

Surface Design Exploration to Diversify Ciwaringin Cirebon Batik Design

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Diversification has been recognized as effective in developing commercial enterprises. However, this strategy requires the commercial business to deeply understand its basic competencies and be aware of changing market trends. In the efforts to develop Ciwaringin batik SMEs, the diversification plan necessitates the Ciwaringin batik SMEs revisiting their unique competencies, namely the hand-writing batik process and the popular trend in 2022/2033, particularly the rising consumption of home décor and *hypernature* themes. As a result, implementing a diversification strategy in Ciwaringin batik SMEs requires investigating opportunities for developing Ciwaringin batik designs that are unique in their written batik techniques through surface design exploration in order to be responsive to the *hypernature*-themed home décor trend. Exploration of surface design on textiles was carried out to develop the appearance of Ciwaringin hand-writing batik so that it is relevant to the changing home decor market trends, namely the organic and textured appearances of the *hypernature* theme. The surface design exploration process is equipped with a data analysis to implement appropriate surface design exploration that supports the Ciwaringin batik diversification strategy. The creative method that combines data analysis and surface design exploration produced several Ciwaringin hand-writing batik designs that display the quality of the organic textured textile surfaces with bright colors typical of the *hypernature* theme. The Ciwaringin batik designs from surface design exploration are also designed to be home décor items, namely aesthetic wall elements that beautify a residential space.

Keywords: Ciwaringin Batik, Diversification, Exploration, Surface Design

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Introduction

Micro-scale enterprises, generally have insufficient resources and insecure financial conditions causing them vulnerable to external disturbances. The issue of competing as micro-scale business unit happens to the batik industry in Ciwaringin village in Cirebon. Compared to the other Cirebon batik enterprises that have been well-established for decades, the Ciwaringins need more competitive power to meet the fashion market's demands, which dominates the Cirebon batik Industry. According to Nursalim, a business owner of a Ciwaringin batik enterprise named CV. Sapu Jagad, the inability of the Ciwaringin batik craftsmen to cope with the fast-consuming pace and the low-pricing demands of the fashion market, has led to the declining of Ciwaringin batik businesses. Additionally, Nursalim conjectured that the Ciwaringin batik firms found it complicated to adapt to the market demand because their signature handwriting batik process consumes considerable time. Concerning the issue, the Ciwaringin batik enterprises must attract new market categories whose purchasing criteria comply with their production pace and method, specifically the signature handwriting batik process. Moreover, the Ciwaringin batik firms must define their distinct competency as a strength and attract new market segments by exposing the competency that distinguishes them from the competitors.

Besides batik cloth, commonly used for fashion, Indonesia has many other potential culture-based product industries. In his paper, Saputra (2021) claimed that Indonesia has a great opportunity to reach the European market of home décor products. According to his views, Handcraft products with Indonesia's heritage context appeal to the European home décor industry because of its exotic features of luxury and sustainability. In order to enter the home décor market, Indonesia's greatest trading partner, the Netherlands, has provided a preliminary route of exporting home décor products to Europe. Given the potential new home décor market, the batik Ciwaringin businesses may view the circumstance as an opportunity to widen its market orientation. Ciwaringin batik enterprises may take a step to enter home décor market by diversifying its design to complement the home décor industry.

Diversifying the range of products to broaden its market segmentation is known as diversification strategy. While diversification has been widely identified as a promising means for expanding a business practice and profit, the strategy culminates several in-dept studies, including world-wide future trends (Ansoff, 1957). To be successful, implementing diversification involves an awareness of the enterprise's main capability and the changing forces that emerge in society. According to Heimtextil Trend Council (2022), a trend incubation platform for textile design and materials for interior, one of the trend's primary themes favored by society for the year 2022/2023 is *hypernature*, which reveals the fusion possibilities of nature and technology. The *hypernature* trend, influenced by the society's admiration of the nature in the current digitally oversaturated period, will drive preferences for peculiar organic textures adopted from nature and luminous colors acquired from digital technology.

According to the explanation, batik Ciwaringin's diversification strategy necessitates comprehending trend adoption and understanding the company's major competency. Even though the Ciwaringin's signature process appeared to be a challenge to complying with the fast-consuming and low-cost fashion industry, the Ciwaringin batik artisans are known for their excellent handwriting batik skills. The long and intricate process of the handwriting batik can be viewed as a distinct competency for attracting new market. Furthermore, the technique can also be utilized to address the cultural context demand of European home décor market since handwriting batik technique is classified as a surface design created from a traditional technique that may produce pattern and color (Ramli & Shuhaizam Said, 2021). The handwriting batik can also be employed to express the *hypernature* trend on textile. However, the technique is insufficient for delivering the trend's peculiar texture which is assumed to be a prominent element favored by home décor market 2022/2023. Thus, it can be indicated that

the importance to investigate the surface design on the Ciwaringin batik to express the *hypernature* inspired texture. There are many different surface creation techniques used in the textile industry. However, not all of them can be used in the diversification strategy due to the Ciwaringin batik artisans's limited skill sets and also better to represent the hypernature trend inspiration on the batik.

Given the factors, the main goal of this design project is to explore *hypernature*-themed surface design on Ciwaringin batik for attracting the home décor market 2022/2023 that correspond with the skills of Ciwaringin batik artisans. In order to achieve the most optimistic design outcome, namely batik design for home décor with the *hypernature*-themed surface design, this project design employs a design process based on combination of data analysis and experimental approach. Surface design techniques were technically explored and collaborated with Ciwaringin batik process to produce batik textile designs which complement the home décor *hypernature* trend, and eventually supporting Ciwaringin batik's diversification strategy to open up new market segments and differentiate itself from competitors.

Creation Method

In order to support the batik ciwaringin diversification plan, this project is intended to develop a new design that represents the visuals of the *hypernature* trend to appeal to the home décor market through exploration of surface design. Therefore, this project adopts a practice-led research method, often known as research through design, a design-related basic research with a practical focus (Sumino & Romadhon, 2022, and Hendriyana, 2018). The process of this design project is divided into two primary phases: data analysis and surface design exploration. The data analysis step aims to identify information to support the comprehension of ideas developed in this Ciwaringin batik diversification project. The data is collected through literature review and field observation, which are analyzed qualitatively to determine the best suggestion that corresponds to the competency of Ciwaringin batik and offer a chance to showcase the specialty. Afterwards, the analysis is further developed to serve as the conceptual and visual foundation of the next phase, the surface design exploration. The surface design is explored with a Ciwaringin batik enterprise, CV. Sapu Jagad, owned by Bpk. Nursalim (48) and Bu Iim Rohimah (38), to determine the most suitable surface design, in particular expressing colors, texture, and shape, of the *hypernature* trend which is compatible with the Ciwaringin batik character as well as the artisans's skill set.

Results and Discussion

Data Analysis

Surface Design

Surface, particularly texture, can convey a specific value or picture to the audience, such as a smooth texture might evoke a pleasant and nostalgic emotion (SudIyti, 2022). Textile design is one of the sectors that has recognized the impact of surface interaction with the users. It has refined its design over the last decades to meet the diversity of the user's needs and unique aesthetic taste. In textile sectors, the study that focuses on the surface is known as surface design. Surface design is commonly associated with the pattern printing on textiles, or as an ornamental fabrication on the surface of a plain textile to enrich its aesthetic appeal (Marlianti & Handayani, 2017). However, today's great technological breakthrough enables the production of novel materials, eventually give a variety of distinct surface properties (Pires & Sun, 2018). As a result, in recent years, surface design has broadened its focus of study beyond the creation of surfaces on textile to various new medium to facilitate the diverse growing purposes and aesthetics.

In fashion, surface design is mainly formed by the textures and colors of the materials attached on a fashion product. Gong & Shin (2013) explain that a surface's texture and color selection are essential in expressing the emotions and aesthetic of the fashion product. Further, Gong and Shim (2013), in their research of surfaces in fashion design, classify the surface designs typically found in fashion product into two main types, namely three-dimensional and two-dimensional surfaces. In further details, the surface of three-dimensional serves tactile texture and is categorized into five types, such as original texture for which is formed by ready-made fabrics, treated textures which is formed by certain fabric processing such as pleating and shibori, supplementary texture which is formed by the addition of decorative elements such as embroidery and embellishment, composite texture which is formed by a mix of two or more materials, and future texture which is formed by new technological innovation such as three dimensional printing. Meanwhile the two-dimensional surface serves visual texture which is resulted from visual printing on fabric such as digital printing or laser engraving.

Surface is also prominent in intriguing user's senses and attention in interior and architecture design. In *Architextures: Between skin and stones*, for example, Kousidi (2014) argued that the artistic surface creation of Claudy Jongstra's wall covering designs made of felt, which have been used by some well-known architect, such as Rem Koolhaas (2007) at the Dutch Embassy in Berlin, Wilkinson Eyre Architects (2012) at Queen Mary University in London, and Bierman Henket architects (2013) at the Fries Museum in the Netherlands, have proven in presenting an essential role as an intermediary medium that builds a harmonious relationship between the human body and the surrounding space. Despite surface designs has not been categorized in details as fashion design, it is also worth noting in the Kousidi article that the surfaces, especially textile, in interior and architecture design can transpire unique yet dynamic quality, for which is designed for public space and meant for resilient to interact with the human sensorial body, however efficient to influence the human personal experience and perception in a gently manner.

Diversification

Over the years, diversification has been referred to as one upscaling strategy used widely by entrepreneurs by expanding the product ranges and services offered by business unit (Jha et.al., 2021). In addition, diversification is also widely adopted due to promising approach for reducing the risk of single unit business by spreading its sources of revenue into diverse types of channels (Bruno & Lerma, 2022). By expanding the sources of revenue category, a commercial unit is expected to widen its growth prospect, especially in terms of economy, because the market segmentation will also expand in response to the diversity offered. Aside from the escalate feasibility, entrepreneurs also favor diversification due to its opportunities for providing innovation endeavor, constructing the potential unique strength criteria that differentiate the commercial unit from its competitors (Ayuningtias et.al., 2020).

In regards to the positive impacts, Wang and Nie (2019), in their analysis of GE electronic business strategy, argued that the diversification will leverage the core competency of one company beyond its original capacity, coercing it to revitalize the capital and the practice for achieving efficiency. Therefore, many predetermined challenges are expected to rise during the company's diversifying endeavor, such as losing its established economy scale, overwhelming management capacities, and covering business features that may be found deficient. Concerning the issue, Wang and Nie (2019) suggest that the commercial unit be aware of its core competency and investigate its specialization. The diversification strategy needs to be constructed responding the practice of corporation's specialization. Besides specialization Ansoff (1957), also argued to analyze some external factor of the business practice that potentially influence the market orientation to the diversified products or services offered, such environmental condition, technological advancement, global economy, and many others. The general mean for understanding the complex external factors is by adopting the trend forecast analysis report since it is arranged based on simultaneous factors

emerges in the society. Infusing the trend analysis in the diversification strategy will support the corporation to anticipate the future event and estimate the most precise outcome.

Trend 2022/2023

Generally, trend is perceived as direction of change or development which emerge amid society. Trend analyst, commonly known as trend forecaster, is responsible for investigating the drive of change and considering its relevance to the future of society (Tucholke & Frohm, 2020). Based on the analysis, trend forecaster will provide overviews of major trend information including changes in consumer behavior and factors which cause the changes, and minor trend detail which mostly has been delivered as various design attributes for certain seasons, such as theme, colors, style, and other visual interpretations (Kim et.al., 2011). Therefore, trend forecast is perpetually used by designers as source of inspiration to determine the short-term trend of qualities used in their design such as colors, shape, materials, and also functions, but also to anticipate the long-term potential change in the future (Petermann, 2014; Evans, 2004).

Referring to the global trend, recent events have raised a fashion to revitalize the residential rooms' interior, demanding a comfortable and fresh mood of the room's concept (Wijaya, 2023). The recent pandemic has caused a growing desire to incorporate nature-based elements into the built environment (McGee & Park, 2022; Carabelli, 2020). Following the trend of nature-inspired design amid today's inevitably tech-driven era, Brownell et.al., (2015) stated hypernatural as a term for explaining the collaboration of technology and natural elements. While technological development is generally interpreted distinctively from natural innovation, Brownell et.al., (2015), reveals that hypernatural is a concept that emphasizes an optimistic view for the collaboration of the technology and natural elements to expand or exceed beyond regular capabilities. In further details, Brownell et.al., (2015) also explains two types of approaches commonly used by designers for integrating the nature-based concept, adopting the emerging hypernatural trend, namely representation and engagement. The representation approach adopts natural forms or behaviors in an innovation, whether in the form of the materials, the shape, or the systems. An example of implementing the representation approach is adopting floral forms in ornamental designs or bio-mimicry designs. Meanwhile, engagement is an approach that brings novelty by directly interacting with nature. Some examples of the engagement approach are using fungal organisms or other bioengineering-based innovations.

Batik Of Ciwaringin, Cirebon

Indonesia's vast geography offers various unique and cultural commodities that represent each region, including food, clothing, entertainment, and many more (Hidayah & Puspitasari, 2022). The city of Cirebon is recognized for its batik craft, which has a uniqueness that cannot be separated from its cultural background which is heavily influenced by various foreign cultures such as Hindu, Chinese, European and Arabic cultures (Machdalena et.al., 2022). Over the last few years, Cirebon batik is often synonymous with Trusmi Village, which is in the Plered district area because the village has been known as a batik center and its people who are known to be active in producing batik for the local palace. However, apart from the batik produced from Trusmi vilage, other areas, namely Ciwaringin Village, produce batik cloth.

Contrast to the popular batik from Trusmi Village, which is historically tied to palace culture, Ciwaringin batik is considered as a new because it was initiated by a group of students from East Java at the Raudlotul Tholibin Islamic Boarding School in the 1950s (Prawira et.al., 2020; Prihyanto et.al.,2014). The aesthetic value of Islam is also greatly influenced the Ciwaringin batik and distinguishes it from Cirebon batik of other area, such as using simple flora ornament and avoiding the animate creatures form adopted from the palace (Tresnawati et.al., 2020). According to Nursalim (personal interview, Mei 2022), a business owner of batik

Ciwaringin named CV. Sapu Jagad, batik from Ciwaringin use only handwriting batik method and uses a variety of synthetic and natural dyes in the production process.

Due to their reliance on handicraft creation, Ciwaringin batik firms can only make batik cloth. Additionally, they hardly initiate novel offerings, but as they do, they frequently innovate the pattern and color of the batik. Nursalim argued that the Ciwaringin batik is iconic due to its handwriting batik process which depicts graceful lines of floral motif in a dynamic composition. In production process, Nursalim also noted that he classifies the quality of Ciwaringin batik artisans into three types based on their watak (personalities): the graceful type includes artisans who create the smooth and organized motifs, but these artisans are typically senior in age; the middle type includes artisans who are sufficiently experienced but still inconsistent in their batik quality; and the rough type includes artisans who are typically less patient and tend to produce rough-quality batik.



Image 1. Ciwaringin batik qualities classified by the artisan's *watak* which are the graceful, the middle, and the rough type. (Source: Martono, 2022)

According to the data gathered, it is important to be noticed that the textile industry has been forced to develop surfaces because of its capacity to encourage user involvement. Concerning the Ciwaringin batik, the batik is solely made in flat patterns with no attention for surface effect, whether three-dimensional tactile or two-dimensional visual textures. In the context of the upcoming trend for 2022/2023, data analysis reveals a growing interest in home décor. However, the market wants home décor that provides a comfy and fresh mood concept and a touch of *hypernature* trend theme. Furthermore, the prospective interest of the European home décor market creates a demand for exposing Indonesia's heritage. Regarding cultural context demand, the Ciwaringin batik has a high potential to satisfy that preference because the Ciwaringin batik artisans only utilize traditional handwriting batik technique.



Image 2. Construction of idea based on data analysis. (Source: Martono, 2022)

Regarding the Ciwaringin batik plan's diversification, it is crucial to highlight the Ciwaringin batik's signatures of handwriting batik and natural design, notably floral

ornamentation as its core competencies. Concerning surface design, which has been identified to influence user engagement, the chosen surface creation method that will be utilized is the combination of the handwriting batik to produce three dimensional tactile texture and two-dimensional visual textures. Additionally, the *hypernature* trend of 2022/2023 and sense of comfortable and fresh mood will be developed to draw home décor market’s attention. As a result, some *hypernature*-inspired image references are organized in a moodboard collage as new design inspiration. The moodboard collage includes irregular texture and distinct natural forms taken from zoom tools to expose visuals that can be only captured through technology. Furthermore, the collage incorporates artificial hues, common in modern technology. These *hypernature*-inspired characteristics, particularly texture, color, and shape, will be explored further into surface design of Ciwaringin batik.



Image 3. Moodboard collage *hypernature* trend-inspired (Source: Martono, 2022)

Surface Exploration

The research is continued to the surface design exploration carried out in a batik Ciwaringin enterprise, CV—Sapu Jagad, under the owner's supervision, namely Nursalim and Iim Rohimah. The surface exploration phase is classified into five stages, such as (1) Drawing process of *hypernature* trend-inspired objects, (2) Designing process using selected *hypernature* trend-inspired drawings on traditional Ciwaringin batik fabrics, (3) Handwriting batik process on Ciwaringin batik fabrics, (4) Exploring color of the batik surface through the dyeing method (5) Last, exploring texture of the batik surface using embroidery techniques.

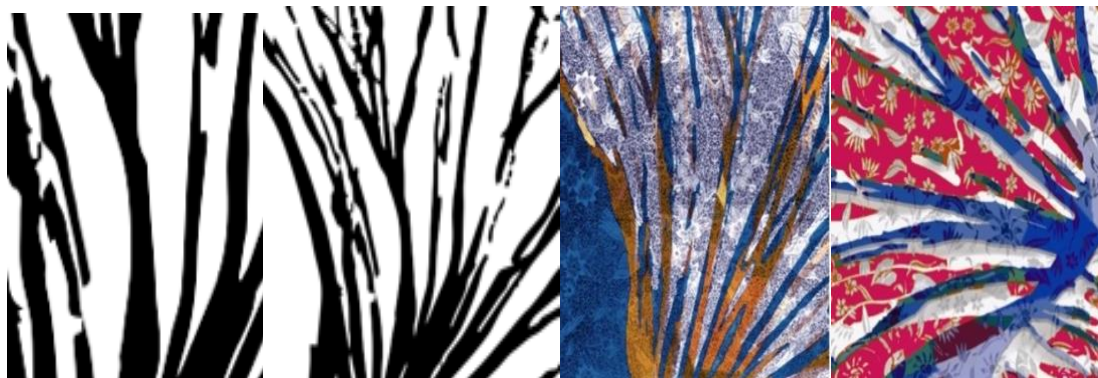


Image 4. Digital drawing and design of *hypernature* trend-inspired ornament. (Source: Martono, 2022)

Considering the Ciwaringin skill-set, the only approach that could be used to present the *hypernature* trend on Ciwaringin batik is utilizing the Brownell nature representation approach, which adopts the natural form into innovation. In this project the form of flora which taken from a zoom process are explored as visual ornamentations for batik. In the first stage of surface exploration, the zoomed flora images are manipulated further through drawings and simplifying process to be a new batik ornament design. Moreover, in the second stage of surface exploration, the new zoomed flora ornaments are combined with the traditional Ciwaringin batik in digital designs to present the collaboration of the new *hypernature* trend-inspired and Ciwaringin long-time characteristic.



Image 5. Batik, dyeing, and embroidery process. (Source: Martono, 2022)

The new Ciwaringin batik design is further processed in the third stage of surface exploration, which is the batik process. This second layer batik process using zoomed flora ornament is explored to create a two-dimensional visual texture. Using handwriting batik technique, the zoomed flora batik ornaments are applied on the selected available Ciwaringin batik, specifically the Kembang Pangko Matahari pattern. In this batik process, Nursalim suggested the middle type of batik artisans to produce the batik because these artisans are typically cooperative and open to new form of batik ideas. Afterwards, the fourth stage of surface exploration is the dyeing process. The batik textiles are dyed in several color substances, particularly Indigo Sol Blue 04B, Indigo Sol Yellow IGK, AS Naphtol Dye, and Red B salt. Those synthetic color types are selected to represent the color of *hypernature* trend which mostly refers to the range of pink and blue hues. Last, the *hypernature*-inspired texture is introduced by re-applying the zoomed flora ornaments on the new batik using hand-embroidery technique to create a three-dimensional tactile texture. The hand-embroidery technique is chosen primarily because of its output character. It may complement the Ciwaringin signature handwriting batik process and expose the craftsmanship value of the new batik design.

Results

The exploration method results in numerous pieces of batik cloth constructed in a square measuring 50 x 50 cm. Several pieces of *hypernature* trend-inspired batik were developed to promote Ciwaringin batik enterprise's diversification strategy for entering the home-décor industry, however only three alternative works are chosen for this paper research. The new Ciwaringin batik influenced by the *hypernature* trend will be employed as home décor, specifically as an aesthetic feature of a room wall. The usage of *hypernature* trend-inspired batik design as a wall decoration is based on an argument that the detailed works of artisans utilized in the production process, notably handwriting batik and hand-embroidery,

deserve recognition. The craftsmanship used in surface design exploration on the *hypernature* trend-inspired Ciwaringin batik nurtures an exclusive value that deserves to be the focal point that beautifies a room.

The traditional two-tone Ciwaringin batik, Kembang Pangko Matahari, is utilized in the first batik piece. As described in the preceding sub-chapter, traditional batik is further processed using a batik procedure incorporating a *hypernature* trend-inspired pattern and re-dyeing before being adorned with a *hypernature* trend-inspired texture. Indigo Sol Blue 04B synthetic dye is used in the econd layer batik procedure to showcase the blue tones of the *hypernature* inspired moodboard. To highlight the texture of surface creation, bright yellow stitches with organic zoomed flora form are stitched on top of the batik. As a result, this first Ciwaringin batik new design performs best as an aesthetically pleasant decoration accent in a minimalist interior dominated by dark colors.

Similar to the first new Ciwaringin batik piece, the two-tone Kembang Pangko Matahari batik is also used in the second batik piece. In order to present the *hypernature* trend Kembang Pangko Matahari is processed using handwriting batik technique and re-dyeing in synthetic dye, specifically Indigosol Rose IR. In addition, dazzling yellow and turquoise thread are stitched on the batik to portray the *hypernature* visual and texture. This second Ciwaringin batik design is intended to complement the aesthetics of an artistic interior where organic forms and brilliant light predominate.



Image 6. First design (blue) and second design (pink) of Ciwaringin batik for home décor.

(Source: Martono,2022)

The third new Ciwaringin batik item uses the same Ciwaringin traditional motif as the previous new batik pieces, which is the two-tone Kembang Pangko Matahari. The third piece uses the Ciwaringin signature handwriting batik technique to express the *hypernature* inspired pattern. However, in contrast to the first and second new Ciwaringin batik pieces,

which were further embroidered using contrast colors thread, the needlework texture in the third new Ciwaringin batik was processed using colors that matched the Indigosol Rose color scheme, which is pink of tone. This third piece of new Ciwaringin batik design has an aesthetic appearance that give a broad impression, making it appropriate for adorning narrow interior spaces, such as living rooms in urban apartments.



Image 7. Third design of Ciwaringin batik for home décor. (Source: Martono,2022)

Conclusion

According to the findings of the design project, the further exploration of surface design, particularly using combination of the handwriting batik and the embroidery method, is a promising mean to develop the Ciwaringin handwriting batik design. Moreover, the handwriting batik skill owned by Ciwaringin batik artisans is proven to have the potential as a superior value rather than an impediment. The artisans's handwriting batik abilities is a cornerstone of product development, specifically surface design, that support the diversification strategy of Ciwaringin batik to penetrate new market. However, the Ciwaringin batik enterprises inevitably need an awareness of the emerging trends and a further understanding of their competencies. Based on this study, the data analysis is critical in complementing the surface exploration process. Despite surface design is significantly capable to provide tangible development, the data analysis is extremely beneficial in laying the groundwork for the development process, particularly the surface design exploration. Data analysis provide a conceptual foundation for surface design exploration, resulting a more structured and driven design development that support a more effective diversification strategy.

References

- Ansoff, H. I. (1957). Strategies for Diversification. *Harvard business review*, 35(5), 113-124
- Ayuningtias, N., Widodo, J., Zulianto, M., & Wahyuni, S. (2020). Products innovation and diversification strategies of Banyuwangi local food souvenirs at UD. Sri Rejeki Genteng, Banyuwangi. *IOP Conference Series: Earth and Environmental Science*, 485(1), 012124. <https://doi.org/10.1088/1755-1315/485/1/012124>
- Brownell, B., Swackhamer, M., Satterfield, B., & Weinstock, M. (2015). *Hypernatural: Architecture's New Relationship with Nature*. Princeton Architectural Press.
- Bruno, E. V., & Lerma, B. (2022). The Contribution of Design Discipline in Business Decisions through Design-Oriented Production Diversification: A Case Study in Italian Furniture Sector. *Proceedings of the Design Society*, 2, 2067–2076. <https://doi.org/10.1017/pds.2022.209>

- Evans, M. (2004). A Design Approach to Trends and Forecasting: FUTUREGROUND: The Design Research Society Conference, Melbourne, Australia
- Gong, L., & Shin, J. (2013). The Innovative Application of Surface Texture in Fashion and Textile Design. *Fashion & Textile Research Journal*, 15(3), 336–346.
<https://doi.org/10.5805/SFTI.2013.15.3.336>
- Hypernature: Reconnect with Nature via Technology.*(2022). Retrieved June 5 2022, from www.heimtextil.messefrankfurt.com
- Hidayah, T. N., & Puspitasari, F. (2022). MODIFIKASI BUSANA TRADISIONAL BALI DENGAN KORSASE BUNGA SEBAGAI DECORATIVE TRIMS. *Corak*, 10(2), 209–212. <https://doi.org/10.24821/corak.v10i2.5538>
- Jha, S. K., Bhawe, N., & Satish, P. (2021). Scaling Social Enterprises through Product Diversification. *Sustainability*, 13(21), 11660. <https://doi.org/10.3390/su132111660>
- Kim, E., Fiore, A. M., & Kim, H. (2011). *Fashion trends: Analysis and forecasting* (English edition). Bloomsbury.
- Pires, L.M., & Sun, D. (2018). A classification of three-dimensional textiles in surface design. 8th World Conference on 3D Fabrics and Their Applications 2018, Manchester, United Kingdom.
- Machdalena, S., Dienaputra, R. D., Suherman, A., Nugraha, A., Kartika, N., & Yuliatwati, S. (2022). NAMA-NAMA BATIK JAWA BARAT: KAJIAN KHREMATONIMIKA. *Prosiding Konferensi Linguistik Tahunan Atma Jaya (KOLITA)*, 20(20), 342–349.
<https://doi.org/10.25170/kolita.20.3814>
- Marlianti, M., & Handayani, W. (2017). KLASIFIKASI TEKNIK STITCHING SULAMAN SEBAGAI SURFACE DESIGN TEKSTIL. *ATRAT*, 5(3), 1-10.
- Matina Kousidi. (2014). *Architextures: Between Skin and Stone*. *Surface Design Journal*, 38-43.
- McGee, B., & Park, N.-K. (2022). Colour, Light, and Materiality: Biophilic Interior Design Presence in Research and Practice. *Interiority*, 5(1).
<https://doi.org/10.7454/in.v5i1.189>
- Sudiyati, N. (2021). TEKSTUR DALAM ESTETIKA KERAMIK. *Corak*, 10(2), 239–246.
<https://doi.org/10.24821/corak.v10i2.4733>
- Petermann, E. (2014). *Archaeology of the Future Reconsidering the Place and Nature of Trend forecasting in Design Discourse*.
- Prawira, N. G., Fitriani Adiwarna Prawira, M., & Susanto, E. (2020). Coastal Batik Ornament Design: Aesthetic Analysis and Meaning of Batik Ornaments in Ciwaringin Cirebon, West Java. *Lekesan: Interdisciplinary Journal of Asia Pacific Arts*, 3(2), 48–53.
<https://doi.org/10.31091/lekesan.v3i2.1170>
- Ramli, H., & Shuhaizam Said, T. (2021). Surface Design Technique through Tradition Technique. Dalam B. Kumar (Ed.), *Textiles for Functional Applications*. IntechOpen.
<https://doi.org/10.5772/intechopen.97069>
- Saputra, R. (2021). MOTIVASI INDONESIA DALAM KERJASAMA EKSPOR HOME DECORATION INDONESIA-BELANDA KE EROPA. 8.

- Sumino, S., & Romadhon, A. G. (2022). Magnetic Levitation Technology As An Object Floating Technique In Wooden Craft. *Corak*, 11(1), 101–108. <https://doi.org/10.24821/corak.v11i1.7510>
- Tresnawati, N., Saleh, I., & Wardani, S. (2020). The utilization of local plants as natural dye Ciwaringin Batik, Cirebon, Indonesia. *EurAsian Journal of BioSciences*.
- Tucholke, K., & Frohm, P. (2020). The Trend Forecasting Paradox? [Master's thesis, The Swedish School of Textiles]. University of Boras.
- Wang, X., & Nie, Y. (2019). The Strategic Choice: Specialization or Diversification?----Based on Case Analysis. *Proceedings of the International Academic Conference on Frontiers in Social Sciences and Management Innovation (IAFSM 2018)*. *Proceedings of the International Academic Conference on Frontiers in Social Sciences and Management Innovation (IAFSM 2018)*, Chongqing, China. <https://doi.org/10.2991/iafsm-18.2019.24>
- Wijaya, I. B. A. (2023). Biophilic Concept Analysis in The Interior of a Post-New Normal Residential Home. *IOP Conference Series: Earth and Environmental Science*, 1169(1), 012055. <https://doi.org/10.1088/1755-1315/1169/1/012055>