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# Mermaid Adaptation through Exploration of Scales in Party Fashion

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**ABSTRACT** - The dynamic development of the fashion industry encourages designers to create works that are relevant to future trends through fashion forecasting. One of the predicted themes for the 2025-2026 period is fluidity, which describes free and flowing changes. This research aims to develop a party dress inspired by the mermaid theme and follow the 2025/2026 fashion forecasting trend. The method used in this research is a three-stage design, which consists of problem definition and research, creative exploration, and implementation. This research interprets the concept of fluidity through the exploration of visual and textural elements inspired by mythology. This Adaptation includes the use of color, fabric texture, and details such as scales to create a party dress that reflects the free-flowing mermaid theme in accordance with the concept of fluidity. The result of this research is expected to produce party wear that is not only luxurious and aesthetic but also reinforces the theme of fluidity as part of future fashion trends.

**Keywords**: Mermaid, party fashion, scales.

## INTRODUCTION

The rapid development of the fashion industry encourages designers to utilize fashion forecasting to create works that are in line with future trends. Fashion forecasting is a process that helps designers and sellers plan products based on predicted trends and consumer preferences (Koren & Shnaiderman, 2023). Ren et al. (2020) emphasizes that trend forecasting plays a vital role in the textile, apparel, and retail industries, as their dynamic and rapidly evolving nature requires companies to anticipate changes in consumer preferences in real time. In Indonesia, fashion forecasting for the period 2025-2026 has been announced under the title "Strive," which includes four major themes (Githapradana et al., 2025). The researcher took the sub-theme fluidity from the hyperconnected flux theme. In this context, fluidity describes the concept of free and fluid change based on the dynamics of the fashion industry that continues to move forward.

Fluidity refers to the ability to move freely and fluidly, describing uninhibited movement. In the world of biology, fish show remarkable adaptability to their environment, one of which is by utilizing the natural structure of scales and mucus to reduce friction while moving through the water (Drelich et al., 2018). The tightly structured yet flexible scales of fish allow them to move gracefully, making them a perfect metaphor for the concept of fluidity. In mythology, mermaid-like creatures, whose bodies combine human and fish elements, symbolize the fluidity of graceful movement underwater, with the scales on their tails often symbolizing beauty and luxury (Müller et al., 2022).

In fashion design, fish scales offer unique textural inspiration to create garments that are not only visually stunning but also capture the essence of fluidity (Ghazali et al., 2015). Party, designed to be elegant and dramatic, is an ideal medium to showcase this adaptation. By utilizing shimmer and organza fabrics, designers can create a complementary

effect. Shimmer fabric, with its elegant shimmer, creates a sparkling effect like the reflection of light on the surface of the water. At the same time, organza, with its transparency and softness, adds an ethereal dimension that depicts the smooth fluidity of water movement. The combination results in a visual harmony that emphasizes the texture of the mermaid scales, creating a luxurious and graceful impression that supports the theme of fluidity.

This research aims to explore how the texture of scales, inspired by mermaids, can be realized in a fashion design. By exploring fabric material, texture, and color, this design is expected to produce clothes that are not only in line with future fashion trends but also reflect the elegance of the mermaid character.

## METHOD

The three-stage design process proposed by LaBat & Sokolowski (1999) is a systematic method in product development, including textile products. The process is divided into three main phases: problem definition and research, creative exploration, and implementation.

1. Problem definition and research: In this phase, the designer gathers relevant and in-depth information about the design theme to be worked on. This research involves analyzing trends, identifying market needs, and exploring various sources of inspiration that can enrich the basis of the design to be developed. The main focus at this stage is to understand the concept of mermaids and their related elements, such as shape, texture, and symbolism, which can enrich the design process.
2. Creative exploration: After gaining an in-depth understanding, the designer proceeded to experiment with various ideas obtained in the research stage. This exploration included testing materials that reflect fluidity and sparkle, such as holographic fabrics and beads, as well as designing fashion silhouettes that match the mermaid aesthetic. The selection of colors, materials, and shapes was done to create various design alternatives that could be applied to party wear.
3. Implementation: In this last phase, the designer implements the final design, including creating a mood board that shows the combination of colors and materials chosen. The designer also applies the elements that have been explored to create an attractive party outfit that fits the mermaid theme. The designer then applies the refined design in the form of prototypes and further visualization to ensure the concept developed can be executed well and in accordance with the design objectives.

## RESULTS AND DISCUSSION

### Problem Definition and Research

By utilizing fashion forecasting, the fashion industry can adjust designs and products better to suit consumers' needs and preferences in the future. Reporting from the official Instagram of Fashion Forecasting Indonesia, the title "Strive" was appointed for the period 2025-2026. The author chose the theme "hyperconnected" with the sub-theme "fluidity."

According to Lenaz & Castelli (2018), membrane fluidity refers to the ability of lipid and protein molecules within the cell membrane to move freely, enabling the membrane to remain flexible and to adjust its shape in response to environmental changes. A similar phenomenon can be observed in the animal kingdom —for instance, in fish, whose agile movements and ability to conform to the shape and condition of water exemplify the inherent flexibility of fluids.

In mythology, fish are often associated with mermaids, mythological creatures that are half human and half fish. Mermaids can be considered the embodiment of fluidity due to their graceful body movements and ability to adapt to their fluid environment, the ocean. To find out the characteristics of mermaids, researchers summarized the physical characteristics of several books that make mermaids the main focus. The following are the results of the search for mermaid characteristics:

**TABLE 1.** Literature study physical characteristics.

| Book/ Article | Mermaid Analysis |
|---|---|
| "The Little Mermaid" in Hans Christian Andersen's collection of Fairy Tales (Andersen, 2023). | The mermaid's underwater appearance includes a beautiful fishtail with scales that glitter below the surface of the water. The lower part of her body, which is also shaped like a long fishtail, allows her to swim very nimbly in the depths of the ocean. |
| "The Fisherman and His Soul" by Oscar Wilde (Wilde, 2024) | Based on Oscar Wilde's The Fisherman and His Soul, mermaids have long, shimmering fishtails and human-like upper bodies. Her skin is soft, luminous, and silvery or bluish. Her hair is long, flowing gently in the water, with large, mysterious eyes. Its scaly tail reflects light, giving it a magical feel, while its body is well-proportioned at about 150-170 cm tall. As a sea creature, it has no legs but moves fluidly and nimbly using its flexible tail, which is adaptive to the sea—aquatic environment. |
| "Undine" by Friedrich de la Motte Fouqué (de La Motte-Fouqué, 1860) | In Friedrich de la Motte Fouqué's Undine, the mermaid is described as having the distinctive characteristics of an aquatic creature. Her skin is pale with a silvery sheen, soft, and almost transparent, reflecting the water element. Her movements are fluid and flexible, like a calm current. Her blue eyes are clear and deep, resembling a springtime lake, while her hair is long and silvery-blonde, adding to the impression of a mythical creature. Her voice is soft with a resonance typical of nature and her.<br>Its fingers are slender, perfect for adapting to the water world. As an aquatic creature, it carries the essence of nature's mysterious and alluring beauty. |
| "The Penguin Book of Mermaids" by Carole Bacchilega and Meredith A. Brown (Bacchilega & Brown, 2019) | In The Penguin Book of Mermaids, princess Dugongs have a hybrid body with a human upper part and a fish tail below. Their skin adapts to water, with color that varies from pale silvery to the local color. Their fishtails have scales that allow for fast movement in water. Eyes reflect the depths of the sea, and the expressions on their faces can change, mixing human and sea creature elements. |

From the **TABLE 1**, it can be summarized that the general physical characteristics of mermaids are:

- A half-fish creature with a graceful tail.
- Glossy and slippery scales.
- Shiny body surface.

## Creative Exploration

Idea generation is a crucial first step in the creative exploration phase of the design process. This process often involves gathering inspiration, creative thinking, and experimentation to find the right solution. As Cross (2006) explains, in design, idea generation involves a deep understanding of the problem at hand and the creative freedom to explore possible solutions. The process also often involves literacy, where ideas are tested, tweaked, and refined to come up with better solutions.

According to Brown & Wyatt (2015), in design thinking, creative exploration is at the core of the innovation process, where ideas gathered are turned into prototypes and tested in an authentic context. This reflects the interconnectedness of idea generation and creative exploration that support each other in producing innovative solutions that meet user needs.

According to Kimbell (2011), in the design practice approach, effective idea generation should be driven by a clear context and purpose so that the exploration process produces results that are not only innovative but also relevant to existing needs and challenges. Thus, in creative exploration, idea generation is a fundamental step that forms the basis of further creative experimentation and is essential in creating innovative and valuable solutions.

1. Silhouette

   The mermaid dress silhouette adopts the mermaid body shape with a fitted top that flares out around the knees or calves. This silhouette creates a graceful and feminine look, accentuates curves, and gives a glamorous feel. This dress is often used in party wear, wedding dresses, or formal events because it gives a luxurious and classic impression.

   According to Bruna (2015), the mermaid silhouette is an example of fashion that focuses on body contouring and emphasizes feminine curves. It also reflects changing aesthetic tastes in fashion history, which often relate to social and cultural representations of the female body. With such a rich history, the mermaid silhouette demonstrates how fashion can be used to reinforce visual narratives, such as in the context of celebrations or events that require a sense of occasion majestic and elegant.

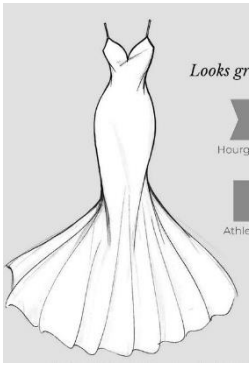



**FIGURE 1**. Mermaid silhouette.

2. Color

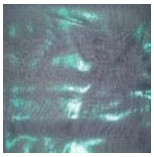
   Color intensity, otherwise known as saturation, refers to the degree of purity or brightness of a color in the visual spectrum. According to Song et al. (2025), colors with high brightness tend to evoke more positive and striking emotional responses, whereas colors with lower brightness and softer saturation convey a calmer and more tranquil impression. The choice of color intensity plays an important role in shaping the emotion and atmosphere one wants to convey.

   In representations of mermaids, color intensity is often used to reflect their characteristics as graceful and magical mythological creatures rooted in the marine world. Colors with high intensity, such as bright blue or emerald green, often symbolize the power and mysterious appeal of the sea. In contrast, low-intensity colors, such as faded green or pastel blue, convey a sense of peace and harmony, illustrating their closeness to the underwater realm.

   Mermaids are often depicted using a combination of high and low-intensity colors. For example, their scaly tails use bright colors to attract attention, while faded skin tones convey a soft and human feel. These color choices not only reflect the versatility of the mermaid character as a symbol of marine life but also build the contrast between the ocean's powerful depth and its delicate surface, as reflected in water's color gradients (Brenner et al., 2022).

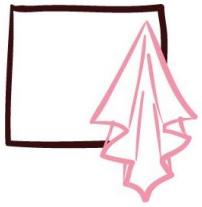
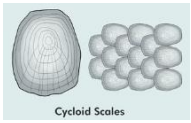
3. Material

**TABLE 2.** Literature study physical characteristics.

| Material | Color | Figure | Information |
|---|---|---|---|
| Satin | Xanadu |  | It has a low color intensity and is used to depict the faded color of the mermaid's skin.<br>Has a slippery texture visualization, just like a slippery mermaid body |
| Chiffon | Iridescent green |  | It has a high color intensity, used to attract attention as well as to balance out the use of the faded Xanadu green<br>Gives a slippery visualization |

4. Ornament Details

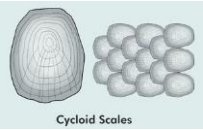
**TABLE 3.** Ornament details.

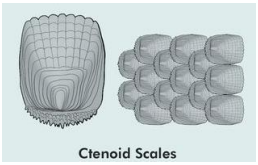
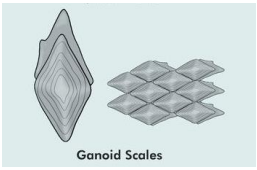
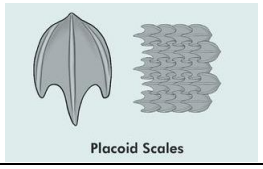
| Image | Description |
|---|---|
|  | Flounces on mermaid dresses provide a dramatic effect that reinforces the silhouette's distinctive feature: the contrast between the tight body and the wide bottom. By adding this element, fashion designs can achieve a balance between elegance and visual power that accentuates every curve of the body. |
|  | The holographic bead was chosen as a form of implementation of the sparkling surface of the mermaid's body. |
|  | Mermaid scales are made by exploration first. This is done so that the scales produced are in accordance with the fashion design. |

5. Scale Exploration

According to Rawat et al. (2021), Fish scales are unique biological structures found in many types of fish, designed to provide protection and support the flexibility of fish movement in the water. Fish scales are divided into four main types, namely:

**TABLE 4.** Types of scales.

| Types | Figure | Information |
|---|---|---|
| Cycloid |  | It has a circular ring-like structure called a "growth ring," similar to the rings on a tree trunk. This type is often found in fish with more delicate bodies, such as carp. |

| | | |
|---|---|---|
| Ctenoid |  | It is known for the "comb"-shaped structure at the end of its armor. These scales are usually found on fish with high swimming ability, providing additional protection from predators. |
| Ganoid |  | It has a thick layer of enamel-like material and is rhomboidal in shape. The ganoid scales are connected with "peg-and-socket" joints, which makes them stiffer than other types. |
| Placoid |  | It is shaped like a tooth and has an outer layer of enamel-like material (vitrodentine). This type is usually found in sharks and stingrays. |

As can be seen in **TABLE 4**, researchers adopted the circular shape of cycloid scales as a benchmark for making party fashion scales. After selecting the scale shape, we proceeded to select fabrics and techniques. In this research, we used several fabrics, such as satin, chiffon, tile, shimmer, and organza, by trying two techniques: solder and fire and wax media. The following are the results obtained.

**TABLE 5.** Technique exploration**.**

| Sample | Fabrics | Technique: soldering | Technique: Fire and candle | Description |
|---|---|---|---|---|
| 1 | Satin |  |  | The edges of the scales are blacker if solder is used<br>The luster produced by satin still lacking |
| 2 | Sifon |  |  | The edges of the scales are blacker if solder is used<br>The resulting luster is appropriate, but the texture of the fabric is very limp to become scales |
| 3 | Tulle |  |  | The edges of the scales are blacker if solder is used<br>Although transparent, tulle does not quite fit into the mermaid theme due to its mesh-like fabric |

| Sample | Fabrics | Technique: soldering | Technique: Fire and candle | Description |
|---|---|---|---|---|
| 4 | Metallic polyester (shimmer) |  |  | The edges of the scales are blacker if solder is used<br>The shimmering fabric is suitable for making scales in terms of luster and fabric condition (limp/stiff). |
| 5 | Organza |  |  | The edges of the scales are blacker if solder is used<br>Organza has a transparent and clean effect, suitable for use as scales |

Results from **TABLE 5**:

1. Technique: The edges of the scales made using the soldering technique produce more black residue than those made using the fire and wax technique. This is because the solder used cannot be adjusted to the heat level. Solder that is too hot will make the fabric melt faster.
2. Fire and wax technique: samples using this technique are cleaner when compared to soldering, of course, by paying attention to several aspects, namely: 1) the fabric is not burned for too long, only; 2) in order for the combustion results to be clean, the sample is burned in the center of the fire (wax) because if the position is too low, the fabric can be exposed to the melted wax, and if it is too high, the sample will become dirty from smoke from the fire (wax).

After the exploration of techniques and fabrics, samples 4 and 5 were selected, which use the heating technique with flame and wax to be combined into scales. Sample 4 produces luster, while sample 5 gives a transparent effect, so both are suitable to be combined. To apply them to the top dress, the researcher made three samples, namely: a) sample 4 only, b) sample 5 only, and c) a combination of samples 4 and 5.

**FIGURE 2**. Sample a)

**FIGURE 3**. Sample b)

**FIGURE 4**. Sample c)

Because the combined results did not produce enough luster, the researcher used the three samples to apply to the top dress and distributed them randomly to avoid luster imbalance. The combination of the three was done by taking more samples, namely sample 1. a and sample 1.b; the following is the explanation.

**FIGURE 5**. Sample 1.a

**FIGURE 6**. Sample 1.b

Description:

- Sample 1. a, in 1 pattern, there are four scales with the amount of organza two scales, shimmer one scale, and combined one scale
- Sample 1.b, in 1 pattern, there are seven scales with the amount of organza four scales, shimmer two scales, and combined one scale
- The author chose sample 1.a because the shine produced by the shimmer was not too lame with the other fabrics, namely organza and combined fabrics.

## Implementation

1. Moodboard

Bestari & Ishartiwi (2016) says a mood board is a visual tool used to collect and organize inspirational elements such as images, text, colors, and textures. The purpose is to determine the purpose, direction, and guidance in creating themed creative works so that the creative process does not deviate from the predetermined theme.


**FIGURE 7**. Moodboard.

2. Design

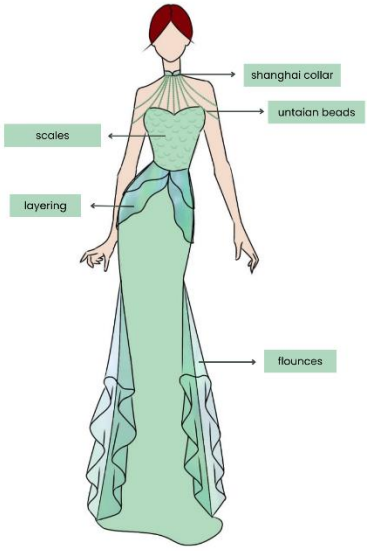



**FIGURE 8**. Design.

3. Finished Results

**FIGURE 9**. Product.

## CONCLUSION

This research successfully produced a party dress with a mermaid theme that remains relevant to the fashion forecasting trend for 2025/2026. The resulting fashion design combines visual elements such as silhouette, color, and ornaments that reflect mermaid characteristics, including flounces, sparkling beads, and scales. These elements depict the mermaid's free-flowing body shape in accordance with the theme of fluidity that describes natural change and movement. Particularly in the scales element, this research shows that the selection of materials such as shimmer and organza is effective in creating a dynamic visual effect, reinforcing the desired impression of fluidity. The combination technique between organza, shimmer, and organza and shimmer has achieved the optimal appearance of scales, giving an elegant and futuristic impression that is in line with the theme of fluidity.

Overall, the resulting fashion is not only able to reflect the mermaid theme aesthetically but also accommodate the fluidity trend that is part of the development of future fashion trends in an innovative way. This research makes a significant contribution to the development of party wear design, especially in terms of the selection and use of materials to create engaging and immersive visual effects that support the overall application of the fluidity theme. The findings also open up opportunities for further research that combines aesthetics with function in order to create more multifunctional and sustainable party wear designs.

Future research should further explore the use of different types of fabric with the same technique in order to produce a wider variety of scale effects while adding visual depth to the design of party wear. Testing the durability, comfort, and functionality of the garments in actual use also needs to be done to ensure that the garments are not only aesthetically pleasing but also comfortable to wear in various party situations. It is important to deepen the analysis of the balance between aesthetics, comfort, and functionality in party wear so as to create designs that are more adaptive to market needs and the development of future fashion trends. Further research can also focus on exploring more diverse material combinations, as well as the impact of material functionality on the overall fashion design.

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