

A Study to Understand How Visual Communication Supports the Perceived Value of Nonexpert Digital Fashion Investors

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Abstract: Unlike the traditional fashion market, where there is easy access to the details of fashion manufacturing, such as textiles and functionalities, the digital fashion market, by nature, prevents traditional fashion investors from accessing complex data without the requisite knowledge of virtual asset transactions. To improve the transition period of shifting from physical to digital, this paper studied how design can increase user engagement and how visual communication impacts user behaviors by utilizing perceived value to better understand the potential demands of the users. This paper conducted 2 stages of study with interface designs through a group of participants. This research examined and condensed the most frequently expressed viewpoints to investigate how visual communication might improve consumers' perceived value. The results aim to assist future visual designers.

Keywords: Visual communication; Fashion market; Digital fashion sector; Visual design; Intangible asset

Online publication: November 29, 2024

1. Introduction

Technology developments, such as virtual reality, metaverse, and non-fungible tokens are changing how fashion is experienced, traded, and consumed in the ever-changing digital fashion market. For example, Fabricant's partnership with Dapper Labs, which resulted in the first-ever digital-only dress sold for \$9,500 on the blockchain platform, shows how digital fashion has revolutionized the industry ^[1]. In contrast with physical fashion, which uses resource-intensive procedures like shipping, dyeing, and the production of textiles, digital fashion produces virtual clothing with no need for physical distribution and does not require textiles ^[2]. Consequently, this change reduces production and transportation-related waste and carbon emissions. Furthermore, digital fashion also makes it possible for designers and brands to market and prototype their creations in a virtual setting, resulting in more effective production cycles, a reduced need to produce real samples, and a reduction in overproduction ^[3].

However, complex data presentation and the lack of easily navigable visual communication on digital fashion trading platforms can prevent inexperienced or unskilled investors from compromising their trust and usefulness while browsing and purchasing digital fashion pieces. Specifically, users' capacity to understand the trading process and effectively make informed decisions is frequently hampered by complex interfaces, crowded layouts, sales data, and inconsistent design components ^[4]. This problem is made worse by insufficient instructions or explanations, which makes investors feel helpless and unprepared to deal with the platform's complexities. A lack of easily navigable visual communication discourages potential investors from using the platform, which further reduces its accessibility and growth potential. Consequently, it is crucial to mitigate these issues and promote a more inclusive and user-friendly trading experience for investors with average levels of expertise. Hence, this work should be done by improving visual communication through intuitive design, making clear navigation signals, and creating instructional tools.

This research article conducted a study from the perspective of perceived value theory. Perceived value theory was originally utilized in the field of the domains of economics, consumer behavior, and marketing. It refers to the value that a consumer places on a good or service depending more on their own experiences than its inherent or objective characteristics ^[5]. Design aesthetics, brand associations, rarity, and the opportunity for social status or self-expression in online communities are some of the factors that shape people's perception of value in the realm of digital fashion, where users interact with clothing in virtual spaces such as gaming, social media or metaverse environments ^[6]. The perceived emotional, experiential, and social benefits take precedence over any functional utility in the conventional sense as the main factors influencing value. Therefore, this research studied how visual communication affects user behaviors by utilizing perceived value to further understand the audiences' demands and how design can enhance user engagement.

The study utilized design to examine how users perceive their value through visual stimulation. The qualitative study, involving 15 participants, demonstrated a profound reception towards the design workshop. The research developed an entry survey at the first stage to recruit 15 participants out of 54 who met the criteria and developed four design considerations based on perceived value. With interpretations aligning more closely with the goal, in the second stage, the research designed a set of interfaces based on the considerations, followed by a new set of semi-structured interviews for the recruited participants. This study improved the design and gained a deeper comprehension in response to the comments and recommendations received. These included streamlining data for greater usability, broadening the range of experiences at events, and developing a community area to enhance intimacy and a feeling of inclusion. Lastly, the study analyzed and summarized the most mentioned perspectives to study and enhance users' perceived value via visual communication.

The study examined and highlighted the most important viewpoints given, helping visual designers comprehend how visual communication contributes to consumers' perceived value. The paper contributes to digital fashion from three aspects: (1) It provides an understanding of how visual communication affects and assists the market of digital fashion. (2) It fosters a deeper comprehension of utilizing perceived value in visual design and the digital fashion industry. (3) The paper offers beneficial avenues for further investigation and implementation in both academic and professional contexts.

2. Related work

2.1. Digital fashion

Design, production, and marketing of apparel and accessories that are only available digitally is referred to as “digital fashion”^[7]. Digital fashion, in contrast to traditional fashion, makes use of technologies like 3D modeling, augmented reality (AR), and virtual reality (VR) to create virtual clothing that can be worn in online gaming environments, virtual worlds, and social media^[8]. By providing environmentally friendly and waste-free substitutes for physical production, this cutting-edge sector is reshaping the fashion industry. Furthermore, designers can explore materials and styles that would be impractical or unattainable in the real world because of the boundless inventiveness offered by digital fashion^[9]. Additionally, it democratizes fashion by giving customers more individualized and accessible options. Digital fashion is becoming more and more important as the digital economy grows, propelling technology developments and changing customer behavior in the fashion industry.

Innovative cases such as Balenciaga’s partnership with Fortnite, for example, introduced virtual apparel for in-game avatars, combining luxury fashion with the gaming world^[10]. Gucci’s foray into virtual reality with their Gucci Virtual 25 sneakers, which can be worn in augmented reality and certain virtual environments, is another noteworthy example of the brand’s progressive mindset^[11]. These cases highlight the emerging intersection of fashion, technology, and digital culture, opening up new business opportunities and consumer experiences.

Digital fashion is crucial in related environments, culture, society, and creative industries^[12]. It addresses pressing sustainability issues by lowering the waste and carbon footprints in contrast to physical clothing, which is reliant on manufacturing, shipping, and selling. From a cultural and socioeconomic perspective, digital fashion democratizes access to high fashion, enabling a wider audience to interact with and express themselves through designer products without being constrained by financial or physical boundaries^[13]. This openness promotes a more varied and just fashion scene. Moreover, digital fashion pushes the frontiers of design in the creative sector by providing boundless opportunities for experimentation and creativity without being constrained by tangible materials. This move to digital media not only increases artistic freedom but also speeds up the evolution of fashion as an art form, redefining the future of the sector by fusing technology and traditional craftsmanship. Concerns about environmental sustainability in the traditional fashion sector are greatly addressed by digital fashion. The production of digital clothing reduces waste and lowers the carbon footprint associated with clothes manufacturing, shipping, and disposal by doing away with the need for physical materials. This change provides a sustainable substitute that complies with rising consumer and governmental demands for environmentally friendly behavior^[14].

Furthermore, digital fashion harkens a major economic revolution in the fashion industry. Smaller designers may now compete on a global scale and fashion design is becoming more accessible thanks to the ability to make and distribute digital fashion goods at a cheaper cost of production^[15]. Moreover, the application of blockchain technology to digital fashion assets creates a new market for digital fashion trading and investment by facilitating safe transactions and clearly defining ownership rights^[16]. This not only generates new sources of income but also presents creative monetization techniques and business models, such as digital clothes rentals and virtual fashion shows.

The way people express their identities and interact with fashion is being redefined by digital fashion, which is changing cultural and social dynamics. Digital fashion facilitates boundless creativity in virtual surroundings, allowing users to explore styles and trends that might be unfeasible in the real world^[7]. This promotes a more diverse and inclusive fashion culture in which individuals are free to express themselves without regard to their

financial or physical restrictions. Furthermore, digital fashion creates new opportunities for social engagement and personal branding in increasingly virtualized social spaces by enhancing social connections inside online communities.

Besides solely wearing digital fashion garments online, cutting-edge digital platforms and creative design are combined to create a new frontier in the fashion and technology industries: digital fashion collections and investments. These collections consist of clothing and accessories that are made, exchanged, and worn only in online environments including social media, virtual worlds, and augmented reality apps^[17]. The digital fashion market is facilitated by platforms that allow digital assets to be bought, sold, and traded. These platforms frequently use blockchain technology to guarantee provenance and authenticity^[16].

These digital goods are bought by consumers and investors for a variety of uses, including speculative investment, personal use in virtual settings, and the feeling of being involved in a fast-evolving cultural phenomenon. The worldwide reach, minimal entry barriers for designers, and potential to create new revenue streams separate from conventional supply chains are the distinguishing features of the digital fashion sector^[18]. Moreover, as digital fashion gains momentum, it promises to usher in novel approaches to value creation, ownership, and customer interaction.

However, investing in digital fashion entails risk, just like any other kind of investment. Due to speculative activity and trends, the value of digital, non-fungible fashion goods can fluctuate significantly; this volatility is made worse by the fact that the market is still in its infancy. Furthermore, current platforms may become outdated due to the speed at which technology is developing and system failures and security lapses may cause disruptions to the way the market operates. Sophisticated technology is also necessary, which restricts accessibility and could impede industry expansion. Moreover, there is uncertainty because the regulatory environment surrounding digital fashion is still developing^[19]. New rules may complicate investment procedures and raise compliance costs in the areas of consumer protection, intellectual property rights, and digital asset transactions.

Major risks are also posed by ethical and security aspects. Digital fashion assets are susceptible to fraud and hacking, two cyber threats that can cause financial loss and damage investor confidence^[18]. Concerns about sustainability are raised by the high energy consumption of blockchain technology and designers may be taken advantage of by others who can easily copy and distribute digital works^[20]. Because of the liquidity concerns associated with the immaturity of the market, evaluating the long-term viability and profitability of investments can be difficult. During times of market stress, low liquidity can result in severe price volatility and increased transaction costs. Therefore, even though digital fashion presents creative investment prospects, managing these risks requires careful planning and due diligence.

2.2. Perceived value for digital fashion

A complex network of platforms and technologies powers the digital fashion industry, enabling the production, sharing, and use of virtual clothing and accessories. Digital fashion platforms are essential to this ecosystem because they serve as an intersection where investors, designers, and customers can transact^[21]. These platforms frequently produce and display digital fashion goods in immersive surroundings by utilizing technology like 3D modeling, augmented reality (AR), and virtual reality (VR). Blockchain technology plays a crucial role in guaranteeing the ownership, provenance, and authenticity of digital fashion assets, sometimes by utilizing non-fungible tokens (NFTs)^[17]. Typically, cryptocurrencies are used to facilitate transactions on these platforms, offering safe and open payment options.

One well-known digital fashion platform is The Fabricant, a cutting-edge online fashion boutique that only does business virtually. The Fabricant creates and markets one-of-a-kind digital clothing using blockchain technology and 3D design. Its dedication to sustainability is one of its main advantages; waste is eliminated, and the environmental impact of traditional fashion manufacturing is diminished through digital-only production [22]. The Fabricant's use of NFTs also adds value and security for investors and customers by guaranteeing the ownership and uniqueness of each digital garment [23]. A drawback is the heavy reliance on technology, which makes it inaccessible to anyone without sophisticated computer knowledge or the required gear. Furthermore, there can be significant volatility and investment risk due to the speculative nature of NFTs and the digital fashion market. The Fabricant presents the creative possibilities of digital fashion platforms, but it also draws attention to the problems of market stability and technological accessibility.

The behavioral perspective of perceived value is beneficial in constructing a digital fashion platform as it emphasizes comprehending and taking advantage of customer preferences, motives, and decision-making processes [5]. Thus, by focusing on perceived value, platforms can customize their services to match the unique demands and preferences of their potential market, further fostering user happiness and engagement. This viewpoint aids in pinpointing important elements that influence customer behavior in the digital fashion industry, such as visual communications, social status, and experiential enjoyment. In this study, 5 consumption values under the behavioral perspective of perceived value are used as the foundation of the design process as follows.

- 1) Functional value: The perceived utility through the possession of salient functional, utilitarian, or physical attributes.
- 2) Social value: The perceived utility through the association with positively or negatively stereotyped demographic, socioeconomic, and cultural-ethnic groups.
- 3) Emotional value: The perceived utility through the creation or perpetuation of feelings or affective states.
- 4) Epistemic value: The perceived utility through the arousal of curiosity, the provision of novelty, and/or the satisfaction of a desire for knowledge.
- 5) Conditional value: The perceived utility through the presence of antecedent physical or social contingencies in a specific situation [24].

Since perceived value emphasizes the intangible and experiential elements that are particularly appealing in the digital sphere, it is especially well-suited for developing a digital fashion industry [5]. In contrast to traditional fashion, which places a strong emphasis on the tangible attributes of materials and craftsmanship, digital fashion is fueled by the individualized, frequent emotional bonds that consumers develop with virtual clothing. As digital fashion is by its very nature immaterial, how valuable anything is seen is vital [3]. Consumer perceptions of the exclusivity, distinctiveness, and visual attractiveness of digital clothing are important to the concept of perceived value.

This approach makes use of fashion items' cultural significance, visual appeal, and brand storytelling — all of which are important in digital areas where people are trying to express themselves in new and innovative ways [25]. Companies such as The Fabricant can generate perceived value by elevating their offerings above digital files and using compelling visual communications and appealing storytelling. Furthermore, by leveraging cutting-edge technology like virtual reality (VR) and augmented reality (AR), perceived value enables digital fashion markets to improve the user experience. Virtual try-ons and immersive fashion presentations, for example, can greatly raise the perceived worth of digital clothing. Additionally, platforms may attract customers who value cutting-edge and immersive digital interactions by differentiating their services and justifying higher price points through the

creation of engaging and interactive experiences.

The perceived value model also makes good use of the ideas of exclusivity and scarcity, which can influence consumer behavior^[5]. Digital fashion products can be released in limited quantities, which increases their perceived novelty and appeal. These products are frequently minted as non-fungible tokens (NFTs). This method can create a heightened demand and a premium price in the online market, much like the attractiveness of limited-edition physical luxury items. Customers are prepared to pay for exclusive digital goods that have status and exclusivity within their online groups, which helps in the construction of strong communities that further contribute to the reinforcement of perceived value. Social media and virtual worlds, where users discuss their purchases and style choices, provide a network effect that drives the digital fashion industry^[15].

Positive public perception and broad community acceptance are two factors that can increase the perceived value of particular digital fashion items. In digital environments, where peer opinions and trends have a considerable influence on consumer choices, this social validation is essential. Moreover, to better adapt to the market, in contrast to pricing strategies that are based on cost or competition, perceived value pricing is more flexible and adaptive to the ever-evolving digital fashion market. It gives brands the flexibility to modify their value offers in response to new trends, developments in technology, and evolving consumer tastes. In a market where innovation and constant change are the norm, this adaptability is crucial for digital fashion platforms to stay current and attractive.

To sum up, perceived value is effective for developing a digital fashion market since it emphasizes the significance of brand perception, technical engagement, exclusivity, community impact, and market adaptability — all traits unique to the digital fashion space. This strategy successfully takes advantage of the special opportunities provided by the digital environment while also capturing the essence of what makes digital fashion appealing.

2.2.1. Traditional market

In traditional markets, consumers' views and decisions to buy are shaped by a variety of factors, including sensory experiences, interpersonal relationships, and well-planned product displays. The upscale London department store Harrods is a well-known example of these factors being used to drive sales. Harrods uses luxurious décor, upscale displays, and individualized customer service to create an environment that is carefully chosen to improve perceived value and exude exclusivity and prominence. With tastefully chosen lighting, sophisticated fixtures, and thoughtfully arranged sections, the store's layout and visual merchandising are intended to highlight the superior quality of its offerings^[26]. Harrods also often arranges designer presentations, special events, and limited-edition releases, which enhances the perceived value and rarity of their products^[27]. This multi-pronged strategy not only raises the product's perceived worth but also improves the shopping experience, building a strong sense of loyalty and trust among its customers.

2.2.2. E-commerce

This research draws on Hsu and Lin's interpretation of how perceived value plays a vital role in mobile app purchases; their work states that a user's intention to make in-app purchases is highly influenced by stickiness and social identity^[28]. Through thoughtful presentation and marketing strategies, perceived value influences customer purchase decisions and brand loyalty, which is crucial in online markets. E-commerce sites like Amazon and eBay, increase perceived value by including thorough product descriptions, excellent photos, and user testimonials that establish credibility and offer social proof^[29]. The utilization of comprehensive features, comparative analyses,

and open pricing structures facilitates customers' comprehension of the distinct advantages and distinctions of a given product. Furthermore, the use of badges such as "Amazon's Choice" or "Best Seller" denotes popularity and quality, improving the product's standing in the eyes of prospective customers. In addition to increasing perceived value, promotional techniques like discounts and time-limited deals also engender a sense of urgency and exclusivity. Online marketplaces may produce a more engaging and reliable purchasing experience by skillfully utilizing these components, which will eventually increase engagement and conversion rates.

2.3. Design for non-expert fashion investors

Professional and non-expert fashion investors/collectors differ primarily in their level of expertise, resources, and approaches to strategy. Professional fashion investors approach the market with a high degree of skill and a strategic view. These investors are well-versed in market dynamics, which leads them to make well-informed decisions as they frequently have access to networks, resources, and insider knowledge about the sector. Experts utilize analytical instruments and market analysis to steer their investments, emphasizing items with noteworthy historical significance, potential for growth, and uniqueness. Through a financial lens, they prioritize portfolio diversification and long-term value when evaluating fashion assets. This scientific approach results in higher returns that are more constant and are in stark contrast to the more intuitive and emotionally driven techniques of non-experts generally.

On the other hand, fashion collecting is usually done as a part-time or secondary interest by non-expert fashion investors. Frequently, trends they see in the media or based on personal preferences or emotional attachments, influence their financial decisions. This group may not have a thorough grasp of all the nuances of the market, including historical relevance, designer influence, and market cycles, and they may not have easy access to insider information. Thus, their investment plans are less grounded in thorough market research and they are more vulnerable to subjective prejudices.

Moving onto the digital fashion realm, besides the distinctions noted above, the difference between these two groups of investors is becoming more nuanced yet showing major disparities. Non-expert investors in digital fashion tend to interact with this new market through easily navigable platforms and well-liked digital fashion products, such as virtual apparel for gaming avatars or limited-edition NFTs promoted on social media. The excitement of following a new trend, the appeal of novelty, and the impact of digital culture could be the driving forces behind their investment. These investors primarily rely on popular viewpoints, easily accessible information, and community opinions in the absence of technical skills or in-depth market knowledge, which might expose them to increased risks and market volatility. Rather than considering long-term financial possibilities, they frequently concentrate on the aesthetic and social worth of digital fashion goods.

Professional digital fashion investors, on the other hand, approach the market with a more knowledgeable and analytical viewpoint. They are extremely knowledgeable in digital asset management, blockchain technology, and the cultural and historical relevance of digital fashion trends. These experts are skilled in using digital platforms, determining the provenance and legitimacy of digital objects, and spotting those with substantial future value. Comprehensive market research, trend analysis, and partnerships with digital fashion designers and developers all inform their tactics. In anticipation of long-term appreciation and market upheavals, this enables them to make wise investments in high-potential digital assets, such as rare NFTs with historical value or digital fashion pieces by well-known designers.

The democratizing feature of digital platforms, which may provide more access to fashion assets regardless

of location, benefits both groups. However, their ability to negotiate this intricate, ever-changing market will determine how successful and stable their investments are to a considerable extent. While professionals aim to use their knowledge for significant financial benefit and influence within the digital fashion ecosystem, non-experts concentrate on the social and aesthetic enjoyment of digital fashion.

It can be intimidating for non-expert investors to interpret financial data and market patterns. Complex information is made simpler by visualization, which converts data into understandable visual representations like graphs, charts, and infographics. These visual aids make it easier for novice investors to understand important data and trends, allowing them to make well-informed decisions without the need for a deep understanding of finance. With captivating visual content that draws and holds their interest, the investing process can be made more engaging and approachable with the use of interactive dashboards, video presentations, and virtual tours of fashion items and technologies. Platforms can generate more interest and enthusiasm for investment possibilities by providing them with precise visual content. Moreover, effective narratives are essential for communicating the promise and ambition of digital fashion endeavors and visualization makes this possible. Platforms can visually represent a fashion brand's path, market effect, and potential for future growth. Well-crafted visual narratives can evoke strong emotional responses in novice investors, increasing their likelihood of making an investment predicated on the brand's potential and story.

By offering precise and comprehensive visual representations of financial performance, market position, and development potential, visual tools can improve transparency. Non-expert investors, who could be leery of the complexity and perceived risks of fashion investments, are won over by transparent visualizations. Platforms can allay worries and increase investor confidence by providing data in an easy-to-understand and visually appealing way. Visual representations that display financial performance, market position, and growth potential side by side make it simple for even non-expert investors to make comparisons. Investors can then more easily find the most attractive options without having to conduct in-depth financial analysis. To further earn the trust of non-expert investors, investment decisions require a thorough understanding of customer behavior and market trends. Investors without a technical background can nevertheless gain valuable insights into market dynamics by utilizing visualization tools like heat maps, trend lines, and consumer demographic charts. In summary, investors are better able to recognize possibilities and make data-driven investment decisions when they have access to visual representations of consumer preferences, buying patterns, and new trends, resulting in a powerful and efficient method to engage and convert non-expert investors in the digital fashion landscape. It does this by making data interpretation easier, increasing engagement, making an emotional appeal, fostering transparency, demonstrating market trends, offering user-friendly interfaces, highlighting innovation, and facilitating comparative analysis.

3. Perceived value understanding and design

3.1. Stage 1: Understanding non-expert investors' perceived value

3.1.1. Participants

To precisely locate the audience group, this study recruited participants through word-of-mouth, social network, and the online community by sending out surveys to 54 individuals who are interested in fashion, which resulted in 15 participants who were recruited by fulfilling the following criteria (**Figure 1**): 1) Age from 20–30. 2) With occupations outside the fashion/fashion-related industry. 3) Active in fashion investment/collection. 4) An active interest in digital fashion investment/collection 5) Has uncertainties about digital fashion in several aspects.

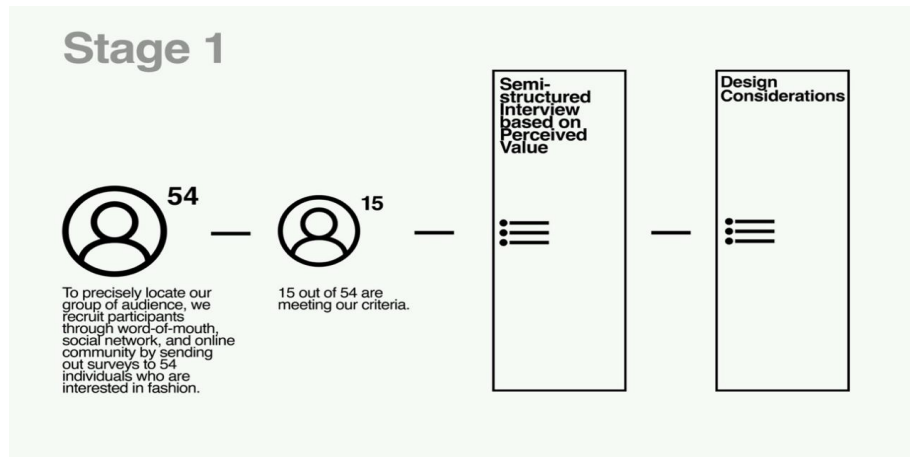


Figure 1. Stage 1

3.1.2. Semi-structured interview

To investigate what value the participants perceived from the current digital fashion market, a semi-structured interview was developed based on perceived value. 15 participants were given an overview at the beginning by sending them the questions. After that, the study set aside time to discuss their individual viewpoints in more detail with the following speech-to-text transcription. The study based the questions on the behavioral perspective of perceived value (**Table 1**): (1) Functional value. (2) Social value. (3) Emotional value. (4) Epistemic value. (5) Conditional value. The study used thematic analysis, which is recommended for researchers to systematically identify, analyze, and report patterns within the data. Finally, the study developed the design considerations further, based on the observations.

Table 1. Behavioral perspective of perceived value

<p>(1) Functional value: The perceived utility through the possession of salient functional, utilitarian, or physical attributes.</p> <p>Do the functionalities in existing digital fashion markets meet the standard of your shopping experience in a physical fashion? If not, what changes do you want to see in the near future?</p> <p>(2) Social value: The perceived utility through the association with positively or negatively stereotyped demographic, socioeconomic, and cultural-ethnic groups.</p> <p>Does the current content on existing markets speak to you in the context of culture and fashion? If not, what changes do you want to see in the near future?</p> <p>(3) Emotional value: The perceived utility through the creation or perpetuation of feelings or affective states.</p> <p>Do the existing markets convey fashion content (storytelling) in a compelling way to you? If not, what changes do you want to see in the near future?</p> <p>(4) Epistemic value: The perceived utility through the arousal of curiosity, the provision of novelty, and/or the satisfaction of a desire for knowledge.</p> <p>Is the current content appealing to you and does it inspire you to explore more about digital fashion? If not, what changes do you want to see in the near future?</p> <p>(5) Conditional value: The perceived utility through the presence of antecedent physical or social contingencies in a specific situation.</p> <p>Do you feel secure to take part in the current market due to its investment nature? If not, what changes do you want to see in the near future (platform, market, and operation)?</p>

3.1.3. Design considerations

A total of 4 directions were developed and analyzed through thematic analysis. The goal of the following considerations is to investigate how the audience perceives value through visual communications and to better understand user experiences with such features. This work will enable researchers to gather opportunities and implications for future research and design. To this end, the study formulated a set of design considerations to guide the development of visualization.

C1: Visual accessibility: Interaction (Functional value)

In digital fashion platforms, social interaction and the quality thereof are crucial since they have a direct impact on user engagement, loyalty, and pleasure. Users may discuss their fashion choices, receive feedback, and keep up with trends through high-quality social interactions made possible by vibrant community features and user-friendly interfaces.

C2: Visual compelling and storytelling: Culture (Social and emotional value)

Content marketing and storytelling techniques are useful for emphasizing the cultural values and narratives behind subcultural fashion trends. Digital fashion platforms provide users with a deeper, more engaging experience by revealing the history, prominent characters, and inspirations of these subcultures. By fostering a deeper awareness and comprehension of subcultural fashion, this educational component contributes to the platform's increased engagement and informativeness, further enhancing the audience's transition from physicality to digitalization.

C3: Visual inspiration and enlightenment: Customization (Epistemic value)

Platforms can provide knowledge and tutorials visually that correspond with users' own preferences in fashion design and aesthetics by providing customizable interfaces and content. People are more inclined to interact with and retain content that feels relevant and individualized; thus, this customized approach improves user engagement and retention.

C4: Visual risk relief: Up to date (Conditional value)

The in-depth market knowledge and analytical tools that professionals utilize to make well-informed selections are sometimes absent from non-expert investors. Consequently, having access to up-to-date data about customer preferences, designer releases, industry trends, and technology advancements can greatly improve their ability to make decisions. Current data makes it easier for non-experts to comprehend how the digital fashion business is changing, enabling them to spot new chances and steer clear of fading or out-of-date trends.

3.2. Stage 2: Design visualization for non-expert investors

3.2.1. Visual communication

Building a digital fashion platform requires effective use of graphic design since it improves engagement, inspiration, narrative, and investment security. Graphic design is rather accessible on a wide range of platforms and devices. While AR/VR technologies bring unique and immersive user experiences, visual communication is more effective for attracting and engaging users due to their accessibility, cost-effectiveness, and immediate impact. Graphic design is universally accessible across various devices and platforms, allowing users to instantly engage with visually appealing and compelling content without accessing complex hardware or software. It ensures that a wider audience can be reached effortlessly.

The study formed a group of 4 visual designers and 2 digital fashion experts. The study created a workshop to work on visualizing nonexpert investors' perceived value based on the 4 design considerations. 4 designers were

given distinct tasks to complete in this workshop: (VD1) Management and customization of the user interface and experience of websites. (VD2) Graphic developments in response to user demands. (VD3) Use of typography. (VD4) Digital platform interaction design. Conversely, the 2 digital fashion experts were dedicated to (DE1) technical proficiency encompassing virtual merchant transactions, market intelligence, and information precedence and (DE2) a designer of digital fashion who designs and lists products. The initial brainstorming session resulted in 14 concepts with various touchpoints and insights. Next, based on the perceived value of each design, the study assessed and graded each design according to four design considerations. Ultimately, for the 6 design concepts that received the highest scores, the study continued to construct high-fidelity prototypes (**Figure 2**).

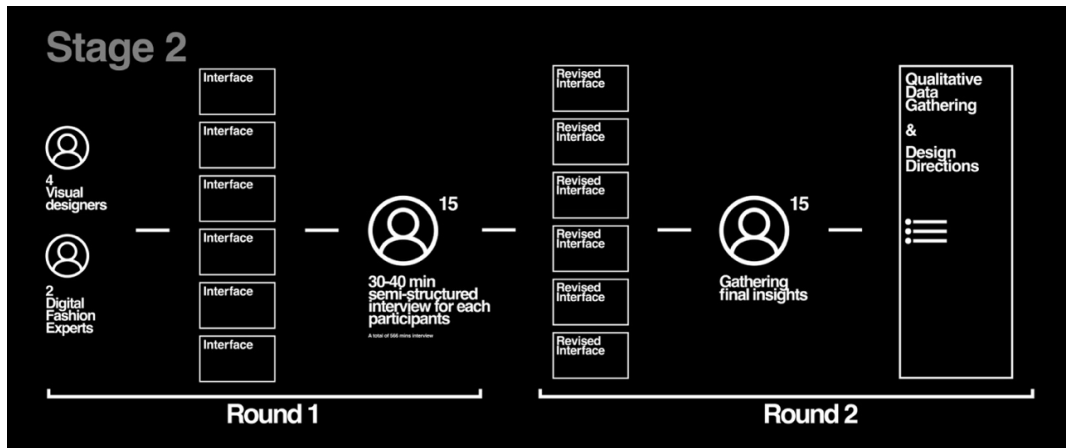


Figure 2. Stage 2

3.2.2. Interface design

(D1) Introducing the “Market Palette”, an interactive feature that analyses investment risk by the tone of colors (**Figure 3**). Green represents positive figures whereas red indicates negative fluctuated data. Its development was driven by the functional value, providing users with a thorough and comprehensible readability to aid in making better investment decisions.



Figure 3. Design 1: The “Market Palette”

(D2) Based on the emotional and epistemic value, the community section draws inspiration from video games that not only offer various opportunities to socialize but encourage users to accumulate scores to unlock more exclusive content (**Figure 4**). This allows users to engage in online activities, such as sharing their own designs, keeping up with the newest trends, and watching/participating in virtual fashion runways.



Figure 4. Design 2: The Community

(D3) The customization studio interface speaks to the epistemic value (**Figure 5**). This design provides users with a creative area to acquire knowledge from a beginner's aspect. To avoid the complex customization of the user interface that current markets are offering, the designer integrated a typography-driven composition that is simple, fun, and easy to use. As the introduction suggested, there are only 4 steps to take without having any complex technical process.



Figure 5. Design 3: The Studio

(D4) Following D3, the studio provides the user with the opportunity to create exclusive digital garments (Figure 6). The Showroom and “Wear it” features allow users to post content in the communities, or list their creativity on marketplaces. Furthermore, real-world fashion elements are included to indicate each process and make it user-friendly, which further engages with the emotional value.

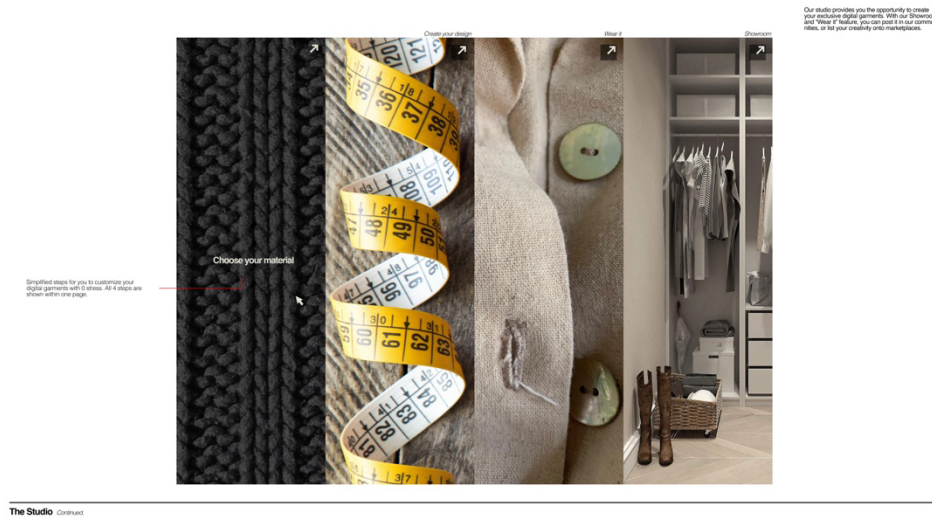


Figure 6. Design 4: The Studio continued

(D5) Following D4, Figure 7 shows an example of an opened material page; it offers information on a specific textile: functionalities, usage, and background. This design further enhances the educational intention of utilizing the epistemic value to a wider audience.



Figure 7. Design 5: The Studio continued

(D6) To address the social and conditional value, the team developed “The Ring” which enables users to become informed about digital assets and take control of digital sustainability (Figure 8). It is a hologram indicator

of the value fluctuations of all the collections for each user. It is an ever-changing ring shape that allows the user to visually sense the change in value of each item in their collection.

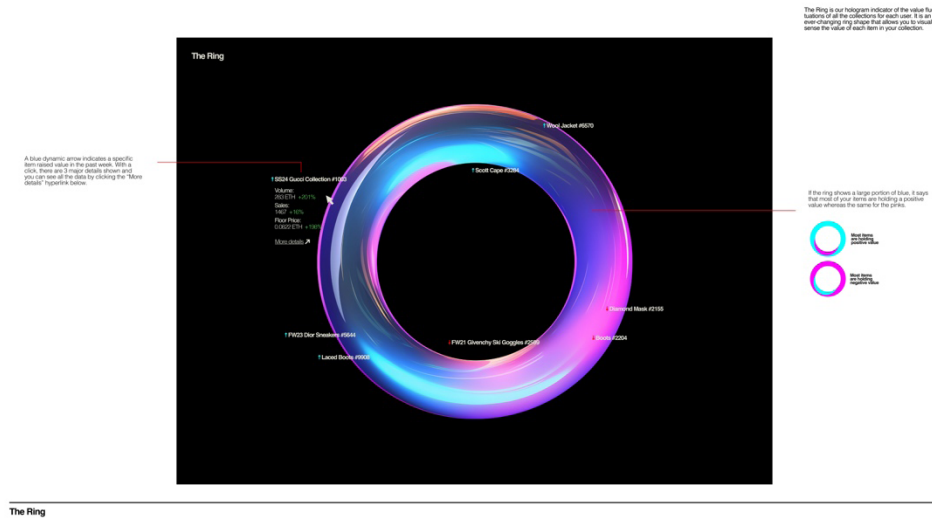


Figure 8. Design 6: “The Ring”

4. User experience study

4.1. Participants and procedure

The study recruited 15 participants from stage 1 to further test and examine how visual communication supports their perceived value of the interface design. The participants were 5 females and 10 males aged 24–29, from a variety of backgrounds and active in industries outside of the digital fashion market (Table 2).

Table 2. Participant information

	Gender	Age	Location	Occupation	Level of expertise in digital fashion investment
P1	Male	24	Mainland China	International commerce	Moderate
P2	Male	26	Los Angeles, United States	Auto modification	Moderate
P3	Female	27	Mainland China	IT	Low
P4	Male	25	London, United Kingdom	Photographer	Low
P5	Female	24	London, United Kingdom	Graphic designer	Low
P6	Male	24	Shanghai, Mainland China	Graphic designer	Low
P7	Male	26	Mainland China	Business owner	Low
P8	Female	25	Virginia, United States	Illustrator	Moderate
P9	Male	29	Washington, D.C., United States	Government worker	Low
P10	Male	26	Auckland, New Zealand	Business owner	Low
P11	Male	27	Beijing, Mainland China	Business owner and basketball player	Moderate
P12	Male	28	Maryland, United States	Freelance	Low

Table 2 (Continued)

	Gender	Age	Location	Occupation	Level of expertise in digital fashion investment
P13	Male	24	Beijing, Mainland China	Civil engineering	Moderate
P14	Female	26	Kaohsiung, Taiwan	Business owner	Low
P15	Female	25	Oxford, United Kingdom	College student	High

To understand how visual communication affects their perceived value towards digital fashion, the study started a 2-round workshop and encouraged participants to take part in the design process. In the first round, each participant was sent an annotated portfolio set of 6 interfaces via WhatsApp, Messenger, and Email and took part in a 30–40-minute semi-structured interview dedicated to the 5 perceived values in both online and physical forms. The study conducted the investigation using the research-through-design method and gained situated knowledge for the second round to examine and study the design based on participants’ needs, including visual adjustments, functionality of user experience, and perceived value. An example of this process can be seen in the work conducted on functionality. Six participants noted that the visual complexity of the investment data was high. As a result, the team made adjustments to the typography and layout to reduce the amount of superfluous information. Lastly, the study distributed the revised design and interviewed the participants in the same manner as in round 1.

The interview content includes a total of 566 minutes of recordings which were then transcribed. By utilizing thematic analysis, the study initially read the text version while listening to the recording to ensure accuracy and started to immerse in locating patterns. To identify themes and patterns, the study gathered similar terms, such as “market risk” and “fluctuation” and circled back to discover the ideas that caused their emergence. The study then filtered out inaccurate themes that were too broad to settle in a specific area by going back to the transcript and examining if they resonated with the original idea. To ensure the authenticity of each theme, the study assigned them distinct names to avoid the possibility of them overlapping each other.

4.2. Qualitative data gathering

4.2.1. Functional value

Data reduction: Excessive visual communication will affect users’ perception of complex marketing data. Therefore, it is important to reduce and organize investing information to a level of only having the figure that directly affects merchants’ value, as providing this visually contributes to greater accessibility for non-expert investors. For example, as P6 noted, “Too much unfamiliar information always shut down my enthusiasm to explore the digital fashion market, I would like to see the major data that affects a single merchant’s value.” P6 felt that with D.1, “The contrast of colors really makes market data significantly easier to access.” P8 also noted, “The measuring unit is stopping me from making any purchase as I do not know what they indicate and how it works in a larger market.” P8 felt that with D.1 and D.6, “It’s great that you minimalized the measuring unit by bringing up the contrast for people who are newly exposed to the market.”

Personal asset analysis. It is imperative to include advanced visual communication tools in digital fashion platforms to improve users’ assessments of investment risks. Investors can get intuitive, real-time insights into consumer behavior, market trends, and financial data by utilizing interactive dashboards, heatmaps, and risk scenario simulations. By presenting complex data, these visualizations can draw attention to possible risks and possibilities and help decision-makers be confident with their choices. However, current markets lack an overall

assessment of individual collection value, leading to a lack of investment confidence. P6 was interested in the hologram risk indicator, “It is rare to see the analysis for users’ personal collections [...] As someone who is not professional about my virtual assets, I frequently do not get informed about their market values.” After P2 learned D.6, and reported, “I feel like the use of a dual color system could save me from a lot of hassles [...] I check my NFTs nearly 3 times a week, simply because they are everywhere, it would be nice that one hologram can do the job by color differences [...]”

Virtual events and experiences: By using visual communication to enhance virtual events and experiences on digital fashion platforms, immersive, visually dynamic environments that capture and engage users are essential. The thrill of real-world fashion events can be replicated online and brought to life for users through the use of real-life fashion images and seamless shopping navigation interfaces. Users’ engagement is increased when they can actively participate rather than just observe through interactive aspects like collection and personalization. Customized virtual places and invitations are examples of personalized visual material that gives consumers a sense of individuality. P10 noted that D.2 and D.4 “are quite engaging features and definitely draw my attention when I browse the site [...] It connects users to the digital clothes as we wear the clothes out in the physical world.” P7 also reacted to the illustrations on D.2: “I like the part where the overall score is displayed for each community and the way you are able to customize your own piece and place them into the communities to earn score [...]”.

4.2.2. Emotional value

Understanding the transition period. The reason for having a transition period for non-expert users is that switching from traditional to digital fashion involves more than just implementing new technology, as it also entails altering deeply ingrained routines, beliefs, and structures. The transition period is the time it takes for people to get used to these changes. By leveraging visual communication strategies, it offers an intuitive and engaging experience for non-experts shifting from traditional to digital fashion. Transitioning from skepticism or an attachment to real clothing to curiosity, excitement, and openness toward virtual experiences is a positive emotional shift. Because of the lack of tactile interaction and the cultural significance of physical clothing, traditionalists could initially feel cut off. However, encouraging feelings like curiosity about innovation, admiration for imaginative possibilities and a feeling of community within online networks can aid in cutting off this divide.

Visualizing how digital fashion creates new opportunities for exclusivity, sustainability, and self-expression facilitates this emotional shift and would help people develop an intimate bond with fashion through an innovative, immersive lens. P1 highlighted this: “I am always a big fan of fashion and fashion investment, with everything moving onto the digital realm, I feel like fashion is rooted in the physical world as we wear the clothes to deliver fashion expression. I believe something is missing to build the bridge between real and virtual.” After experiencing D.4 and D.5, P1 stated, “It is nice to see visuals of physical fashion instead of solely digital cloth that scare off a lot of real-world fashion enthusiasts. Users are attracted to digital fashion for many different reasons, it could be video games, virtual goods collectors, or simply curiosity. But one thing that bonded with them is their interest in expressing themselves.”

Users’ individuality and self-expression. Digital fashion relies heavily on visual communication to translate abstract concepts of identity and style into concrete, visual representations. These self-expression factors can be an avenue for the exploration of identity, creativity, exclusivity, and community. In an increasingly digital world, it gives individuals the tools to discover, define, and communicate their uniqueness, making self-expression

impactful and accessible. As P1 noted, “Several platforms (digital fashion) are offering customization and I have tried most of them. But they seem to lack a sense of exclusivity for me.” As P1 felt with D.2, “I cannot wait to try the subculture communities where I can share my designs, socialize, and earn credits.” P5 also mentioned, “I feel like current designs of digital fashion markets are designed for either professional investors or digital fashion experts. I know they are trying to make it ‘cool’ to look at, but it certainly lacks an interaction with nonexperience users.” After engaging with the designs, P5 stated, “I would say you did a good job on engaging potential users due to the step-by-step tutorial for customization, it inspires users’ interests without a complicated process.”

Community and belonging: To foster a sense of community and belonging via visual communication on a digital fashion platform, designers need to develop a visually appealing style that appeals to the platform’s intended audience. This entails utilizing imagery, typefaces, and color schemes that are unified and represent the community’s aesthetics and values. For instance, including realistic and varied personas in fashion imagery promotes inclusion by giving viewers a sense of being seen and welcomed. Additionally, it is possible to prominently highlight user-generated content, which strengthens a sense of community and participation.

Avatars, customized feeds, and community badges are examples of interactive visual components that visually indicate membership in the larger community while also enhancing individual expression. As P12 mentioned, “After purchasing goods on current platforms, I never stick around at any site since there are simply no more things to do besides trading. I understand it could be easy for a lot of investors as they do not care much about fashion. I personally prefer to explore more about what is going on and be part of the community [...]” After seeing D.2 and D.3, P12 reacted, “The gaming achievements within the subculture part seems similar to any ranking system in other video games, it certainly ensures users’ motivation for a long-standing participation in the platform [...]”

Emotional ownership: Building up communities is the foundation for gaining participation and interaction. Furthermore, constructing emotional uniqueness and exclusivity contributes to retaining target audiences. Enabling customization and collaborative design is crucial for the platform’s design. Granting users the ability to personalize, curate, and modify the platform offers them full control and ownership over their online persona. Encouraging user contributions through visual means by putting user-generated content on display, putting user designs in certain communities, and giving out visual badges for achievements helps users feel that their input and identity are reflected on the platform.

Users are more likely to experience a strong emotional connection and sense of ownership when these individualized components are visually integrated into the platform’s general style, allowing the platform to become an extension of their personality and a means of self-expression. P4 noted an example of collaborations between video games and fashion brands, “I think digital fashion survives better in video games because ownership is already built up in video games, and digital fashion can enhance it to a higher level. For instance, like the collaboration between Fortnite and Balenciaga, users feel exclusive when getting a piece from the collaboration and wearing it on their avatar.” After seeing D.2, P4 felt, “I would be happy to try the communities as they seem challenging to me, it is a great way to encourage users to prove their value in the digital world.”

4.2.3. Social value

Subculture and socialization. Curating and exhibiting a wide range of genuine, authentic styles and aesthetics that speak to different subcultural groups is a crucial part of incorporating subcultures into digital fashion platforms through visual communication. Subcultures provide a common identity and aesthetic standards that encourage a sense of community involvement and belonging, which improves interaction and socialization in the digital

fashion industry. Fashion subcultures enable people to associate with like-minded groups online, where they can share ideas, work together on virtual creations, and take part in subcultural rituals like virtual events or style challenges.

Subcultures' distinctive visual codes, symbols, and tales serve as the catalyst for these interactions, which in turn encourage ongoing discussion and participation on these common subjects. Digital platforms also remove geographical restrictions, allowing for global involvement and fostering relationships between varied communities. Higher levels of socialization result from the subcultures' ongoing interchange of creative and cultural capital, as users connect through common interests, shape subcultural trends, and receive reinforcement and social acknowledgment for their online style choices. As P11 puts it, "Fashion is formed along with any subculture is formed [...] It feels inclusive by looking at the community part, I would like to know more about not just the subculture that I am interested in but others."

Storytelling through design: Incorporating storytelling into a digital fashion platform entails narrating the fashion product's path from conception to consumption through visually striking images that highlight the social and ethical aspects of the design. This can be accomplished by producing rich multimedia material that highlights the experiences of craftsmen, the benefits of sustainable techniques, or the social issues the platform supports. As P3 mentioned, "I was first drawn to digital fashion by a real-life fashion event held by ZARA [...] It was about sustainability [...]"

Users feel the deeper significance of the stories behind their purchases through the visual presentation of these narratives, which strengthens the emotional bond and improves their impression of the social value of the platform. Additionally, users are more engaged and have a more meaningful user experience when the brand's mission and values are aligned, which is achieved through the use of storytelling. P5 built up a strong emotional reaction on this: "I am a big sneakerhead, and I always doubt myself if I truly like the shoe that I collected [...] take Air Jordan for example, sometimes I do not feel the shoe by its looking but there was always a rich story that Nike speaks perfectly to me, and the most important part is, it adds tons of market resell value to the shoes [...] and those stories can also be told the same in digital world as well."

4.2.4. Epistemic value

Education and inspiration: Using a multifaceted strategy that makes use of cognitive psychology and design principles is crucial. Learning is facilitated by visually rich and interactive content that presents difficult knowledge in an interesting and easy-to-understand style, such as interactive diagrams and organized tutorials. After experiencing D.3–5, P14 noted, "I enjoy looking at a simple and easy navigated tutorial especially when it comes to an area that I am not familiar with [...] it also could be an inspirational novice entry practice for digital creation [...]" Platforms can improve users' epistemic engagement by combining components such as trend analysis, styling advice, and behind-the-scenes information with high-quality images and intuitive user interfaces. As P11 reported, "I understand users need certain freedom for personalized experience, but a good number of expertise/examples are also needed for beginners [...]" Success stories and expert interviews are examples of inspirational content that not only inspires but reinforces learning by offering context and practical applications, as they improve users' application and acquisition of information, which raises the overall epistemic worth of the digital fashion experience.

Adaptation to digitalization: Facilitating visual communication to dissolve complex and new ideas into a more approachable and engaging way potentially assists users in adapting to digital fashion. As P2 noted, "Visuals have

great possibilities to influence hesitating users, a strong platform can have great potential for not just education but social responsibility as a beacon to guide the direction to the future [...]” Visual aids that lower cognitive barriers to new technology encounters include virtual simulations, interactive interfaces, and imagery. Digital platforms can mimic the physical purchasing experience by simulating the tactile and sensory elements of traditional fashion through intricate images and virtual try-ons, easing consumers into the digital move. P13 made a telling example of this: “We can do what we are doing in the digital world except having a physical object, there is an environment needs to be formed to guide people to get ready [...] Visual tools play a vital role in construct the learning journey as clothes themselves are already a kind of visualization.” Additionally, visual storytelling functions as a teaching tool by highlighting the advantages of digital fashion, such as customization and sustainability, which is in line with modern consumer ideals and promotes acceptance of digital advancements.

User-generated insights. User-generated content (UGC) facilitates peer-to-peer learning and community-driven information exchange, making it a visual communication tool for educational purposes in digital fashion. People learn best from watching other people’s actions, decisions, and styles. UGC helps with this by providing visual representations of user-submitted looks, styling advice, and product ratings. In addition to offering a variety of viewpoints, these visual contributions democratize fashion knowledge by giving consumers access to useful, everyday uses of design concepts that may be more relatable than brand-driven material. As P9 stated, “The story I have been told from platforms are often time confusing, refer to the transaction, online styling, and customization part [...] it does not have to have a forum thing but a collective community where general usage, design, and market investment are constantly shared and talked about by users [...] get informed is a type of gradual education in a long run.” Furthermore, the interactive quality of UGC through comments, likes and shares promotes additional interaction and helps consumers comprehend and remember fashion-related information better. Through the creation of a dynamic, interactive learning environment where users continuously build and perfect their fashion knowledge through shared experiences and collective insights, this peer-generated visual information therefore enhances the epistemic value.

4.2.5. Conditional value

User segmentation: User segmentation through visual communication can greatly improve conditional value and user engagement by customizing material to the unique requirements and tastes of various user groups. Visual material is perceived as more relevant and valuable when it is tailored to the user’s identity, preferences, and location. Digital fashion platforms, for example, can provide personalized experiences that appeal to certain users by utilizing dynamic visual interfaces that adjust to diverse user segments, such as age, style choice, or geographic area. After seeing D.2, P6 reported, “I can see the different subculture sections you have here, but I wonder if you can make it accurate to the user who is actually interested in this culture [...] but do not lose the opportunity for them to explore other sections at the same time.” However, P13 noted, “As a relatively new area to me, I would like to discover more about other communities instead of staying in my ‘fashion comfort zone’ [...]” Consequently, it is necessary to have some degree of control over how precisely users are positioned, as user segments can be classified according to their interests while also being visually guided to further areas. In addition to increasing user happiness and engagement, focused visual communication raises the conditional value of the platform’s products since consumers see it as having more utility and being more in line with their individual fashion needs.

Positioning and market conditions: By dynamically matching visual content with changing user demands and

market trends, platforms can proactively position and adapt to market conditions through visual communication, fostering user engagement and conditional value. Designs can better meet the requirements of their customers and create customer value by continuously monitoring and responding to market and personal collection values. After experiencing D.1 and D.6, P11 reported, “Both the merchants’ invest value and The Ring speak to market condition effectively since they are real-time updated for a better understanding of the current market.” Platforms may ensure relevance and resonance with users by quickly updating their visual interfaces, promotional imagery, and product displays to match current trends, seasonal shifts, or socio-cultural movements by utilizing real-time data and analytics. Under certain circumstances, this flexibility in visual communication reflects the shifting tastes of various market segments and customizes user experience, raising the perceived value of the platform’s benefit. P9 noted, “An ever-changing place that follows up with the newest trend is needed for any digital fashion market, utilizing visuals can amplify its potential to draw more potential audience [...]” In the end, visual design improves user engagement by fostering a more personalized and contextually relevant interacting experience that corresponds with users’ changing and urgent fashion requirements.

Sustainability: With visual communication, digital fashion platforms can greatly improve user engagement and conditional value by giving customers a more relevant and meaningful understanding of the abstract and frequently confusing idea of sustainability. Vibrant and unambiguous sustainability messaging can change consumer attitudes by making information easily available and consistent with consumers’ values and beliefs. Achievements, eco-labels, and visual storytelling are useful tools that digital fashion platforms can employ to draw attention to sustainable practices, including the use of eco-friendly materials, ethical labor practices, and information about a product’s environmental impact. As P2 suggested, “Adding sustainability achievement for the D2 can encourage and educate users to enhance their awareness of being sustainable in digital fashion [...] most people are aware of how sustainable digital fashion is as it comes without physicality, but the amount of energy waste cost by collectibles are also raising attention in the industry [...]” Graphic components can help educate users to prioritize sustainability while making decisions about shopping. With a consistent and transparent design that drives sustainability efforts, platforms can foster positive brand associations and long-term loyalty and also increase the conditional value of their offerings by presenting sustainability in an engaging and visually appealing way, so this work will allow users to perceive a greater value due to the alignment with their ethical standards.

5. Discussion

This paper aims to provide future visual designers with a comprehensive and distinctive insight when designing for nonexpert digital fashion investors. The purpose was to study how visual communication helps nonexpert digital fashion and the perceived value of investors in the digital fashion market. The study was divided into two stages. In stage 1, the study recruited participants and generated design considerations by utilizing perceived value. In stage 2, the study developed interfaces with other specialties and conducted two rounds of semi-structured interviews following the research-through-design method. The data was analyzed thematically to identify the qualitative data.

The research highlighted how crucial visual communication is in digital fashion and how it significantly impacts how users perceive value. This perceived value, which includes quality, identity, and experience, is essential for both attracting and retaining customers in a competitive online marketplace. The importance of visual communication cannot be overstated in digital fashion, as it plays a crucial role in shaping users’ emotional

reactions and their overall assessment of worth. Users are drawn in by top-notch images, captivating videos, and visually attractive layouts, which establish an emotional bond with the brand. By strategically employing color, typography, and design elements, brands can elicit particular emotions and connections, such as luxury, refinement, or modernity, thus elevating the perceived value.

While earlier research on perceived value has focused primarily on tangible attributes in traditional markets, the findings highlight the growing importance of symbolic and experiential dimensions in digital fashion ^[5]. This shift underscores the need for visual designers to prioritize these elements to enhance perceived value in virtual environments. In the digital fashion industry, perceived value is crucial since it elucidates how customers value intangible goods, like virtual clothing and accessories. Looking at traditional markets, a product's perceived value is frequently determined by its material, craftsmanship, and usefulness, among other physical attributes.

However, virtual surroundings have a distinct context and lack physical substance, therefore the driving force of perceived value in the digital fashion market differs dramatically. This development is indicative of more general shifts in consumer behavior, where value is now more closely associated with rewards that are emotional, social, and experiential. When it comes to digital fashion, "aesthetics", "brand reputation", "rarity", and "utility within certain virtual ecosystems" are the main variables that impact perceived value, and these all vary due to visual communication factors. Technically, for example, the value of digital fashion goods is enhanced by their exclusivity, which is typically associated with the use of blockchain technology (e.g., NFTs). This is because these items offer limited edition pieces or original designs that are impossible to replicate ^[30]. Customers view these products more highly for their symbolic value and their capacity to communicate status in online communities like gaming platforms and the metaverse than for their practical usefulness. Furthermore, customization and interaction are important factors in increasing perceived value since they allow users to add personality and creativity to their virtual attire by animating or personalizing it. The focus on personal expression through digital fashion raises its perceived value above that of static physical clothing even further.

On the other hand, "pragmatic" characteristics like comfort, affordability, and durability are more likely to impact perceived value in other domains, including traditional retail or service markets. For instance, in conventional fashion markets, buyers frequently assess value according to a garment's quality, fit, or material quality. Perceived value in the hospitality sector may depend on observable factors like location, amenities, or service quality ^[5]. While emotional and symbolic value is present in these industries, functional aspects typically play a significant role in the overall assessment. However, the lack of physical interaction in digital fashion shifts the focus almost entirely to symbolic, aesthetic, and experiential dimensions of value. Consumers are more focused on how digital clothing improves their social identity, visibility, and engagement in virtual places than they are on the garment's durability or comfort, where visual communication thrives.

Social recognition and community validation are especially crucial in the digital fashion market, marking a key distinction from traditional sectors. Peer recognition and approval play a major role in shaping one's perceived value in many visual contexts, including social media platforms and online games. Adorning unique or cutting-edge digital fashion pieces can elevate one's standing in the community and offer social rewards that are essential to the consumer's value perception. This contrasts with traditional markets, where value judgments frequently place more weight on personal utility and enjoyment of the individual. In contrast, the digital fashion industry is driven by network effects, as more people identify and interact with a digital item, its perceived value rises and socializing plays a critical role in this process.

The emphasis on symbolic, social, and experiential elements rather than practical features and physical traits

sets the digital fashion market apart from other sectors in terms of perceived value. The distinct characteristics of digital fashion — its absence of physicality, dependence on virtual ecosystems, and the importance of social validation — create an alternative value system that emphasizes exclusivity, inventiveness, and community engagement over more conventional indicators of value ^[31]. Comprehending these distinctions is vital for marketers and companies seeking to maneuver through the digital fashion landscape and proficiently convey value to customers.

Though digital fashion is still in its infancy, visual communication has enormous potential because it is essential to establishing and educating consumers' connection and acknowledgment. As technology develops, a wealth of options and possibilities will surface. It is currently developing into a mature industry and raising society to new heights in terms of social advancement. Indeed, some of the potential in the immediate vicinity is possible to achieve.

5.1. Future potential

5.1.1. Seamless cross-platform experiences

Improving smooth cross-platform interactions via digital visual design is essential for preserving brand coherence and optimizing the perceived value of different user interfaces. A consistent visual experience is crucial as customers engage with fashion businesses more frequently on various platforms, including social media, PCs, tablets, and smartphones. Whatever platform users frequently interact with, they should always see a unified and consistent brand identity thanks to excellent, responsive graphics that preserve the company's style and messaging. Users may expect the same degree of visual and functional quality throughout their digital experience, strengthening brand identification and developing trust and reliability. A smooth visual design also lessens friction in the user experience, which facilitates users' navigation and interaction with the platform and, in turn, raises their sense of satisfaction and perceived value. A well-implemented cross-platform visual strategy can play a critical role in fostering long-term brand engagement and loyalty in a market where customers have a plethora of options.

5.1.2. Other areas of virtual collectible commerce

Driven by perceived value and visual design, future prospects for the digital collectibles industry include the creation of highly interactive and personalized assets with distinctive customization choices that increase their appeal and exclusivity. By enabling users to engage with collectibles in authentic settings, integration with augmented reality (AR) can potentially create immersive experiences that raise the perceived value of the items. Deeper engagement can be achieved with dynamic images that adapt to user actions or events, while blockchain technology adds value and authenticity by guaranteeing provenance and validity. Working with well-known companies or artists might result in limited-edition products that are aesthetically pleasing and culturally meaningful. Furthermore, gamification and cross-platform capabilities can improve usability and attractiveness, and ethical design elements like environmentally friendly blockchain practices can draw in conscientious customers. Together, these developments will raise the perceived value of digital goods, elevating their interaction, worth, and significance in consumers' digital lives.

5.2. Limitations

The analysis has some limitations because it is an early investigation of perceived worth in digital fashion. It was difficult to capture the subtleties of a future full of virtual enterprises due to the uncertainties surrounding

the direction of digital fashion. Long-term observation and technological advancement should be combined in future research to monitor the evolution and diversity of digital fashion. Therefore, a wider audience is required to minimize prejudice and personal preferences while also enhancing the result's trustworthiness. To better understand how audience perspectives shift relating to perceived value and how the study modifies visual elements to fit each stage of the evolving trip, a long-term, methodical approach must be established.

Furthermore, research into the future of technology may concentrate on uncovering new avenues for inquiry while simultaneously identifying potential risks that could impede the advancement of digital fashion through the misuse of visual communication. Perceived value develops over time and takes on subtleties based on an individual's cognitive processes. Timely adjustment is required since it will impact how the audience views their value in the digital fashion industry. Lastly, the impact and utility of the designs are likely to be investigated in numerous scenarios. This calls for a thorough understanding of how the designs are perceived and applied in real-world situations.

6. Conclusion

While digital fashion markets are thriving nowadays, this study aims to assist non-expert investors and collectors in better adapting to the market by integrating perceived value supported by visual communication design. The exploration used design to examine how users perceive their value through visual stimulation. The study examined and highlighted the most important viewpoints given, helping visual designers comprehend how visual communication contributes to consumers' perceived value. Consequently, the research offers a strong visual design direction that upcoming designers might use. It offers a creative direction as well as a viable route for the growth and adaptation of the digital fashion sector in the future to cater to a wider audience.

Disclosure statement

The author declares no conflict of interest.

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