https://doi.org/10.4324/9780429507137-9>
- Putri, H. R. D., Yendra, S., & Syaputra, E. A. (2024). Transformation of East Kalimantan Batik into Ready-to-Wear Fashion with Augmented Reality for Creative Economy IKN. *Gorga : Jurnal Seni Rupa*, 13(2), 660-669. <https://dx.doi.org/10.24114/gr.v13i2.64317>
- Sanders, E. B.-N., & Stappers, P. J. (2008). Co-creation and the new landscapes of design. *CoDesign*, 4(1), 5–18. <https://doi.org/10.1080/15710880701875068>
- Tung, F.-W. (2012). Exploring Craft-Design Collaborations in Revitalizing a Local Craft. 14.
- Sudana, I.W., & Mohamad, I. (2023). Embracing the Diversity of Craft Functions in Daily Life. *International Journal of Literature and Arts*. <https://doi.org/10.11648/j.ijla.20231104.14>
- Woolley, M., Sabiescu, A., Waelde, C., Cummings, C., Modest, W., Konniger, S., Wippo, M., van Dijk, D., & Society, W. (2015). D5.1 The Use of Craft Skills in New Contexts.
- Zbuche, A. (2022). Traditional Crafts. A Literature Review Focused on Sustainable Development. *Culture. Society. Economy. Politics*, 2(1), 10–27. <https://doi.org/10.2478/csep-2022-0002>
- Zukhrufa, A., Pane, S. F., & Mutiara, M. W. (2024). Exploring Java-China Fusion in Interior Design of Beauty Spa and Wellness Senopati. *Gorga : Jurnal Seni Rupa*, 13(2), 591-599. <https://dx.doi.org/10.24114/gr.v13i2.62836>