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How Augmented Reality And Virtual Reality Campaigns Impact Brand Experience And Brand Love in The Luxury Fashion Sector

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Master in Marketing

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March, 2026

BUSINESS SCHOOL

Department of Marketing, Operations, and General Management

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Acknowledgments

I would like to start by thanking my supervisors, Helena Rodrigues and Maria Da Conceição Torres Figueiredo. For their insights, patience, and most of all for their courage to take on this challenge with me when they did and how they did. For your support, I will be eternally grateful.

For those who came into my life because of this master's, thank you for making the past two years more enjoyable. For companionship, endurance, and words of encouragement. A special thank you to Ana Rita for sharing so much of life with me.

For the friends who grew up with me, in particular Carolina, Inês, and Sara. Thank you for the constant presence, for all the fun, all the games, and all the memories shared between us. Thank you for being there for me when I cried and for always finding it in your heart to cheer me up. You have given me space to grow and learn alongside you, and I will always carry you in my heart. You are family.

To my family and above all my parents, Susana and Pedro, and my brother João Pedro, I wouldn't have made it without you. I am who I am today because of you. Thank you for your unconditional love and faith in me, and for your endless sacrifice. I couldn't have asked for better. I hope I have made you as proud as you have made me. I am very proud of you, my brother, who has just started college. I hope to see you succeed and grow to be the man I know you can be. I love you.

To my grandparents, José Maria and Ivone. You have raised me and shown me love. I carry you through every decision and thought I have.

Finally, to my grandpa, José Botas, who unfortunately could not finish his master's degree as he did. This one is for you. I hope I have made you proud. I am incredibly grateful to have shared 20 years with you.

Resumo

Este estudo investiga como a Realidade Aumentada e a Realidade Virtual influenciam a *Brand Experience*, bem como o impacto da Ansiedade Tecnológica associada a estas tecnologias na *brand experience*. Por fim, o estudo analisa também como a *Brand Experience* influencia o *Brand Love*. Foi adotada uma abordagem quantitativa, por meio da aplicação de um questionário que recolheu 297 respostas válidas.

Os resultados demonstram que a Ansiedade Tecnológica é um preditor significativo, ainda que de pequena magnitude, da *Brand Experience*. Entre a Realidade Aumentada e a Realidade Virtual, a Realidade Virtual revelou-se o preditor mais forte da *Brand Experience*, embora ambas as tecnologias tenham apresentado efeitos positivos e estatisticamente significativos. A *Brand Experience* evidenciou igualmente um forte poder preditivo em relação ao *Brand Love*.

O estudo contribui para o marketing de moda de luxo ao clarificar de que forma as perceções dos consumidores relativamente às tecnologias interativas moldam as suas experiências de marca e, consequentemente, influenciam os seus sentimentos de amor pela marca. Além disso, desafia pressupostos sobre a ansiedade tecnológica e destaca a importância de as marcas tomarem decisões informadas no que respeita ao investimento em novas tecnologias.

Palavras-chave: Moda de luxo, Realidade Aumentada, Realidade Virtual, Ansiedade Tecnológica, Brand Love, Brand Experience

Códigos JEL: M31 (Marketing), O33 (Technological Change: Choices and Consequences)

Abstract

This study investigates how Augmented Reality and Virtual Reality affect Brand Experience. As well as how Technology Anxiety is associated with the impacts of these technologies on Brand Experience. Finally, the study also brings light to how Brand Experience impacts Brand Love. A quantitative design was used, with a survey yielding 297 valid responses.

Findings show that Technology Anxiety is a small but significant predictor of Brand experience. Between Augmented Reality and Virtual Reality, Virtual Reality is the stronger predictor of Brand Experience, but both technologies showed strong, positive results. Brand Experience also presented itself as a strong predictor of Brand Love.

The study contributes to luxury fashion marketing by clarifying how consumers' perceptions of interactive technologies shape their brand experiences and, in turn, how this impacts their feelings of brand love towards the brand. It challenges assumptions about technology anxiety and highlights the importance of brands making informed decisions when investing in new technologies.

Keywords: Luxury Fashion, Augmented Reality, Virtual Reality, Technology Anxiety, Brand Love, Brand Experience

JEL Codes: M31 (Marketing), O33 (Technological Change: Choices and Consequences)

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Acronyms Glossary

AR – Augmented Reality

VR – Virtual Reality

UTAUT2 – Unified Theory of Acceptance and Use of Technology

Introduction

The COVID-19 pandemic significantly altered consumer shopping behavior, accelerating the shift toward online retail environments. This transformation led to a rapid expansion of e-commerce activity and increased reliance on digital purchasing channels. As online retail continues to evolve, retailers must adapt their strategies accordingly to remain competitive. These behavioral changes have compelled organizations to develop approaches that deliver engaging and well-managed shopping experiences within digital environments. In response, many brands have begun integrating interactive technologies such as Virtual Reality (VR) and Augmented Reality (AR) to create more immersive and distinctive virtual shopping experiences. The pandemic further intensified the need for retailers to incorporate these technologies into their digital platforms, as immersive tools became increasingly important for replicating elements of the in-store experience within online environments (Grewal et al., 2017; Kannan & Kulkarni, 2022; Luna-Nevarez & McGovern, 2021).

When applied to advertising, interactive technologies create memorable experiences for users by enabling them to view and interact with virtual images in new ways. For instance, AR has been applied in retail contexts through AR try-ons, which display virtual elements overlaid on the real world (Javornik, 2016).

On the other hand, VR technology has been adopted by high-end brands, which have seen an opportunity in a digitalized world, as teens and young adults increasingly rely on screens. Luxury brands recognized the need to adapt to attract younger consumers. The expansion of these brands into metaverses (VR technology) has been the most significant change in recent years. As the line between “real” and “virtual” continues to blur, these online worlds become crucial for brands to keep their clients captivated as well as acquire new ones (Joy et al., 2022).

Despite several studies analyzing consumers’ attitudes and intentions towards specific AR applications, very few studies simultaneously analyze the impact of VR and AR technologies on brands and the impact that marketing campaigns utilizing these technologies might have on brand experience and, consequently, on brand love (Javornik, 2016).

We aim to address this gap in the literature by analyzing how these campaigns affect brand love and brand experience. As well as studying whether technology anxiety affects brand experience. Thus, we propose a conceptual model that analyzes the impact of AR, VR, and technology anxiety on brand experience and the impact of positive brand experiences on brand love.

Addressing this is relevant as it will help brands analyze the impact of AR and VR campaigns and assess how effective these campaigns are in their marketing strategy (J. H. Kim et al., 2023)

In this sense, we present the following research questions:

RQ1: Does technology anxiety affect brand experience?

RQ2: How do AR and VR campaigns affect brand experience?

RQ3: Does positive brand experience affect brand love?

By focusing on the impact these technologies have on brand experience, and consequently by studying how positive brand experiences impact the development of brand love, this research aims to contribute new insights into fashion marketing fields, namely, luxury fashion. While global literature has explored interactive technologies, there are still limitations in the understanding of how these technologies can and will impact brand experience, which is associated with consumer perception. This research responds to calls for further investigation into this topic and offers practical implications for marketers and brands looking to introduce these technologies.

This dissertation is divided into five chapters. The first chapter introduces the study, outlining its background, objectives, and relevance. The second chapter presents a literature review that explores key theoretical concepts, including brand love, brand experience, technology anxiety, AR, and VR. The third chapter explores the methodological approach, including the conceptual model and hypothesis, as well as the survey and data designs. The fourth chapter presents and discusses the study's findings and addresses the research questions. The fifth chapter presents conclusions and recommendations for future research.

1. Literature review

1.1. Luxury Fashion Brands

Luxury has been commonly perceived from the consumer's perspective as a branding device for a product. A substantial amount of literature surrounding luxury aims to explain it in terms of carrying symbolism that works at an individual and collective level. Accordingly, luxury is recognized in terms of the psychological value it holds for the consumers who purchase it, its purpose as a status symbol, and as a shopping experience that is so highly involved that it becomes consistent with a person's self-concept. As for the product itself, luxury brands are often described as having excellent quality, uniqueness, craftsmanship, high transaction value, and exclusivity (Chadha & Husband, 2010; Jackson, 2002; J.-N. Kapferer, 2008; Nia & Zaichkowsky, n.d.; Nueno, 1998; Radon, 2002; VIckers & Renand, 2003; Vigneron & Johnson, n.d.).

A brand must observe several key attributes to have a luxury fashion positioning. The luxury proposition considers the brand concept, particularly the name and identity, as fundamental. In marketing, luxury brands require a clear, well-defined strategy. This strategy must be developed to support the brand's global reputation and presence, as well as to leverage the brand's status. In collaboration with the brand concept, a variety of different characteristics are thought essential when developing a luxury brand, these include design and product attributes, craftsmanship, and products unique to the brand (Bruce & Kratz, 2007; Chadha & Husband, 2010; Fionda & Moore, 2009; Jackson, 2002; J.-N. Kapferer, 2008; Laurent & Dubois, 1994; Moore & Birtwistle, 2004; Nueno, 1998; Okonkwo, 2007; Phau & Prendergast, 2000; Radon, 2002).

The service and environment offered by luxury brands are key characteristics that determine whether a brand is considered part of the luxury proposition. Luxury stores use architecture to convey a sense of grandeur and characterize the shopping experience for wealthy customers. (Bruce & Kratz, 2007).

The luxury goods market is significant not only for its market value but also for its growth. The growth has been associated with several factors, the most notable being the increase in individuals with elevated net worth who seek luxury. In response, luxury brands have adopted strategies to better meet the increasing demand (Fionda & Moore, 2009)

The growth also brings competition within the luxury brands. Among all marketing strategies tried, engaging customers with the brand has been proven effective in conquering the loyalty of customers and increasing profitability for the brand. When considering the price point of luxury items, the way consumers act is normally justified through a strong connection with the brand community, both online and offline (Kumar & Pansari, 2016)

The fashion industry offers VR technologies a place to thrive across multiple areas, such as the use of VR to simulate 3D fashion garments (Choi, 2022). This technology can also generate virtual stores or even allow customers to create their own 3D virtual environments. Additionally, the luxury fashion market can benefit from this technology by utilizing it to create virtual fashion shows (Jung et al., 2021).

1.2. Augmented Reality and Virtual Reality

Following the COVID-19 pandemic, consumers' behaviors changed significantly, particularly in their shopping habits (Kannan & Kulkarni, 2022). With the decrees imposed on consumers, many shifted to online shopping; such rapid shifts demanded that retailers figure out a quick and efficient way to improve the current online shopping experience (J. H. Kim et al., 2023). This led retailers to prioritize the insertion of Augmented Reality and Virtual Reality into their post-pandemic marketing strategies to highlight their business (Williamson, 2020).

Augmented reality (AR), according to Tan et al. (2021), is a technology that overlays virtual images onto physical environments. This virtual layer can add images, text, or videos to the physical environment the person is viewing (Javornik, 2016). The integration of virtual information into our world makes AR a technology widely used by retailers across both online and physical stores (Lavoye et al., 2021; Poushneh & Vasquez-Parraga, 2017)

Fashion retailers have used AR in their stores to offer virtual experiences to customers who frequent their stores. ZARA is an example of this, as they have developed an app that allows consumers to point their camera at a ZARA store window and see the clothing appear on a model. Consumers can then simply click on the screen and buy the clothing directly. AR allows consumers to have an experience that engages in multiple senses without having to relocate to a physical store (Wedel et al., 2020).

Virtual Reality (VR) is a computer-generated simulation experienced by the user through multiple senses. Currently, technology consists mostly of vision with VR glasses, allowing interaction as if it were real (Sherman & Craig, 2018). Users can experience VR through a range of hardware, including head-mounted displays (HMDs), mobile devices, cubic immersive spaces (CAVEs), personal computers (desktops or laptops), and televisions. Others can sometimes complement these devices (Wedel et al., 2020).

VR in marketing has primarily been used to create digital environments known as the '*metaverse*'. This hyper-connected digital universe is bound to evolve into an interconnected space of virtual realities predestined to change how consumers and brands interact (Giang Barrera & Shah, 2023). Authors argue that the metaverse may transform the retail industry and even people's personal lives in a manner like the emergence of the Internet (Bobier et al., 2022; Elmasry et al., 2022; Foutty & Bechte, 2022; Hackl, 2021; Morino, 2022; Sullivan, 2021).

Anthropomorphism is defined by Epley et al. (2007) as a cognitive process involving the allocation of human-like characteristics to certain entities, real or imaginary. Inside VR environments, particularly metaverses, brands can provide sensory stimuli to their consumers, as well as avatars that can engage with consumers in a quasi-social manner (Vernuccio et al., 2023). These features allow brands to influence consumers' perceptions by offering a virtual space that makes them feel truly present and connected with the brand, thus enabling the perception of the brand as closer to humans (Vernuccio et al., 2025a).

AR and VR are distinct in that VR creates a simulation based entirely on virtual information, while AR enhances the real world by layering additional information. (Carmigniani et al., 2011).

As technology continues to evolve, it becomes a force to be reckoned with in retail, simultaneously benefiting consumers and retailers (Grewal et al., 2017). As the long-awaited promises of Virtual and Augmented Reality start coming true, the shift in the retail market becomes more pronounced. These new reality-based technologies enhance consumers' sensory perceptions (Poncin, 2014). One example of the use of these technologies is the virtual fashion shows hosted by various fashion retailers (Deloitte, 2016).

1.3. Augmented Reality and Virtual Reality in Luxury Brands

As previously mentioned, marketing strategies for luxury brands are of elevated importance. Efforts to develop strong marketing strategies can be enhanced by interactive technologies such as AR, which uniquely blend virtual and the real, allowing luxury consumers to immerse themselves in enhanced experiences. Rolex has developed an AR application that allows users to virtually experiment with their watches. Another example is Coco Chanel, who developed an application for users to explore their Paris Atelier (Javornik et al., 2021).

Luxury brands need to investigate ways to incorporate digital technologies that enhance their luxury attributes rather than undermine them (Holmqvist, Wirtz, et al., 2020). Literature developed to emphasize this point focuses on social media as its main topic; however, studies on how immersive technologies can be used to develop luxury brand equity are limited (Javornik et al., 2021).

There has been research that showcased the possibility of customizing luxury products with the help of an online tool, or even using the consumer's own DNA to incorporate ideas of certain luxury attributes (Rosenbaum et al., 2021; Yoo & Park, 2016). Pantano et al. (2018) note that, despite luxury brands' interest in interactive technologies, their adoption remains very limited. Regardless of research depicting these technologies as an opportunity for luxury retailers in both online and offline channels, their potential role is a long way from being understood (Javornik et al., 2021).

The lack of literature supporting and specifying exactly how, and whether, immersive technologies can uphold luxury brands and showcase their luxury attributes is a reason for this lack of adoption (Javornik et al., 2021). Existing literature views immersive technology primarily as tools for visualization, treating AR as merely an auxiliary exploration, and, in doing so, disregards how AR and its characteristics can help build brand equity and showcase luxury attributes (Holmqvist, Wirtz, et al., 2020; Pantano et al., 2018). Another important note is that very few authors have explored the effects of digital technologies on the creation of brand experience, and the luxury research area related to brand equity remains underdeveloped. Establishing these connections is crucial to understanding how immersive technologies can create experiences essential to luxury (Holmqvist, Diaz Ruiz, et al., 2020).

Research into luxury has also not yet separated the customer journey from brand experience; these are different areas of customer involvement, and each of them carries its own brand-equity elements (Kuehnl et al., 2019). Brand experience focuses on how consumers respond to brand-related stimuli (Brakus et al., 2009). On the other hand, the design for a good customer journey depends on utilitarian aspects and must showcase cohesive touchpoints (Kuehnl et al., 2019).

To study marketing technologies, it is necessary to identify their characteristics (Hoffman & Novak, 1996). Studies have investigated the user perspective, analyzing aspects such as the value gained from AR use (Rauschnabel, 2018). Previous literature identifies four main AR characteristics relevant to its use in the luxury sector.

Virtuality is the term used to describe a virtual simulation through the usage of AR (Javornik, 2016). The degree of virtuality in AR is lower than in VR and is subject to variances. In luxury, these virtual simulations can offer illusions that bring power to the consumer (Milgram & Kishino, 1994), for example, Louis Vuitton utilized AR to add artistic elements to their bags, and Prada used AR to showcase a New York City sunset in their own headquarters (Javornik et al., 2021).

The *virtual-physical overlay* alludes to superimposing virtual depictions onto the physical world; the magnitude of this overlay is subject to fluctuations (Javornik et al., 2021). The creation of imagery utilizing AR allows consumers to visualize a 3D product (Heller et al., 2019). AR overlays do not need to be limited to products and can be used to develop engaging simulations. Burberry presents an example of this by utilizing an application to overlay Burberry-inspired drawings onto the physical world (Javornik et al., 2021).

Virtual-physical alignment enables consumers to interact with virtual elements in real time. This happens when the virtual world and the real world are visually aligned (Javornik et al., 2021). Dior's sunglasses virtual try-on on Instagram is an example of this, as is Swarovski's AR face filter that curates look for users (Javornik et al., 2021).

Seamless activation enables remote activation of AR visualizations via location or marker-less tracking (Azuma et al., 2001). The seamlessness between this AR visualization and the real world depends on the reliability and immediacy of the chosen tracking system. Examples of this being used in luxury are: Hugo Boss, who used a store display window to showcase an AR visualization, and Harrods, which, through a mobile app, created an in-store safari (Javornik et al., 2021).

In VR, the most common form of adoption is the metaverse. This is a digital environment in which users can interact with virtual objects or with one another (Y. K. Dwivedi et al., 2022; Kniazeva et al., 2024). The appearance of this space presents an opportunity to capitalize on the current evolution in the fashion industry (Bigliardi et al., 2022). Research indicates that the emergence of the metaverse can transform the fashion industry, improving customer interaction and even customer co-creation (Periyasami & Periyasamy, 2022a). The metaverse enables users to create avatars for use in games, virtual environments, and online communities, offering businesses a means to interact directly with their customers. However, in the fashion industry, this space is used for virtual events, partnerships, and even product development, to improve the customer experience (Kniazeva et al., 2024; Trunfio & Rossi, 2022).

Research on how the fashion industry can enter the metaverse has delved into how brands have used the digital space (Kniazeva et al., 2024). Chen et al. (2022) compare the different techniques used by Gucci and Givenchy to position themselves on the digital platform Roblox. Gucci developed its own virtual world, “Gucci Garden,” that allows customers to purchase virtual products. On the other hand, Givenchy created an immersive experience titled “Givenchy Beauty House”, which presented itself as an innovative model for other cosmetic brands.

Previous research has highlighted the potential benefits for fashion brands in joining the metaverse. Enhanced customer engagement, increased brand recognition, and cost reduction, as well as facilitated and renewable business practices (Gursoy et al., 2022; Periyasami & Periyasamy, 2022a). An example would be the fact that the metaverse permits the upgrade of product design and production in a more sustainable way (Sayem, 2022). The metaverse also allows brands to make their own 3D designs that provide enhanced dynamic features, allowing for customization and even color or textile changes (Jiang et al., 2023).

Insertion in the metaverse might improve companies’ ability to innovate and increase brand engagement (Kraus et al., 2022). Inserting virtual experiences that allow consumers to interact with their products while hosting interactive, immersive events, luxury fashion brands offer consumers an experience that might encourage them to make a considerable initial investment, thereby reducing the likelihood of a shift to a competitor (Gauttier et al., 2024).

1.4. Advertising Effectiveness

As mobile advertising has grown in prominence, new ways for brands to communicate with customers have emerged. These benefits retailers as they might increase in-store consumption, serve as reminders of specific brands, and increase purchase intention (Bues et al., 2017). In response to these recent trends, retailers have adopted emerging technologies such as AR and VR.

AR ads were used to increase consumers' exposure to brands or specific products and to enhance their shopping experience during in-store trips. Marketing strategists are reshaping how communications reach consumers by adopting AR mobile applications into their campaigns (Javornik, 2016). Consumer-driven companies have leveraged AR technologies and AR apps to increase brand engagement and sales (S. Yang et al., 2020).

When applied to advertising, AR enables advertisers to create unique experiences that users will never forget. However, studies have shown that the positive effects of these advertisements are only when consumers lack knowledge of AR technology. As familiarity with AR grows, the curiosity diminishes, and so does the impact of the ad (S. Yang et al., 2020). Studies have shown that AR advertising can influence brand attitudes and alter the retail experience (J. Kim et al., 2017).

Yaoyuneyong et al. (2016) conducted a study comparing two ads: a traditional ad and one that used AR technology with a smartphone as a viewfinder. Their results showed higher novelty for the AR ad. In addition, studies on advertising engagement show that attitudes toward advertising can be increased when ads include engaging features (J. Kim et al., 2017).

S. Yang et al. (2020) advance three key relationships that present the basis for the serial mediation process. First, individuals' curiosity about the ad is influenced by the use of AR. The second is a direct consequence of the first, suggesting that increased curiosity positively affects the attitude toward the ad. Lastly, attention to the ad positively affects attitude towards it.

VR technology allows the creation of virtual stores that facilitate consumer research (Kniazeva et al., 2024). It offers a vivid and active simulation that allows users to connect with the product. Virtual reality may provide a better communication channel between the user and the product, and therefore can be used to test new products and even new retail locations. Offering consumers the opportunity to enter a simulated retail environment may offer them an enhanced experience (Alzayat & Lee, 2021).

Both technologies, AR and VR, are expected to impact product visualization and add interactivity to the shopping process (Hilken et al., 2022). However, as both technologies have different usability and present themselves differently to the user, very little is known about how alike or different they are in their influence on user experience (J. H. Kim et al., 2023). Hilkem

et al. (2021) noted the lack of research examining the combined or individual impacts of AR and VR on consumer attitudes.

1.5. Technology anxiety

Privacy concerns were significant before the increase in data-driven technologies. Faqih (2022) acknowledges the necessity to secure personal information privacy. The unified theory of acceptance and use of technology (UTAUT2) has a strong predictive power in determining customers' behavioral intention (Elsotouhy et al., 2024).

Elsotouhy et al. (2024) investigate technology adoption using the UTAUT2 model and include privacy risks as one of the most important obstacles to reducing technology adoption intention. AR applications raise privacy concerns, and users express such concerns when using them (Harborth & Pape, 2021). Most concerns regarding AR center on the possibility of being recorded by these devices, the sharing of personal data, and the risk of surveillance (Al Khalifah et al., 2025; Elsotouhy et al., 2024).

Both AR and VR are associated with physical risks that may increase technological anxiety. For AR, the use of such devices can lead to immersion distraction, caused by complete immersion in a virtual experience. It can render users oblivious to their current environment, increasing the risk of theft or damage. As for VR, it requires interaction with complex, multi-sensory environments, which can increase feelings of discomfort and anxiety. VR also presents unique challenges related to immersion, such as motion sickness and spatial disorientation. These can increase anxiety towards the technology (Al Khalifah et al., 2025; Elsotouhy et al., 2024).

Technology anxiety refers to an unfavorable mental state in users regarding their competence and inclination to use technology tools. It is common for consumers to have apprehensions about adopting unfamiliar technologies, which can vary from person to person (Elsotouhy et al., 2024).

1.6. Brand Experience

Previous research has focused on utilitarian product attributes rather than on brand experiences. When consumers engage with a brand, they are exposed to utilitarian product attributes; however, there is also exposure to brand-related stimuli such as brand-identifying colors, shapes, fonts, design elements, mascots, and slogans (Bellizzi & Hite, 1992; Keller, 1987; Mandel & Johnson, 2002; Veryzer Jr & Hutchinson, 1998). These brand-related stimuli are part of the brand design, identity, and marketing communications and are shown in

environments where the brand is sold. Brand-related stimuli are the biggest source of internal consumer responses, which we refer to as brand experiences (Brakus et al., 2009).

Brand experiences vary in intensity and strength, with some stronger than others. Brand experiences also vary in valence, with some being more positive than others, and some experiences may even be negative (Brakus et al., 2009).

Brand experience differs from other brand constructs, namely evaluative, affective, and associative constructs such as brand involvement, brand attitudes, brand attachment, brand personality, and consumer delight. Attitudes are general assessments based on affective reactions or consumer beliefs; on the other hand, brand experiences are not general evaluations about the brand; they include sensations, cognitions, feelings, and behavioral responses provoked by brand-related stimuli (Brakus et al., 2009).

1.7. Brand Love

Brand love is a consumer's emotional attachment to a specific brand name. Brand love has become a topic of growing interest among researchers, with research on the subject increasing significantly over the past few decades. The notion of brand love suggests that consumers may feel love for certain brands (Gumparthi & Patra, 2020).

The affective feelings a group of satisfied consumers has for a brand can be classified as brand love; these feelings influence emotional reactions to the brand and shape evaluations. Eventually, they lead to strategic, economic, and competitive advantages for the brand. Researchers suggest that satisfied customers become loyal customers, who amplify marketing campaigns, thereby reducing the company's communication costs. Brand love is a complex construct of the brand-consumer relationship that oversees positive emotional connections, integration, and long-term attachment to the brand (Gumparthi & Patra, 2020).

Consumer-brand relationships have been the subject of numerous studies since the 1960s, during which time humanlike characteristics have been attributed to brands (de Chernatony & Dall'Olmo Riley, 1998). Later research on consumer-brand relationships showcases the similarity between interpersonal relationships and the ones forged between consumer and brand (Mcalexander et al., 2002).

Based on previous research, Carroll & Ahuvia (2006) created the construct of brand love to provide a detailed perspective on satisfied consumers and to clarify post-consumption behavior, such as positive word-of-mouth and brand loyalty. Researchers put forth the idea that brand love is a meaningful form of satisfaction, and that not all satisfied consumers would feel love for a brand.

1.7.1. Brand love in luxury fashion

Studies have shown that the desirability of a luxury brand can stem from creating “abundant rarity,” which helps ease consumers into feelings of privilege by enticing them through various facets, pricing, or other relevant aspects (J. N. Kapferer & Valette-Florence, 2016).

Siew et al. (2018) in their study, they found that brand love moderates the effect of perceived brand origin strength on consumers’ willingness to purchase more. Studies conducted on fashion brands showcase that brand love, brand image, and brand excitement have a significant impact on word of mouth (Ismail & Melewar, 2015).

1.8. Context of the study - Gucci Overview

Gucci, founded in 1921, began as a retailer of high-end luggage and bags. This positioning set them apart from other brands and marked the beginning of the luxury marketing world. Just a few years after its founding, Gucci developed a loyal customer base. In 1944, the nomination of Tom Ford as the brand's Creative Director changed its direction and gave it a new, modern voice. This decision transformed Gucci into the fashion icon it is today (Liu, 2023).

In response to the 5G era and the rapid development of digital technologies, Gucci has launched an online customer service and an online shopping app. The technological advancements and rapid socioeconomic development have led to moderate acceptance of digitalization, resulting in a significant increase in the share of online marketing. In recent years, Gucci has entered the virtual world through both VR and AR. Robert Triefus, Gucci’s Executive Vice President of Brand and Client Relations, states that young people spend most of their time in these digital spaces (Liu, 2023).

1.8.1. Gucci and Augmented Reality

The 2020 pandemic led to increased popularity of online experiences, with users preferring these over physical retail stores. Technologies such as AR also foster brand loyalty among younger consumers who cannot currently afford the product by enabling them to interact with the brand’s products digitally and share them with their followers. AR try-on services also offer personalized interest settings, bringing a similar feel of personalized customer service to users who seek personalization (Zhang, 2021).

Gucci, a leader in the luxury industry, is known for its expertise in appealing to younger consumers. In 2018, the brand doubled its sales, with consumers under 35 years old accounting for half of those sales (Zhang, 2021).

In 2019, Gucci launched its online shopping app. This app lets users try on the brand's Ace sneaker collection virtually using AR. Currently, the app has expanded to allow users to try on the brand's watch collection using AR technology. To use the AR feature, you start by selecting a pair of sneakers from the ACE collection, then angle your phone toward your feet, allowing the AR sneakers to layer over them, like how filters work (Zhang, 2021).

1.8.2. Gucci and Virtual Reality

Luxury brands don't intend to miss out on the coming opportunity to expand into the metaverse. Gucci has increased sales by adopting virtual technology. The Gucci website is proof that the company understands its target audience, as it prioritizes images over text. The company has dealt with virtual reality on multiple occasions. It launched virtual products within Roblox that people could purchase and wear in-game. An NFT program is a unique digital certification of ownership. Gucci premiered "Gucci Aria," a short film sold as an NFT at auction. It then released SUPERGUCCI as a limited-edition NFT collection (Liu, 2023).

As familiarity with the metaverse grows among Generation Z, who represent the future of the market, no brand wants to miss out on the digitalization trend. As the metaverse blends the real and the digital, Gucci must reach consumers in both worlds and leverage it to build momentum. Gucci meets consumer needs in these virtual spaces while also promoting the brand's digitalization.

Notably, one of the study's focuses is that Gucci has launched a virtual space in partnership with a gaming platform. Within the Roblox platform, Gucci now features a substantial online exhibition. Gucci Garden Archetypes and the newly launched Gucci Town enable consumers and game players to have the same experience they would in an actual Gucci store. This campaign is favorable for creating goodwill and rejuvenating the brand, as it satisfies younger generations' need for fun and uniqueness in fashion (Liu, 2023).

2. Methodology

2.1. Hypothesis and Conceptual Model

2.1.1. Hypotheses

Elsotouhy et al. (2024) use the UTAUT2 model to investigate technology adoption and note privacy risks as one of the biggest obstacles to technology adoption intention. AR applications, such as the one analyzed in this study, raise privacy concerns (Harborth & Pape, 2021). Many users also convey concerns regarding the idea of being recorded by these devices, leaks of personal data, and the idea of being subjected to surveillance (Al Khalifah et al., 2025; Elsotouhy et al., 2024).

Both technologies are subject to physical risks, which often lead to increased technological anxiety and greater resistance to their adoption. For AR, immersion distraction, which occurs when users become fully immersed in the virtual experience, is a concern because it makes them susceptible to theft or damage. VR requires complex, multi-sensory environments, which can increase feelings of discomfort and anxiety. In addition to motion sickness and spatial disorientation. These can increase anxiety towards the technology (Al Khalifah et al., 2025; Elsotouhy et al., 2024).

There are numerous studies on technology anxiety, but the literature on its impact on consumers and their brand experience is limited. The study proposes the following hypothesis to resolve this gap:

H1*: A Higher level of technology anxiety can create a negative brand experience.*

Verhoef et al. (2009) describe brand experience as capturing the consumers' affective, cognitive, social, and even physical response to a brand. Brand experience can also be defined as the sensations, feelings, and behaviors that are brought forth by brand-related stimuli (Brakus et al., 2009). Research suggests focusing on elaborating sensory and emotional connections with consumers rather than on the product's physical attributes.

AR can facilitate marketing efforts and enable new, unique strategies for the brand. Gucci launched its online shopping app, which allows users to try the brand's sneakers and watches using AR technology.

The lack of existing literature supporting how AR can enhance luxury brands' adoption of this technology hinders their ongoing campaigns to elevate the brand (Javornik et al., 2021). The idea that interactive technologies can contribute to creating a positive brand experience has been explored by a limited number of authors. It is essential to examine this topic to assess

the relevance of these technologies for luxury brands (Holmqvist, Diaz Ruiz, et al., 2020). The study proposes the following hypothesis:

H2: *The increase in AR campaigns in the shopping process can create a positive brand experience*

Metaverse offers brands an opportunity to capitalize on the current evolution of the fashion industry as well as the improvement of customer interaction (Bigliardi et al., 2022). Enhanced customer engagement, brand recognition, and cost reduction have also been noted by previous research as benefits to joining the metaverse (Periyasami & Periyasamy, 2022b).

The metaverse might offer brands an opportunity for innovation as well as an increase in brand engagement (Kraus et al., 2022). Hosting interactive events offers consumers an experience that might incentivize loyalty to the brands and reduce the possibility of a shift to a competitor (Gauttier et al., 2024).

Gucci delved into the world of the metaverse by creating Gucci Town and Gucci Garden Archetypes, as previously mentioned.

Brand experience, conceptualized as the consumer's internal response, encompasses sensations, knowledge, and behavioral responses elicited by a brand stimulus. Brakus et al. (2009) propose four dimensions of brand experience: sensory, affective, intellectual, and behavioral. The sensory dimension requires visual impact on consumers, as well as impact across all five senses. The metaverse is a highly immersive environment that can enhance brand experiences. Taking into consideration this, the study proposes the following hypothesis:

H3*: The increase of VR campaigns in the shopping process can create a positive brand experience*

Brand love is defined by Carroll & Ahuvia (2006) as “the amount of passionate, emotional attachment, a satisfied consumer has for a particular brand name”. Positive feelings towards a brand impact consumers’ emotional reactions and brand evaluations (Batra et al., 2012). Romanticism, consumer delight, satisfaction, and brand experience are essential to positive word of mouth and brand love (Roy et al., 2013). Brand experience positively impacts brand love.

There is an assumption that multidimensional brand experiences influence brand love. Mullen & Johnson (2013) support this with attribution theory, which is “a theory that describes the cognitive processes by which people determine the causes of behavior and events in their world”. Positive brand experiences encourage consumers to form attachments to brands and

develop not only positive feelings but also love for those brands. There's a significant lack of practical research on this topic; thus, the study proposes the following hypothesis:

H4: *Interactive technologies can create positive brand experiences that increase consumers' feelings of brand love.*

To visualize and organize the hypotheses presented, the following table was created, which clearly indicates whether each hypothesis has a positive or negative impact on the study.

Table 2.1- Hypotheses and their impact

Hypotheses	Impact
H1: A Higher level of technology anxiety can create a negative brand experience.	-
H2: The increase of AR campaigns in the shopping process can create a positive brand experience	+
H3: The increase in VR campaigns in the shopping process can create a positive brand experience.	+
H4: Interactive technologies can create positive brand experiences that increase consumers' feelings of brand love.	+

Source: Own elaboration

2.1.2. Conceptual Model

The development of the hypotheses shown above facilitated the creation of a conceptual model presented in Figure 3.1. The model aligns with the hypotheses. Where high levels of technological anxiety can hinder brands' adoption of interactive technologies, this can lead to a negative brand experience (H1) (Elsotouhy et al., 2024). On the other hand, AR, when adoption goes as planned, can lead to highly interactive and positive brand experiences by allowing consumers to interact with the brand in unique ways, such as virtual try-on apps, as the one brought forth by Gucci (H2) (Holmqvist, Diaz Ruiz, et al., 2020). VR and the metaverse offer equally innovative opportunities for the brand, allowing consumers to interact with and experience it without in-person interaction. This can lead to a positive brand experience not only for habitual consumers but also for new consumers entering the brand's space (H3) (Periyasami & Periyasamy, 2022a). Finally, the idea that positive brand experiences facilitate and increase feelings of brand love consumers have towards a brand (H4).

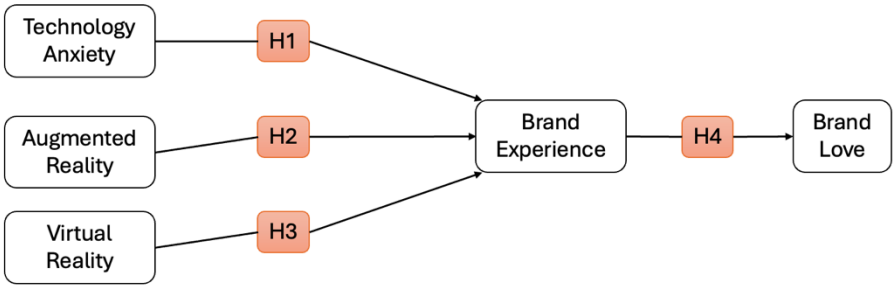


Figure 3. 1 - Proposed Research Model

Source: Own elaboration

2.2. Survey Design

2.2.1. Survey structure

The research presented adopted a quantitative approach to test the research hypotheses and validate the proposed conceptual model. It involved an online questionnaire that allowed assessing how people viewed the brand before and after exposure to marketing campaigns that used AR and VR. To do this, a brand was selected. After conducting extensive research on luxury fashion brands in the Global Top Brands (Interbrand, 2024), Gucci was found to be the only brand that has used both AR and VR and has both campaigns and experiences available to the public as of the present date. For VR, Gucci was chosen for its integration into the metaverse with the creation of Gucci Gardens, a virtual space on the gaming platform Roblox that allows users to enter a digital environment and interact with products from the brand (Kniazeva et al., 2024). For AR, the Gucci App was used as it has an AR try-on feature within the app that allows users to try on Gucci watches and shoes without leaving their house (Zhang, 2021).

The primary objective is to examine how brand experiences are affected by the introduction of interactive technologies, AR, and VR, into its marketing campaigns. And how these brand experiences impact the feelings of Brand Love towards a specific brand, in this case, Gucci.

The survey was distributed to a large sample and elicited responses from individuals aged 18 or older. The survey gathered responses to constructs derived from the literature reviews as well as demographic data. The goal was to test the hypothesis formulated in this study.

The questionnaire was primarily disseminated via the SurveyCircle platform. In addition to social media platforms such as Facebook, Instagram, and WhatsApp. It was developed using Qualtrics Survey Software and was structured in four main sections.

The first two sections focused on the interactive technologies themselves and the campaign created by Gucci. The third section focused on brand experience and how these campaigns affected it. In these three sections, all constructs were measured using validated scales from prior literature. Lastly, the last section collected demographic information (e.g., gender, age, salary, and education level)

The questionnaire can be found here:
https://iscteiul.co1.qualtrics.com/jfe/form/SV_9vLAWs0Ll2mEWJ8

Data Collection ran from May 2025 to August 2025.

2.2.2. Data measurement and Scales

To guarantee consistency across measurements, all variables were assessed using a 7-point Likert scale. Table 3.2 showcases the scales used for the questionnaire.

Table 2.2 - Constructs and Sources

Group	Construct	Measures	Items (Likert scale)	Authors
Group I – Technology anxiety	Technology anxiety	Using interactive technologies would be somewhat intimidating for me; I would be concerned that I could miss important information by selecting the wrong option. I would feel apprehensive about using the Gucci AR try-on app I would hesitate to use the AR try-on app for fear of making mistakes I cannot correct	7 points	K. Yang & Forney (n.d.).
Group II – Augmented Reality	Content quality	The AR try-on app provides relevant information on Gucci products. The AR try-on app's content was clear and easy to understand.	7 points	Butt et al. (2022)
	AR environmental embedding	I felt as though I were using the product I was trying on; it felt as though it meshed with the real surroundings.	7 points	Butt et al. (2022)
	Continuous intention to use AR	I intend to continue using the Gucci AR try-on app; I will use it more frequently in my daily life and strongly recommend it to others.	7 points	Butt et al. (2022)

	Perceived enjoyment	Using the AR try-on app was indeed a joy; to me, shopping online with it was an adventure; I enjoyed it.	7 points	Butt et al. (2022)
	Perceived interactivity	I felt in control of the try-on features through the AR try-on app; I interacted quickly and efficiently with the products; I had some control over the app's content that I wanted to see and use.	7 points	Butt et al. (2022)
	Perceived ease of use	The AR try-on app features were easy to use; they required little mental effort and were more comfortable than trying on the products in person.	7 points	Butt et al. (2022)
	AR satisfaction	I am satisfied with the AR try-on app, its features, and its content. Overall, I am satisfied with the AR try-on app.	7 points	Butt et al. (2022)
	Service quality	The AR try-on app's service quality was high; it understood my fashion requirements and integrated information and services into its features.	7 points	Butt et al. (2022)
	System quality	The AR try-on app quickly loads the product for try-on, along with all its features. The AR try-on app was easy to navigate; The AR try-on app has visually attractive features; The AR try-on features were convenient to use	7 points	Butt et al. (2022)
	Retail app brand engagement	Using augmented reality features stimulates my interest in this retail brand; Using augmented reality features makes me think about this retail brand; I think about this retail brand a lot when using the brand's augmented reality app; I feel positive when I use the brand’s augmented reality app; I feel good when I use the brand's augmented reality app.	7 points	Nikhashemi et al. (2021)
	Telepresence	The experience with Gucci in the VR metaverse	7 points	Vernuccio et al. (2025b).

Group III – Virtual Reality		created a new world for me, which suddenly disappeared when the experience ended; When the experience in the VR metaverse ended, I felt as if I had returned to the “real world” after a journey; The experience in the VR metaverse seemed to be “a place I visited” rather than “something I saw”; There were times during the experience in the VR metaverse when I perceived the virtual environment of Gucci as if it were reality; During the experience in the VR metaverse, I had the feeling of actually being in the environment of Gucci, not being somewhere else; During my experience in the VR metaverse, I often happened to think that I was actually in the virtual environment of Gucci.		
	Brand social presence	I experienced human contact, personal presence, and sociability in the VR environment provided by Gucci.	7 points	Vernuccio et al. (2025b).
	VR attitude	VR technology is favorable, appealing, and attractive.	7 points	Vernuccio et al. (2025b).
Group IV – Brand Experience	Sensory	Gucci makes a strong impression on my senses; I find it interesting in a sensory way.	7 points	A. Dwivedi et al. (2018)
	Emotional	I have strong feelings for Gucci; it is an emotionally resonant brand that evokes sentiment.	7 points	A. Dwivedi et al. (2018)
	Behavioral	Gucci's interactive campaigns create embodied experiences; I engage in physical actions and behaviors when using them. Gucci's interactive campaigns are action-oriented.	7 points	A. Dwivedi et al. (2018)

	Intellectual	The Gucci interactive campaign stimulates my curiosity and problem-solving; I think deeply when I encounter it. Gucci's interactive campaigns make me think.	7 points	A. Dwivedi et al. (2018)
Group V - Brand Love	Gucci Brand Love	Gucci is a wonderful brand; it makes me feel good; it is totally awesome; it makes me very happy; it is a pure delight; I am passionate about Gucci.	7 points	Vernuccio et al. (2025b).

Source: Own elaboration

2.2.3. Pre-test

A pre-test was conducted prior to releasing the questionnaire to ensure its quality and to identify and correct any necessary modifications. The main purpose of the pre-test was to determine whether the questionnaire was too long, as response quality could have been impacted. The pre-test included 10 respondents aged 22 to 45. The feedback was positive for the length of the questionnaire, but it indicated some confusion about the wording of certain questions. These were revised to improve clarity.

2.3. Data Collection and Sample

As previously outlined, a survey was conducted to test the proposed hypotheses. The only eligibility criterion for participation was that respondents were at least 18 years of age. A total of 297 valid responses were obtained. Table 3.3 presents the demographic characteristics of the sample.

In terms of gender distribution, the sample was predominantly female (69.7%). Regarding age, nearly half of the respondents (49.2%) were between 18 and 24 years old.

For monthly income, the largest proportion of respondents (30.0%) reported earning more than €2000 per month.

Concerning educational attainment, most participants held a master's degree (43.1%), followed by those with a bachelor's degree, who also represented a substantial share of the sample (39.1%).

This demographic profile suggests a sample skewed towards younger, highly educated individuals, which may limit the generalizability of the findings to the broader population.

Table 2.3 – Socio-demographic Characteristics used for Sample Characterization

	Category	Frequency (n)	Percent (%)
Gender	Male	87	29.3
	Female	207	69.7
	Prefer not to say	3	1.0
Age	18–24	146	49.2
	25–29	52	17.5
	30–34	28	9.4
	35–40	21	7.1
	> 40	50	16.8
Monthly Salary	< 1000€	62	28.6*
	1000€–1499€	59	27.2*
	1500€–2000€	31	14.3*
	> 2000€	65	30.0*
Education Level	Middle School Graduate	5	1.7
	High School Graduate	42	14.1
	College Graduate	116	39.1
	Master's Degree	128	43.1
	PhD	6	2.0
Total		297	

*Percentages for salary are based on valid responses only (n = 217) due to missing data.

Source: Own elaboration

2.4. Data analysis

The data analysis was done using SPSS and followed a structured process. First, the dataset was examined to detect missing values and outliers.

Descriptive statistics were computed to characterize the respondents' demographic profile after data cleaning. To ensure internal consistency, the model was assessed through Cronbach's alpha, with values above 0.70 being considered acceptable. To assess the correlation between the variables under study, a Pearson Correlation test was also performed, with statistical significance evaluated at $p < 0.05$.

To test the research hypotheses, simple linear regressions were performed. Prior to analysis, it was checked if these regressions met the necessary assumptions through tests of normality, such as the Shapiro-Wilk and Kolmogorov–Smirnov. The assumption of homoscedasticity was also checked with the Scatter Plots. The regressions were interpreted using R^2 to evaluate explanatory power, the F-statistic to assess overall model significance, and unstandardized beta coefficients to determine the strength of the relationships. These analyses provided direct insight into the impact of technology anxiety, augmented reality, and virtual reality on brand experience and, subsequently, on brand love.

3. Results and Discussion

In this chapter, the survey results are presented and analyzed in detail. These findings provide quantitative evidence used to examine, evaluate, and test the proposed hypothesis. Through a systematic presentation of the data, this chapter aims to provide clear insights into the patterns and relationships revealed by the survey responses, thereby supporting the study's overall objectives.

3.1. Results

3.1.1. Internal Consistency and Descriptive Statistics of The Scales

Before conducting the main statistical analyses, the internal consistency of the measurement scales was assessed using Cronbach's Alpha for each study construct, as presented in Table 4.1.

The study dimensions were measured using a seven-point Likert scale, ranging from 1 ("strongly disagree") to 7 ("strongly agree"). Items measuring technology anxiety were reverse-coded before analysis. Internal consistency reliability was evaluated using Cronbach's alpha and interpreted in accordance with established thresholds. All constructs exceeded the threshold of 0.70, thus confirming a satisfactory level of reliability. Technology anxiety had the lowest reliability, with a Cronbach's alpha of 0.869. Both interactive technology constructs showcased robust reliability, with Augmented Reality presenting a value of 0.928 and Virtual Reality presenting a value of 0.905. Brand Experience and Brand Love exhibited the highest reliability, with values of 0.948 and 0.968, respectively (see Table 4.1).

Table 3.1- Reliability Analysis (Cronbach's Alpha) for Each Construct

Construct	Nº. of items	Cronbach's α
Technology Anxiety	4	0.869
Augmented Reality	16	0.928
Virtual Reality	12	0.905
Brand Love	12	0.948
Brand Experience	6	0.968

Source: Own elaboration

With respect to the descriptive statistics of the measurement scales, shown in Table 4.2, the Technology Anxiety scale (reverse-coded) yielded a mean score above the midpoint of the

scale (M = 4.595, SD = 1.375), indicating that participants generally reported moderate levels of anxiety when using interactive technologies. The Augmented Reality scale had a mean of 4.813 (SD = 0.945), suggesting moderately positive perceptions toward the use of augmented reality technologies. In contrast, the Virtual Reality scale recorded a lower mean score (M = 3.744, SD = 1.157), reflecting comparatively less favorable evaluations of participants' experiences with virtual reality. Finally, regarding perceptions of the Gucci brand, participants did not demonstrate particularly positive attitudes, as both the Brand Experience scale (M = 3.735, SD = 1.335) and the Brand Love scale (M = 3.696, SD = 1.608) had relatively low mean values.

Table 3.2 - Descriptive Statistics of the Scales

Scales	N	Minimum	Maximum	M	SD
Technology Anxiety*	259	1.00	7.00	4.595	1.375
Augmented Reality	140	1.50	6.88	4.813	0.945
Virtual Reality	149	1.17	6.42	3.744	1.157
Brand Experience	288	1.00	6.75	3.735	1.335
Brand Love	292	1.00	7.00	3.696	1.608

M: Mean; SD: standard deviation; *reverse coded
Source: Own elaboration

3.1.2. Correlations Between Variables

Pearson correlation analyses were performed to assess linear relationships among variables, applying the pairwise exclusion of cases method. Correlation coefficients were interpreted according to the guidelines of Pestana and Gageiro (2008): very weak (≤ 0.19), weak (0.20–0.39), moderate (0.40–0.69), strong (0.70–0.89), and very strong (0.90–1.00).

It can be observed in Table 4.3 that Technology Anxiety presents a weak negative relationship with Brand Experience ($r= -0.244$, $p<0.01$), indicating that the higher the level of Technology Anxiety, the lower the Brand Experience.

Augmented Reality exhibited moderate positive correlations with both Brand Experience ($r=0.586$, $p < 0.01$) and Brand Love ($r=0.509$, $p<0.01$), indicating that higher engagement with Augmented Reality is associated with higher Brand Experience and Brand Love.

Finally, Virtual Reality presented moderate to strong positive correlations with both Brand Experience ($r=0.755$, $p<.001$) and Brand Love ($r=0.681$, $p<0.01$), indicating that higher engagement with Virtual Reality is associated with higher Brand Experience and Brand Love.

The correlation between Augmented Reality and Virtual Reality could not be computed due to the lack of overlapping data. As mentioned previously, the participants were assigned one of the technologies.

Regarding the relationship between Brand Experience and Brand Love, a strong positive correlation was found (r=0.840, p<0.01), suggesting that the higher the Brand Experience, the higher the Brand Love.

Table 3.3 - Pearson's Correlations (r)

Variable	Technology Anxiety	Augmented Reality	Virtual Reality	Brand Experience	Brand Love
Technology Anxiety	1				
Augmented Reality	-0.024	1			
Virtual Reality	-0.106	—	1		
Brand Experience	-0.244**	0.586**	0.755**	1	
Brand Love	-0.265**	0.509**	0.681**	0.840**	1

Note. ** p < .01 (two-tailed).
Source: Own elaboration

3.1.3. Regression Analysis

To test all four hypotheses, simple linear regressions were conducted. Hypotheses H1 through H3 had Brand Experience as the dependent variable and Technology Anxiety, Augmented Reality, and Virtual Reality as predictors. For hypothesis H4, Brand Experience was the predictor, and Brand Love was the dependent variable

3.1.3.1. Technology Anxiety and Brand Experience

The assumptions of regression were checked and met (Appendix C), except for the normality of residuals, shown in Table C.1. Although the Shapiro–Wilk and Kolmogorov–Smirnov tests indicated a statistically significant deviation from normality $p \leq 0.05$, visual inspection of residual plots, in Appendix C on Figure C.3, suggested approximate normality. Given the large sample size and the application of the central limit theorem, the regression analysis is considered robust to minor violations of normality assumption. The scatter plot in Figure C.2

allows us to verify homoscedasticity; the dots present a pattern of constant variability around the residuals line, which allows us to verify the assumptions.

Table 4.4 shows us how strongly Technology Anxiety predicts Brand Experience. Technology anxiety negatively predicted Brand Experience ($\hat{\beta}$ = −0.241, t = −3.979, p < 0.001), indicating that higher levels of Technology Anxiety are associated with poorer Brand Experiences. Thus, H1 was supported.

Table 3.4 - Technology Anxiety Predicting Brand Experience

Coefficients[a]

Predictor	$\hat{\beta}$	t	P
(constant)	4.803	16.434	<0.001
Technology Anxiety	-0.241	-3.979	<0.001

a. Dependent Variable: brandexp Brand Experience

Source: Own elaboration

The regression 1 model, shown in Table 4.5, was statistically significant (F(1, 250) = 15.831, p < 0.001) and explained 6.0% of the variance in Brand Experience (R^2 = 0.060). Although the effect size was small, Technology Anxiety emerged as a statistically significant predictor of Brand Experience.

Table 3.5 - Model Summary of Regression 1

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	0.244[a]	0.060	0.056	1.30960

a. Predictors: (Constant), techanx Technology Anxiety

b. Dependent Variable: brandexp Brand Experience

Source: Own elaboration

Overall, the findings indicate that technology anxiety plays a statistically significant, albeit modest, role in shaping brand experience. While the proportion of explained variance was relatively small, the negative relationship suggests that individuals with higher levels of technology anxiety tend to evaluate their brand experiences less favorably. This highlights technology anxiety as a meaningful psychological factor influencing consumer perceptions, even though other variables are likely to contribute to brand experience beyond the scope of the present model.

3.1.3.2. Augmented Reality and Brand Experience

The assumptions for regression were checked (Appendix D), and the normality of residuals produced mixed results, shown in Table D.1. The Kolmogorov-Smirnov test showed no significant deviation from normality, whereas the Shapiro-Wilk test was significant. Observing the normal Q-Q plot, Figure D.3, shows that residuals were approximately distributed with minor deviations at the tails. Given the sample size and robustness of the linear regression, the assumption of normality can be sufficiently met. To validate the assumption of homoscedasticity, we refer to the scatter plot in Figure D.2, which shows a pattern of variability around the residuals line, indicating no funneling of the residuals. This allows validation of the assumption.

To test H2, another simple linear regression was conducted with Brand Experience as the dependent variable and Augmented Reality as the predictor. Augmented Reality was a significant positive predictor of Brand Experience ($\hat{\beta}$ = 0.814, t = 8.302, p <0.001). These results indicate that greater brand involvement with Augmented Reality leads to more positive brand experiences. These findings strongly support H2.

Table 3.6 - Augmented Reality Predicting Brand Experience

Coefficients[a]

Predictor	$\hat{\beta}$	t	P
(constant)	-0.129	-0.269	0.789
Augmented Reality	0.814	8.302	<0.001

a. Dependent Variable: brandexp Brand Experience

Source: Own elaboration

Table 4.7 shows that the model was statistically significant, F(1, 132) = 68.92, p < 0.001, explaining 34.3% of the variance in Brand Experience (R^2=0.343).

Table 3.7 - Model Summary of Regression 2

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	0.586[a]	0.343	0.338	1.05600

a. Predictors: (Constant), augmreal Augmented Reality

b. Dependent Variable: brandexp Brand Experience

Source: Own elaboration

In summary, the findings demonstrate that Augmented Reality plays a substantial role in shaping Brand Experience. With over one-third of the variance in Brand Experience explained, the effect is not only statistically significant but also practically meaningful. This suggests that

interactive and immersive technological features meaningfully enhance how consumers perceive and evaluate brand interactions.

3.1.3.3. Virtual Reality and Brand Experience

The assumptions for regression were checked (Appendix E), and the normality of the residuals indicated significant deviations from normality, as shown in Table E.1. Kolmogorov–Smirnov p = 0.006 and Shapiro–Wilk p = 0.029. Observation of the Q-Q plot, Figure E.3, showed that residuals followed the diagonal line closely with only minor deviation at the tails. The central limit theory claims that a sample, n=148, is large enough to support minor deviations from normality. Observation of the scatter plot between standardized residuals and predicted values, Figure E.2, was done to verify homoscedasticity. Considering residuals showcase a pattern of constant variability around the residuals line and no funneling can be observed, homoscedasticity can be assumed.

The simple linear regression conducted to study H3 has Brand Experience as the dependent variable and Virtual Reality as the predictor. As seen in Table 4.8, Virtual Reality positively predicted Brand Experience ($\hat{\beta}$ = 0.886, t = 13.932, p < 0.001); these results indicate that higher engagement with Virtual Reality leads to more favorable Brand Experiences, supporting H3.

Table 3.8 - Virtual Reality Predicting Brand Experience

Coefficients[a]

Predictor	$\hat{\beta}$	t	P
(constant)	0.362	1.454	0.148
Virtual Reality	0.886	13.932	<0.001

a. Dependent Variable: brandexp Brand Experience

Source: Own elaboration

The model, shown in Table 4.9, was statistically significant, F(1, 146) = 194.11, p < 0.001, explaining 57.1% of the variance in Brand Experience (R^2=0.571). This shows that Virtual Reality is highly significant in offering consumers a positive Brand Experience.

Table 3.9 - Model Summary of Regression 3

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	0.755[a]	0.571	0.568	0.89566

a. Predictors: (Constant), virtreal Virtual Reality

b. Dependent Variable: brandexp Brand Experience

Source: Own elaboration

Overall, the findings indicate that Virtual Reality exerts a substantial, practically meaningful influence on Brand Experience. Explaining over half of the variance in Brand Experience, Virtual Reality demonstrates a markedly stronger effect compared to other technological factors examined in this study. This suggests that highly immersive digital environments play a central role in shaping consumer perceptions and evaluations of brands. The strength of this relationship underscores the strategic importance of Virtual Reality as a powerful experiential marketing tool.

3.1.3.4. Brand Experience and Brand Love

To test the last hypothesis, H4, a last simple linear regression was conducted with Brand Love as the dependent variable and Brand Experience as the predictor. The test of normality, shown in Appendix F, Table F.1, produced mixed results with Kolmogorov–Smirnov being non-significant ($p = 0.080$) and Shapiro-Wilk being significant ($p < 0.001$). However, inspection of the Q-Q plot in Figure F.3 indicated no strong deviation. Given the large sample size ($n = 285$) and the sensitivity of the tests, slight departures from normality are considered normal. Figure F.2 showcases the scatter plot between standardized residuals and predicted values. Despite residuals being more actively concentrated, the scatter plot still shows a regular form and no tunneling, validating homoscedasticity.

Brand Experience positively predicted Brand Love as seen in Table 4.10 ($\hat{\beta} = 1.006$, $t = 26.015$, $p < 0.001$), indicating that positive Brand Experiences are associated with a substantially greater Brand Love, supporting H4

Table 3.10 - Brand Experience Predicting Brand Love

Coefficients[a]

Predictor	$\hat{\beta}$	t	P
(constant)	- 0.080	-0.522	0.602
Virtual Reality	1.006	26.015	<0.001

a. Dependent Variable: brandlov Brand Love
Source: Own elaboration

The model, shown in Table 4.11, was statistically significant, $F(1, 283) = 676.800$, $p < 0.001$, explaining 70.5% of the variance in Brand Love ($R2 = 0.705$). Showing a very significant impact of Brand Experience on Brand Love. These results showcase the need for brands to invest in experience-driven interaction as a way to foster feelings of Brand Love

Table 3.11 - Model Summary of Regression 4 (Brand Experience and Brand Love)

Model Summary[b]

Model	R	R Square	Adjusted R-Square	Std. Error of Estimate
1	0.840[a]	0.705	0.704	0.87076

a. Predictors: (Constant), brandexp Brand Experience

b. Dependent Variable: brandlov Brand Love

Source: Own elaboration

Overall, the findings indicate that Brand Experience is a highly powerful predictor of Brand Love. Explaining more than 70% of the variance, the relationship is not only statistically significant but also substantively strong. This suggests that consumers' emotional attachment to a brand is largely driven by the quality and intensity of their experiential interactions with it. The magnitude of this effect highlights Brand Experience as a central mechanism within the proposed framework, reinforcing its role as a key pathway through which immersive technologies may ultimately influence Brand Love.

3.1.3.5. Summary of the Regression Analysis

To conclude the results sub-chapter, Table 4.12 was elaborated. This table summarizes all previously presented regression models. By showing these results together, it becomes easier to interpret the findings of the study overall. Technology Anxiety has a negative impact on Brand Experience, shown by the negative value of the unstandardized beta; on the other hand, both Augmented Reality and Virtual Reality have a positive impact. Results also show that Brand Experience has a highly significant positive impact on Brand Love. Observing the table, it can be identified that the most impactful model was Model 4, showcasing the high significance that a positive Brand Experience has in fostering feelings of Brand Love among consumers of the brand.

Table 3.12 –Summarization of important values from the four regression models presented

Predictor	$\hat{\beta}$	t	p-value	R^2
Model 1 -Technology anxiety	-0.241	-3.979	**<0.001**	0.060
Model 2 – Augmented Reality	0.814	8.302	**<0.001**	0.343
Model 3 – Virtual Reality	0.886	13.932	**<0.001**	0.568
Model 4 – Brand Experience	1.006	26.015	**<0.001**	0.705

Collectively, these results suggest that while individual psychological barriers, such as Technology Anxiety, may hinder consumer experiences, immersive technological engagement significantly enhances Brand Experience, which in turn serves as a central driver of Brand Love. The pattern of relationships aligns with the conceptual model and highlights Brand

Experience as the key mechanism linking technological interaction to emotional brand attachment.

3.2. Discussion

This study examined the impact of interactive technological campaigns, specifically Augmented Reality and Virtual Reality, on Brand Experience and subsequently on Brand Love. Using quantitative research design, the findings provide empirical evidence on the extent to which immersive technologies can influence consumer perceptions and emotional brand attachment. The results contribute to a clearer understanding of the effectiveness of these technologies as strategic marketing tools and offer insights into their potential to enhance experiential and relational brand outcomes.

The results supported H1, indicating that technology anxiety significantly and negatively predicted Brand Experience. Participants reporting higher levels of technology anxiety tended to evaluate their brand experiences less favorably, which shows consistency with prior research (Elsotouhy et al., 2024). However, while the relationship was statistically significant, the effect size was relatively modest, explaining only a small proportion of the variance in Brand Experience. Suggesting that although technology anxiety remains a relevant psychological barrier in consumer perceptions, its explanatory power within the present model is limited when compared to the positive impact that the interactive technologies offer. Elsotouhy et al. (2024) emphasize the role of technology anxiety in inhibiting the adoption of new technologies. The current findings indicate that its impact on brand experience may be weaker when considered alongside positive technological engagement variables such as Augmented Reality and Virtual Reality.

The current digital environment is characterized by connectivity, with the average household now owning numerous devices. This increasingly technological world provides consumers with frequent exposure to interactive digital tools in familiar, comfortable settings, thereby changing expectations of technological engagement. Prior research conceptualized technology anxiety as a cognitive and affective response to information and communication technologies, often arising from prior negative experiences. Such anxiety has been shown to negatively impact desired outcomes, including adoption and engagement with new technologies (Kumar et al., 2022)

The findings of the present study support this theoretical perspective by demonstrating that Technology Anxiety negatively predicts Brand Experience. Although the effect size was modest, the results confirm that Technology Anxiety functions as a potential negative of interactive technologies. In the context of Augmented Reality and Virtual Reality, anxiety may impact immersion, reduce perceived control, or heighten cognitive load, diminishing the quality

of the consumer–brand interaction. While interactive technologies offer substantial benefits, their effectiveness may be constrained by consumers' readiness and comfort with technological innovation. Consequently, even when the technological feature itself is innovative, heightened anxiety may negatively impact on the overall brand experience. Over time, this could negatively influence positive word-of-mouth or brand advocacy, particularly among consumers who are less confident in their technological abilities (Kumar et al., 2022).

The market for Augmented Reality and Virtual Reality continues to grow rapidly, with experts projecting significant financial growth in the coming years. Despite this expansion, academic research examining how these technologies are implemented in marketing contexts and how they can be used to create meaningful brand-related outcomes remains limited. Marketers increasingly view immersive technologies as tools capable of enhancing brand experiences, strengthening customer retention, and encouraging repeat engagement and purchase behavior (Zeng et al., 2023)

The findings of the present study offer empirical support for these expectations by demonstrating that both Augmented Reality and Virtual Reality significantly enhance Brand Experience, which, in turn, strongly predicts Brand Love. These results suggest that immersive technologies can serve as effective experiential mechanisms within contemporary brand strategy.

In line with the expansion of immersive technologies in the marketplace, the results also supported H2, demonstrating that Augmented Reality significantly and positively predicts Brand Experience. Participants indicated that greater brand involvement with Augmented Reality was associated with more favorable experiential evaluations. This finding reinforces the strategic relevance of AR within contemporary marketing practice.

The present study extends on Javornik (2016) findings, which conceptualize Augmented Reality as a tool that complements physical retail environments by integrating interactive overlays, and provide evidence of its impact on consumers. Previous research highlighted the need to better understand how AR influences customer behavior. The current findings contribute to this gap by demonstrating that AR meaningfully enhances Brand Experience. This suggests that, beyond merely augmenting physical spaces, AR functions as a powerful experiential mechanism that strengthens consumers' evaluative and emotional responses to brands.

Online consumers often struggle to visualize how products will appear, function, or fit within their personal context, leading to uncertainty and reduced purchase confidence. To address this limitation and strengthen affinity toward digital shopping environments, many brands have adopted service augmentation strategies, namely the integration of Augmented Reality. Rather than focusing solely on product attributes, these strategies improve interaction between the

customer and the brand's digital interface, effectively extending elements of the organizational frontline into the virtual space (Hilken et al., 2017).

By embedding virtual content within the consumer's physical environment, AR enables brands to simulate aspects of traditional in-store experiences, such as product trial, in an online setting. In doing so, AR reduces perceptual risk and increases experiential richness, thereby transforming online shopping from a transactional process into a more immersive and interactive brand encounter (Hilken et al., 2017).

Despite the growing enthusiasm for AR, consumer expectations may pose strategic challenges. Customers expect AR applications to deliver meaningful, engaging experiences while reducing uncertainty in decision-making processes. If these expectations are not met, brands risk investing in technological solutions that fail to generate engagement or adoption (Hilken et al., 2017).

The findings of the present study help navigate this uncertainty by giving empirical evidence that AR positively and significantly impacts Brand Experience. By showing a strong association between AR engagement and positive Brand Experiences, this research suggests that well-implemented AR technology can meet consumer expectations and contribute to meaningful brand-related outcomes. Consequently, the effectiveness of AR does not depend solely on technological novelty but also on its ability to deliver experiential benefits that align with consumer needs.

H3 was also supported, as Virtual Reality emerged as a strong and significant positive predictor of Brand Experience. The magnitude of the effect exceeded that of Augmented Reality, indicating that more immersive technological engagement is associated with enhanced experiences. This finding aligns with prior research, such as Alzayat & Lee (2021), who argue that simulated retail environments can enrich consumer experiences by increasing presence and interactivity.

The strength of the relationship observed in the present study may be explained by the sensory and immersive nature of Virtual Reality. Unlike less immersive digital tools, VR can engage multiple sensory dimensions simultaneously, thereby intensifying consumers' perceptual and emotional responses. From a Brand Experience perspective, this multi-sensory stimulation supports theoretical claims that richer sensory engagement enhances experiential depth. Consequently, Virtual Reality appears to function not merely as a technological novelty, but as a powerful experiential mechanism capable of strengthening consumer–brand interactions.

New technologies exhibit human-like traits and even agency, granting them affordances such as interactivity, immersion, traceability, and anonymity. These characteristics impact experiences and service communication as well as activate cognitive heuristics in users. Brand

experiences hinge on how customers respond to the communication outcomes enabled by technological affordances (Alzayat & Lee, 2021).

As previously outlined, Brakus et al. (2009) conceptualize Brand Experience across four dimensions: sensory, affective, intellectual, and behavioral. These dimensions operate throughout the consumer journey and collectively shape brand-related perceptions and outcomes. Virtual Reality, due to its immersive and interactive nature, can engage all four dimensions simultaneously. By engaging multiple sensory channels, eliciting emotional responses, and enabling active behavioral participation, VR creates a more significant experiential encounter than less immersive technological formats.

The empirical findings of the present study provide support for this theoretical explanation. Virtual Reality emerged as a significant predictor of Brand Experience, indicating that immersive engagement enhances consumers' experiences. The magnitude of this effect suggests that VR's ability to create vivid mental imagery intensifies consumers' experiences across the sensory, affective, intellectual, and behavioral dimensions. In this way, the study corroborates prior theoretical claims regarding the experiential power of VR and provides quantitative evidence of its impact on brand-related outcomes.

The heightened sense of presence in Virtual Reality is likely to elicit strong affective responses, as users experience the simulated environment as immersive and psychologically engaging. This intensified presence can foster emotional reactions toward the brand, thereby strengthening the affective dimension of Brand Experience. In addition to its emotional impact, prior literature suggests that VR encourages action-oriented engagement by prompting users to explore, interact, and make decisions within the virtual environment. Such interactive participation aligns with the behavioral dimension of Brand Experience, as defined by Brakus et al. (2009).

The findings of the present study support these theoretical claims, demonstrating that Virtual Reality significantly enhances Brand Experience. The strength of the observed relationship suggests that VR's ability to generate emotional immersion and behavioral involvement may be key to developing highly positive brand experiences. Through heightened presence and active engagement, VR appears to deepen both affective and behavioral responses toward the brand.

Although existing literature highlights the importance of Brand Love as a key indicator of strong consumer–brand relationships, empirical research examining how Brand Experience meaningfully contributes to the development of such emotional attachment remains comparatively limited. The present study addresses this gap by providing quantitative evidence of Brand Experience's substantial impact on Brand Love. By demonstrating a strong and significant relationship between these constructs, this research underscores the pivotal role of

experiential interactions in fostering deep emotional connections between consumers and brands (Ferreira et al., 2019).

As hypothesized, H4 was supported, with Brand Experience emerging as a strong and significant positive predictor of Brand Love. This relationship represented the most substantial effect observed in the study, explaining a large proportion of the variance in Brand Love. The findings are consistent with prior literature suggesting that positive brand experiences serve as a foundational driver of emotional attachment and enduring consumer–brand relationships. The magnitude of the effect shows the central role of positive brand experiences in cultivating Brand Love and reinforces the importance of experience-based strategies in contemporary brand management.

Developing and maintaining strong consumer–brand relationships is a central objective of contemporary brand strategy. Such relationships are cultivated through meaningful interactions that foster emotional connection, trust, and brand identification. When these bonds intensify, they may evolve into Brand Love, which represents one of the most profound forms of consumer–brand attachment and extends beyond mere preference or satisfaction (Ferreira et al., 2019).

The findings of the present study provide strong empirical support for this relational perspective. The strong relationship between Brand Experience and Brand Love suggests that experiential interactions serve as a primary mechanism for forming and strengthening emotional attachment to a brand. In other words, positive and immersive brand experiences do not merely influence short-term evaluations; they play a critical role in transforming consumer perceptions into deeper, enduring emotional bonds (Ferreira et al., 2019).

Overall, the study demonstrates that the impact of Technology Anxiety on Brand Experience has decreased compared to previous research, and that Augmented Reality and Virtual Reality are proven significant drivers of positive Brand Experiences. As well as showing that positive, significant brand experiences are fundamental to establishing strong feelings of Brand Love among consumers.

4. Conclusions and Recommendations

The study examined consumer responses to the adoption of interactive technologies by luxury fashion brands, focusing specifically on Gucci. The findings indicate that Virtual Reality emerged as the strongest driver of positive Brand Experience among the technologies analyzed. Augmented Reality also demonstrated a significant, positive impact, though to a lesser extent. While Technology Anxiety was identified as a statistically significant predictor, its influence on Brand Experience was comparatively modest.

Overall, the study contributes to existing literature by providing empirical evidence of how immersive technologies shape Brand Experience and, subsequently, Brand Love within the luxury fashion context. By clarifying the relative influence of Virtual Reality, Augmented Reality, and Technology Anxiety, this research addresses a gap in prior studies concerning the experiential and emotional consequences of interactive technological adoption. Furthermore, the findings offer practical implications for luxury brands, supporting more informed strategic decisions about integrating immersive technologies into marketing initiatives.

4.1. Theoretical Implications

This study contributes to both academic research and industry practice by elucidating how Augmented Reality, Virtual Reality, and Technology Anxiety affect Brand Experience and, in turn, clarifying the impact of positive brand experiences on the development of Brand Love.

The findings show that both Augmented Reality and Virtual Reality significantly impact Brand Experience, with Virtual Reality exerting a greater impact. In addition, technology anxiety was found to have a small, statistically significant negative influence on Brand Experience. This finding differs from prior research, which highlighted that Technology Anxiety is a major factor in the low adoption of new technologies by users.

Taken together, the findings suggest an evolving consumer perception of interactive technologies in the luxury fashion context. Consumers appear to increasingly associate Augmented Reality and Virtual Reality with positive, engaging, and value-enhancing brand experiences, indicating a growing acceptance of immersive digital formats. The interactive and participatory nature of these technologies appears to strengthen the connection between consumers and brands by enhancing experiential depth and engagement.

Furthermore, while Technology Anxiety remains a statistically significant factor, its comparatively modest effect size suggests that psychological resistance may be less constraining than previously assumed. As consumer familiarity with immersive technologies increases, the potential inhibitory influence of technology anxiety may diminish. For luxury brands, this implies that although the adoption of innovative technologies involves uncertainty,

the experiential and relational benefits may outweigh the perceived risks when implementation is strategically aligned with consumer expectations.

Finally, this study also contributes methodologically by validating the relationships between emerging technologies and consumer-brand outcomes. By connecting technological stimuli (AR and VR) with psychological responses (Brand Experience and Brand Love), the research provides a deeper understanding of how digital innovation can translate into emotional brand attachment. This perspective creates a valuable foundation for future research to build upon, particularly by incorporating more complex models that incorporate additional mediating variables.

4.2. Limitations and Suggestions for Future Research

Despite its contributions, this study is subject to several limitations that provide opportunities for future research.

First, the study relied on a broad, relatively undifferentiated sample, with the only inclusion criterion that participants were over 18 years old. While this approach allows for a general understanding of perceptions toward interactive technologies, it limits the ability to capture differences across specific segments. Future research could benefit from focusing on more targeted groups, such as distinct age cohorts or nationalities, to identify potential variations in responses and enhance the applicability of findings for specific markets.

Second, the study was based on self-reported data, which may be subject to social desirability bias and may not accurately reflect actual behaviors or intentions. Participants might respond in ways they perceive as appropriate rather than truthful. To address this limitation, future studies could incorporate behavioral data or longitudinal designs that track consumer interactions with these technologies over time, thereby providing a more accurate assessment of their impact on brand experience.

Third, the study examined non-immersive virtual reality, which represents only one aspect of a rapidly evolving technological landscape. As immersive virtual reality becomes increasingly accessible and widely adopted, future research should explore its effects in greater depth, as it may produce different or more pronounced impacts on consumer perceptions and experiences.

Fourth, the study adopted a purely quantitative approach, which, while useful for identifying patterns and relationships, does not fully capture the depth of consumer perceptions and emotions. Future research could complement these findings by incorporating qualitative methods, such as interviews or focus groups, to gain richer insights into how consumers interpret and emotionally respond to interactive technologies.

Finally, participants evaluated brand love after being exposed to information about campaigns involving interactive technologies. This post-exposure measurement does not

account for prior attitudes toward the brand. Future research could adopt a longitudinal or experimental design with multiple stages to assess brand perceptions before, during, and after interaction with the technology. Such an approach would allow for a more comprehensive understanding of how these technologies influence changes in consumer attitudes over time.

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Appendices

Appendix A – Survey Questions

Q1 - AR content quality

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree Nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
The AR try-on app provides relevant information on Gucci products (1)	○	○	○	○	○	○	○
The content quality of the AR try-on app was clear and easy to understand (2)	○	○	○	○	○	○	○

Q2 - AR environmental embedding

I felt like I was using the product I was trying on (1)	○	○	○	○	○	○	○
I felt like the product I was trying on meshed in the real surroundings (2)	○	○	○	○	○	○	○

Q3 - Continuous intention to use AR

I intend to continue using the Gucci AR try-on in the future (1)	○	○	○	○	○	○	○
I will try to use the AR try-on more often in my daily life (2)	○	○	○	○	○	○	○
I will strongly recommend others to use the Gucci AR try-on app (3)	○	○	○	○	○	○	○

Q4 - Perceived enjoyment

The use of the AR try-on app was indeed a joy (1)	○	○	○	○	○	○	○
To me, shopping online with an AR try-on app was an adventure (2)	○	○	○	○	○	○	○
I had a good time with the use of the AR try-on app (3)	○	○	○	○	○	○	○

Q5 - Perceived interactivity

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree Nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
I felt like I was in control of the try-on features through the AR try-on app (1)	○	○	○	○	○	○	○
I felt like I was interacting quickly and efficiently with the products through the use of the AR try-on app (2)	○	○	○	○	○	○	○
I had some control over the contents of the AR try-on app that I wanted to see and use (3)	○	○	○	○	○	○	○

Q6 - Perceived ease of use

The AR try-on app features were easy to use (1)	○	○	○	○	○	○	○
The AR try-on app features did not require a lot of my mental effort (2)	○	○	○	○	○	○	○
The AR try-on app features were more comfortable to use than trying on the products in real life (3)	○	○	○	○	○	○	○

Q7 – AR Satisfaction

I am satisfied with the use of the AR try-on app (1)	○	○	○	○	○	○	○
I am satisfied with the use of the AR try-on app features (2)	○	○	○	○	○	○	○
I am satisfied with the contents of the AR try-on app (3)	○	○	○	○	○	○	○
Overall, I am satisfied with the AR try-on app (4)	○	○	○	○	○	○	○

Q8 – Service Quality

The level of AR try-on app service quality was high (1)	○	○	○	○	○	○	○
The AR try-on service quality understands my fashion requirements (2)	○	○	○	○	○	○	○
The AR try-on app service quality blended the information and services with its features (3)	○	○	○	○	○	○	○

Q9 - System quality

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree Nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
The AR try-on app quickly loads the product to try on and all its features (1)	○	○	○	○	○	○	○
The AR try-on app was easy to navigate (2)	○	○	○	○	○	○	○
The AR try-on app has visually attractive features (3)	○	○	○	○	○	○	○
The AR try-on features were convenient to use (4)	○	○	○	○	○	○	○

Q10 – Technology Anxiety (AR)

Using the AR try-on app would be somewhat intimidating for me (1)	○	○	○	○	○	○	○
It would scare me to know that I could lose a lot of information by hitting the wrong feature in the AR try-on shopping system (2)	○	○	○	○	○	○	○
I would feel apprehensive about using the Gucci AR try-on app (3)	○	○	○	○	○	○	○
I would hesitate to use the AR try-on app for fear of making mistakes I cannot correct (4)	○	○	○	○	○	○	○

Q11 – Retail app brand engagement

Using augmented reality features stimulates my interest in this retail brand (1)	○	○	○	○	○	○	○
Using augmented reality features makes me think about this retail brand (2)	○	○	○	○	○	○	○
I think about this retail brand a lot when using the brands augmented reality app (3)	○	○	○	○	○	○	○
I feel positive when I use the brand’s augmented reality app (4)	○	○	○	○	○	○	○
I feel good when I use the brands augmented reality app (5)	○	○	○	○	○	○	○

Q12 – Telepresence

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree Nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
The experience with Gucci in the VR metaverse created a new world for me, which suddenly disappeared when the experience ended (1)	○	○	○	○	○	○	○
When the experience in the VR metaverse ended, I felt as if I had returned to the “real world” after a journey (2)	○	○	○	○	○	○	○
The experience in the VR metaverse seemed to be “a place I visited” rather than “something I saw” (3)	○	○	○	○	○	○	○
There were times during the experience in the VR metaverse when I perceived the virtual environment of Gucci as if it were reality (4)	○	○	○	○	○	○	○
During the experience in the VR metaverse, I had the feeling of actually being in the environment of Gucci, not being somewhere else (5)	○	○	○	○	○	○	○
During my experience in the VR metaverse, I often happened to think that I was actually in the virtual environment of Gucci (6)	○	○	○	○	○	○	○

Q13 – Brand Social Presence

I felt a sense of human contact in the VR environment provided by Gucci (1)	○	○	○	○	○	○	○
I felt a sense of personalness in the VR environment provided by Gucci (2)	○	○	○	○	○	○	○
I felt a sense of sociability in the VR environment provided by Gucci (3)	○	○	○	○	○	○	○

Q14 – VR Attitude

VR technology is favorable (1)	○	○	○	○	○	○	○
VR technology is appealing (2)	○	○	○	○	○	○	○
VR technology is attractive (3)	○	○	○	○	○	○	○

Q15 – Technology Anxiety (VR)

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree Nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Using the VR app would be somewhat intimidating for me (1)	○	○	○	○	○	○	○
It would scare me to know that I could lose a lot of information by hitting the wrong feature in the VR system (2)	○	○	○	○	○	○	○
I would feel apprehensive about using the Gucci VR app (3)	○	○	○	○	○	○	○
I would hesitate to use the VR for fear of making mistakes I cannot correct (4)	○	○	○	○	○	○	○

Q16 – Brand Experience – Sensory

Gucci makes a strong impression on my visual sense or other senses (1)	○	○	○	○	○	○	○
Gucci appeals to my senses (2)	○	○	○	○	○	○	○
I find Gucci interesting in a sensory way (3)	○	○	○	○	○	○	○

Q17 – Brand Experience – Emotional

I have strong emotions for Gucci (1)	○	○	○	○	○	○	○
Gucci is an emotional brand (2)	○	○	○	○	○	○	○
Gucci induces feelings and sentiments (3)	○	○	○	○	○	○	○

Q18 – Brand Experience – Behavioral

Gucci's campaigns utilizing interactive technology result in body experiences (1)	○	○	○	○	○	○	○
I engage in physical actions and behavior when I use the Gucci interactive campaign (2)	○	○	○	○	○	○	○
Gucci interactive campaigns are action-oriented (3)	○	○	○	○	○	○	○

Q19 – Brand Experience – Intellectual

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree Nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
The Gucci interactive campaign stimulate my curiosity and problem solving (1)	○	○	○	○	○	○	○
I engage in a lot of thinking when I encounter the Gucci interactive campaign (2)	○	○	○	○	○	○	○
Gucci interactive campaigns make me think (3)	○	○	○	○	○	○	○

Q20 – Brand Love

Gucci is a wonderful brand (1)	○	○	○	○	○	○	○
Gucci makes me feel good (2)	○	○	○	○	○	○	○
Gucci is totally awesome (3)	○	○	○	○	○	○	○
Gucci makes me very happy (4)	○	○	○	○	○	○	○
Gucci is a pure delight (5)	○	○	○	○	○	○	○
I am passionate about Gucci (6)	○	○	○	○	○	○	○

Q21 - Gender

- ○ Male (1)
- ○ Female (2)
- ○ Non-binary / third gender (3)
- ○ Prefer not to say (4)

Q22 - Age

- ○ 18 - 24 (1)
- ○ 25-29 (2)
- ○ 30-34 (3)
- ○ 35- 40 (4)
- ○ >40 (5)

Q23 - Salary

- ○ <1000 (1)
- ○ 1000 - 1499 (2)
- ○ 1500 - 2000 (3)
- ○ >2000 (4)
- ○ Not applicable (7)

Q24 - Education Level

- ○ Middle School Graduate (1)
- ○ High School Graduate (2)
- ○ College Graduate (3)
- ○ Master (4)
- ○ PhD (5)

Appendix B – Sample Analysis

Table B. 1 - Frequency and Percentage of Participants' Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	87	29.3	29.3	29.3
	Female	207	69.7	69.7	99.0
	Prefer not to say	3	1.0	1.0	100.0
	Total	297	100.0	100.0	

Source: Own elaboration

Table B. 2 - Frequency and Percentage of Participants' Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	146	49.2	49.2	49.2
	25-29	52	17.5	17.5	55.8
	30-34	28	9.4	9.4	76.1
	35-40	21	7.1	7.1	83.2
	>40	50	16.8	16.8	100.0
	Total	297	100.0	100.0	

Source: Own elaboration

Table B. 3 - Frequency and Percentage of Participants' Salary

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<1000	62	20.9	28.6	28.6
	1000 – 1499	59	19.9	27.2	55.8
	1500 – 2000	31	10.4	14.3	70.0
	>2000	65	21.9	30.0	100.0
	Total	217	73.1	100.0	
Missing	System	80	26.9		
Total		297	100.0		

Source: Own elaboration

Table B. 4 - Frequency and Percentage of Participants' Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Middle School Graduate	5	1.7	1.7	1.7
	High School Graduate	42	14.1	14.1	15.8
	College Graduate	116	39.1	39.1	54.9
	Master	128	43.1	43.1	98.0
	PhD	6	2.0	2.0	100.0
	Total	297	100.0	100.0	

Source: Own elaboration

Appendix C – Assumption Checks for Regression 1 (Technology Anxiety and Brand Experience)

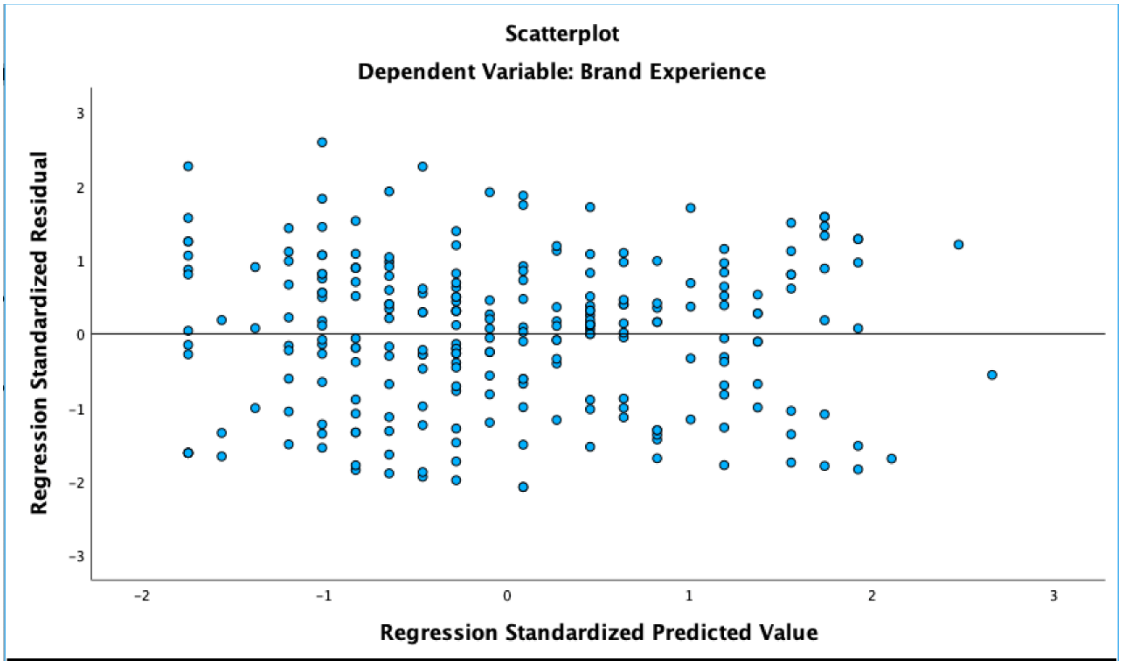


Figure C. 1 - Scatter Plot of Residuals for Regression 1

Source: Own elaboration

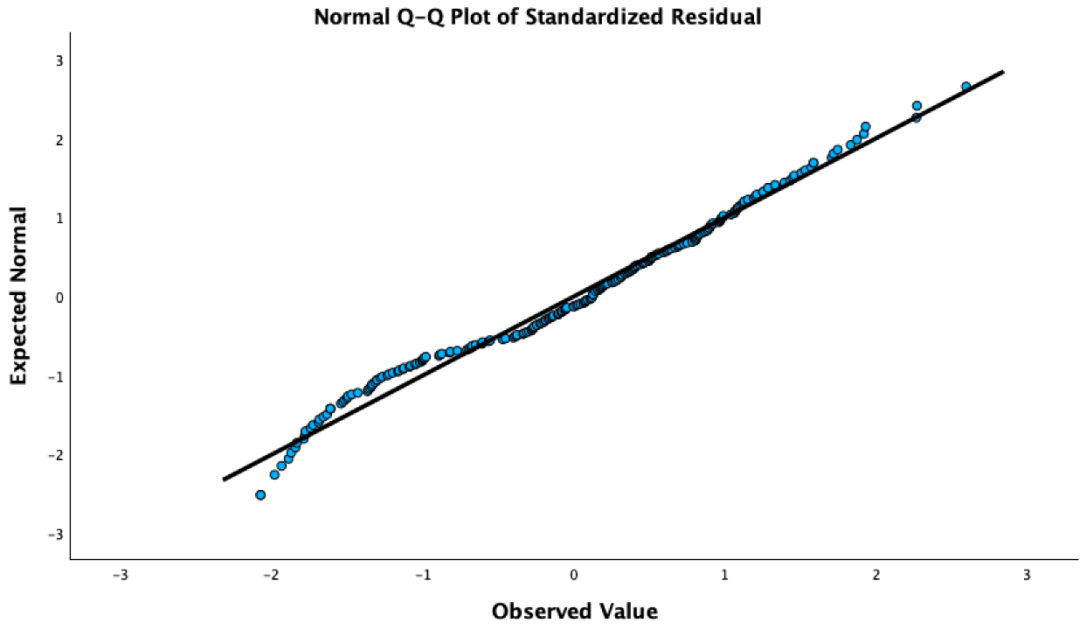


Figure C. 2 - Normal Q-Q plot for Regression 1

Source: Own elaboration

Table C. 1 - Tests of Normality for Regression 1

	Kolmogorov–Smirnov[a]			Shapiro–Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residuals	0.060	252	0.027	0.981	252	0.002

a. Lilliefors Significance Correction

Source: Own elaboration

Table C. 2 - Residuals Statistics Table for Regression 1

Residual Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.1128	4.5616	3.6875	0.32889	252
Residual	−2.71648	3.39570	0.00000	1.30699	252
Std. Predicted Value	−1.747	2.658	0.000	1.000	252
Std. Residual	−2.074	2.593	0.000	0.998	252

a. Dependent Variable: brandexp Brand Experience

Source: Own elaboration

Table C. 3 - Coefficients Table for Regression 1

Coefficients[a]

Model	Variable	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
1	(Constant)	4.803	0.292	—	16.434	<0.001
1	technanx Technology Anxiety	−0.241	0.061	−0.244	−3.979	<0.001

a. Dependent Variable: brandexp Brand Experience

Source: Own elaboration

Appendix D – Assumption Checks for Regression 2 (Augmented Reality and Brand Experience)

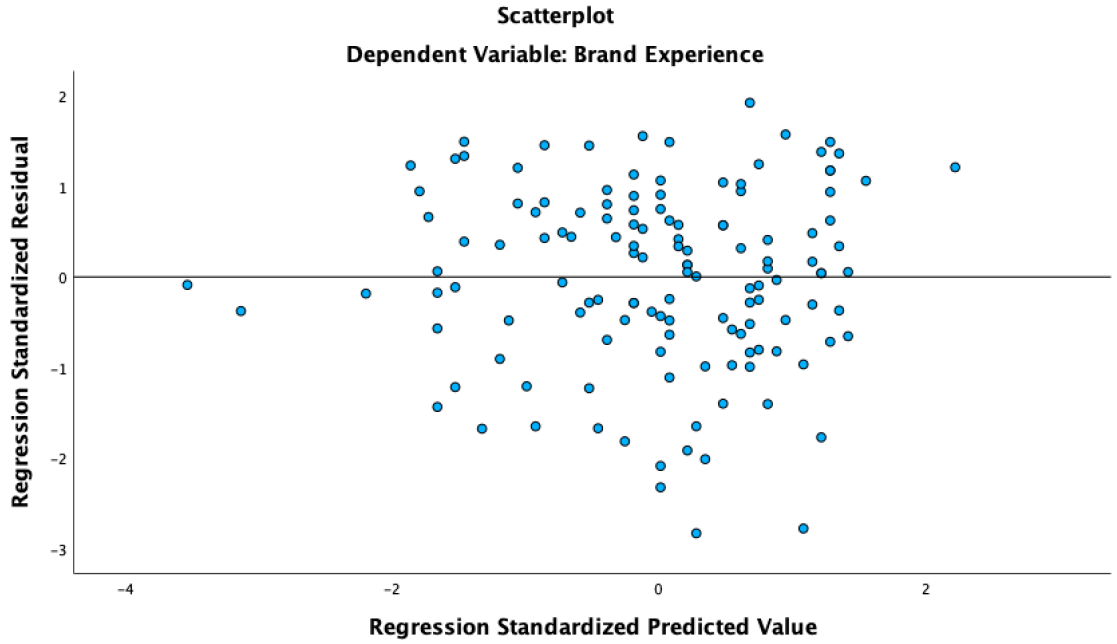


Figure D. 1 - Scatter Plot of Residuals for Regression 2

Source: Own elaboration

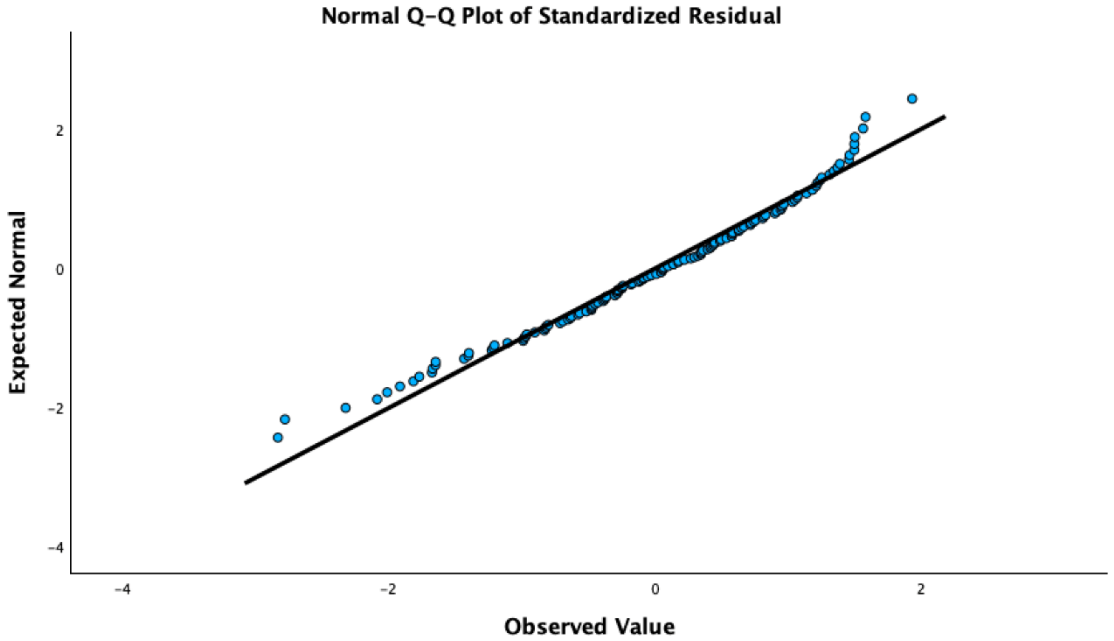


Figure D. 2 - Normal Q-Q plot for Regression 2

Source: Own elaboration

Table D. 1 - Tests of Normality for Regression 2

	Kolmogorov–Smirnov[a]			Shapiro–Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residuals	0.059	134	0.200	0.975	134	0.014

a. Lilliefors Significance Correction

Source: Own elaboration

Table D. 2 - Residuals Statistics Table for Regression 2

Residual Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.0925	5.4693	3.7811	0.76017	134
Residual	−2.99340	2.03458	0.00000	1.05202	134
Std. Predicted Value	−3.537	2.221	0.000	1.000	134
Std. Residual	−2.835	1.927	0.000	0.996	134

a. Dependent Variable: brandexp Brand Experience

Source: Own elaboration

Table D. 3 - Coefficients Table for Regression 2

Coefficients[a]

Model	Variable	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
1	(Constant)	−0.129	0.480	—	−0.269	0.789
1	augmreal Agumented Reality	0.814	0.098	0.586	8.302	<0.001

a. Dependent Variable: brandexp Brand Experience

Source: Own elaboration

Appendix E – Assumption Checks for Regression 3 (Virtual Reality and Brand Experience)

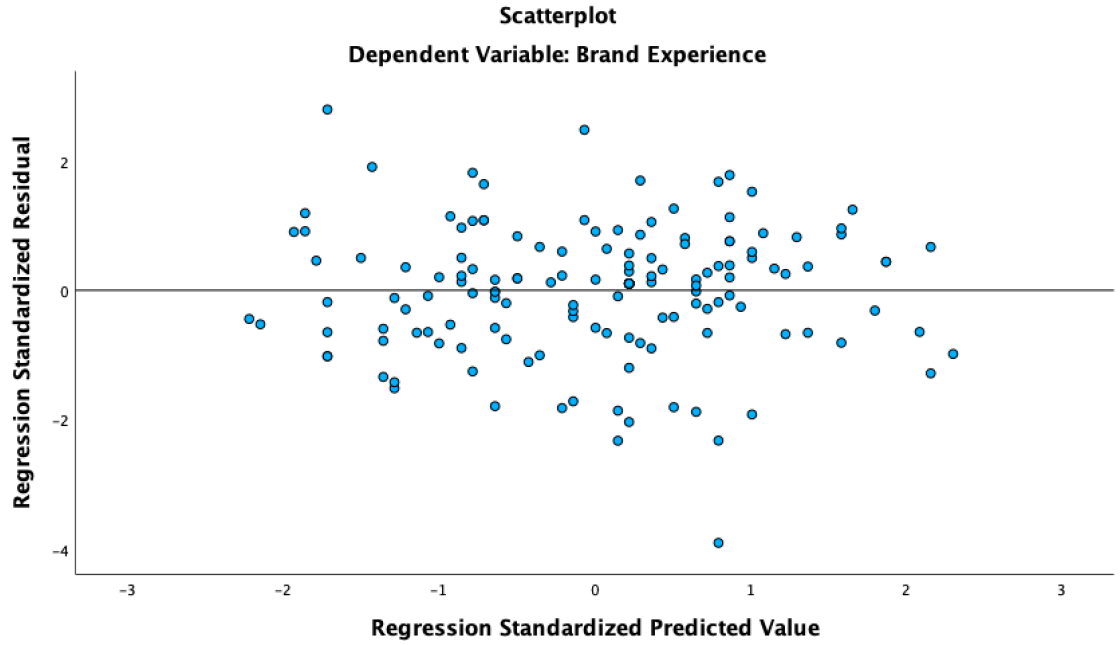


Figure E. 1 - Scatter Plot of Residuals for Regression 3

Source: Own elaboration

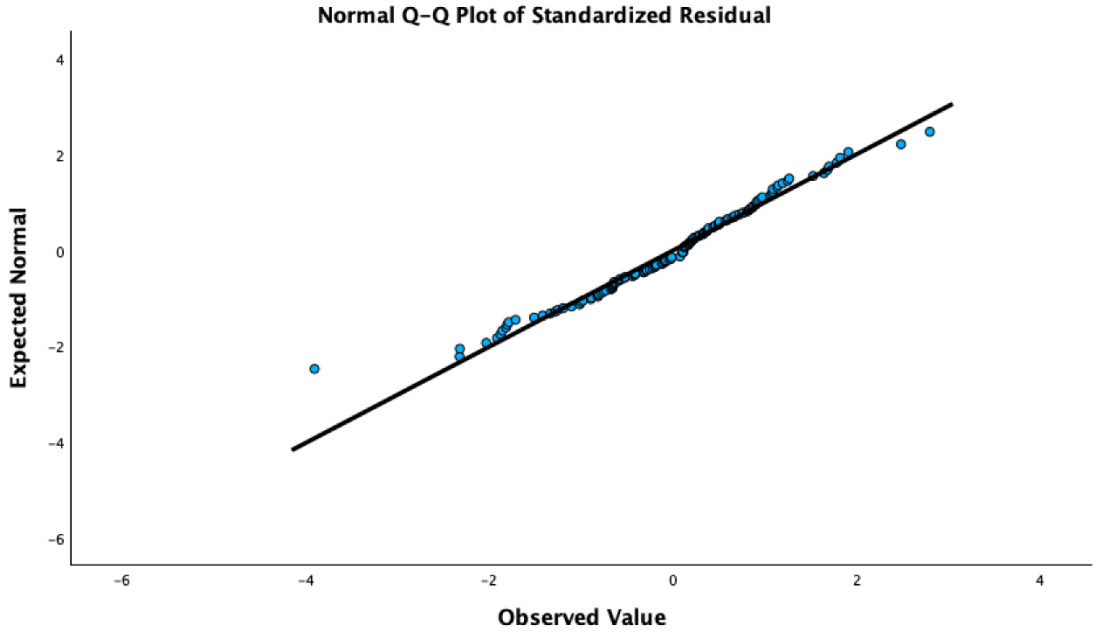


Figure E. 2 - Normal Q-Q plot for Regression 3

Source: Own elaboration

Table E. 1 - Tests of Normality for Regression 3

	Kolmogorov–Smirnov[a]			Shapiro–Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residuals	0.089	148	0.006	0.980	148	0.029

a. Lilliefors Significance Correction

Source: Own elaboration

Table E. 2 - Residuals Statistics Table for Regression 3 (

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.3959	6.0470	3.6791	1.02922	148
Residual	−3.49663	2.50395	0.00000	0.89261	148
Std. Predicted Value	−2.218	2.301	0.000	1.000	148
Std. Residual	−3.904	2.796	0.000	0.997	148

a. Dependent Variable: brandexp Brand Experience

Source: Own elaboration

Table E. 3 - Coefficients Table for Regression 3

Coefficients[a]

Model	Variable	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
1	(Constant)	0.362	0.249	—	1.454	0.148
1	virtreal Virtual Reality	0.886	0.064	0.755	13.932	<0.001

a. Dependent Variable: brandexp Brand Experience

Source: Own elaboration

Appendix F – Assumption Checks for Regression 4 (Brand Experience and Brand Love)

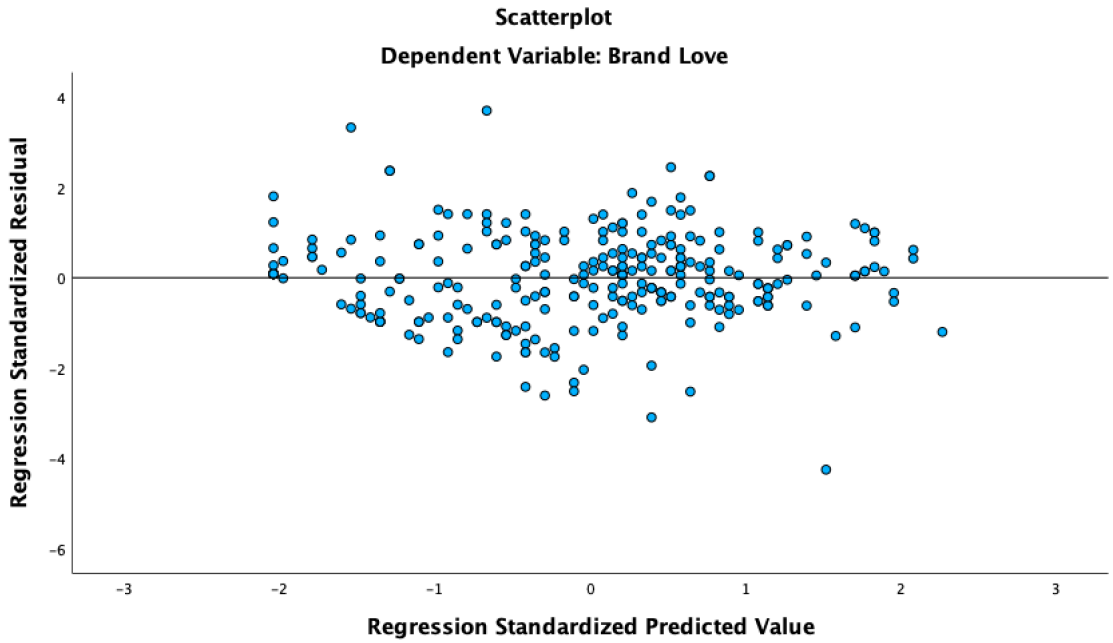


Figure F. 1 - Scatter Plot of Residuals for Regression 4

Source: Own elaboration

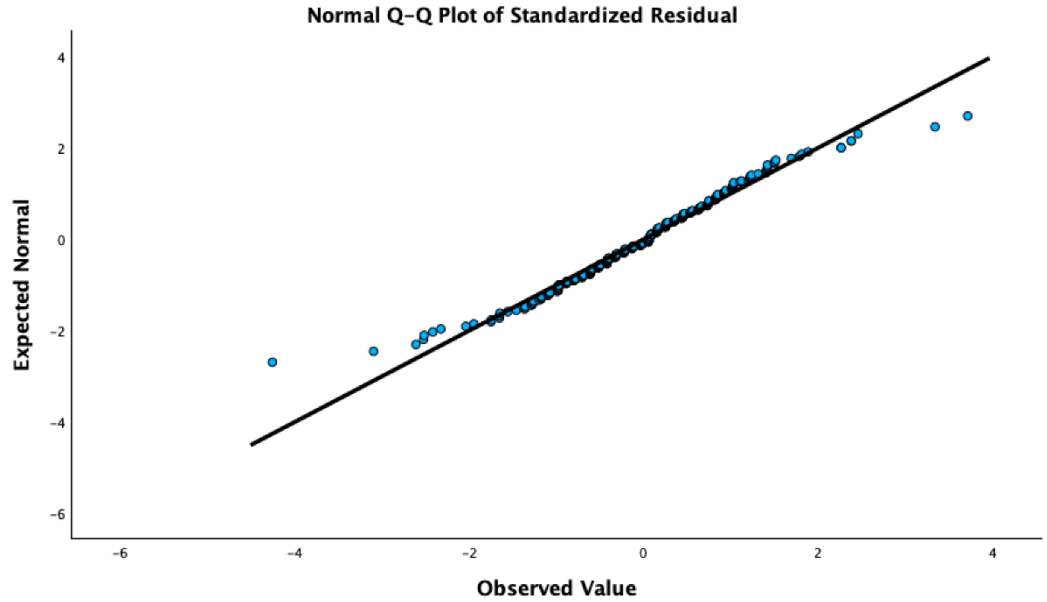


Figure F. 2 - Normal Q-Q plot for Regression 4

Source: Own elaboration

Table F. 1 - Tests of Normality for Regression 4

	Kolmogorov–Smirnov[a]			Shapiro–Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residuals	0.050	285	0.080	0.980	285	<0.001

a. Lilliefors Significance Correction

Source: Own elaboration

Table F. 2 - Residuals Statistics Table for Regression 4

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	0.9264	6.7126	3.6673	1.34422	285
Residual	−3.70631	3.22870	0.00000	0.86923	285
Std. Predicted Value	−2.039	2.266	0.000	1.000	285
Std. Residual	−4.256	3.708	0.000	0.998	285

a. Dependent Variable: brandlov Brand Love

Source: Own elaboration

Table F. 3 - Coefficients Table for Regression 4

Coefficients[a]

Model	Variable	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
1	(Constant)	−0.080	0.153	—	−0.522	0.602
1	brandexp Brand Experience	1.006	0.039	0.840	26.015	<0.001

a. Dependent Variable: brandlov Brand Love

Source: Own elaboration