Digital Marketing:
The Complex Interplay of Influencer Type, Advertisement Message Type, and Social Media Platform

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ABSTRACT

This thesis aimed to investigate how different types of social media influencers (nano, micro, and macro) and different types of advertisement messages (rational versus emotional) impact customer-brand engagement on social media platforms. Specifically focusing on measuring engagement through metrics such as likes, shares, and comments, using a 3x2 between-subjects experimental research design. This thesis addressed the research question: *How do influencer type (nano, micro, vs. macro) and advertisement message type (rational vs. emotional) impact customer-brand engagement (e.g., likes, shares, and comments), while accounting for differences across social media platforms?* To answer this question, three hypotheses were formed: H1 (Micro- and nano-influencers generate significantly higher customer-brand engagement than macro-influencers), H2 (Emotional advertisement messages will lead to significantly higher customer- brand engagement than rational advertisement messages), H3 (The effect of influencer type on customer-brand engagement will be influenced by the advertisement message type) are incorporated as a covariate. The hypotheses and covariate were tested through a two-way ANCOVA. H1 was rejected, meaning nano- and micro-influencers are not found to generate significantly higher customer-brand engagement than macro-influencers. Similarly, H2 was rejected. Emotional advertisement messages do not lead to significantly higher customer-brand engagement. Finally, H3 was rejected. The effect of influencer type on customer-brand engagement was not influenced by the advertisement message type. On the contrary, the covariate revealed that platform preference had a significant effect on customer-brand engagement. Thus, this research contributed to the understanding of influencer marketing effectiveness and suggested that engagement outcomes do not only depend on influencer type or advertisement message type, but as social media platforms, also tend to have an influential role. Offering valuable implications for brands aiming to optimize their social media marketing strategies.

KEYWORDS: *Influencer Marketing, Advertisement Message Type, Customer-Brand Engagement, Social Media*

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List of abbreviations

CBE	Customer-Brand Engagement
SMI	Social Media Influencer
ANCOVA	Analysis of Covariance
M	Mean score (average)
N	Number of research units
SD	Standard deviation
n	number of participants in a subgroup/sample size
p	p-value (probability value in statistical testing)
η^2	Eta squared (measure of effect size)
Partial η^2	Partial eta squared (effect size controlling for other variables)

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1. Introduction

In October 2023, BMW launched a campaign for its iX2 model, using Lil Miquela, a virtual influencer. By Lil Miquela showing her enthusiasm about this model, BMW showed its dedication to modern digital marketing strategies. using an influencer. The importance of this dedication was highlighted by Stefan Ponikva, Vice President of Brand Communication and Experience at BMW, who emphasized the quick changes of society influence not only product developments but also marketing tactics (Cambosa, 2023). The collaboration of BMW with Miquela illustrated an example of how brands adapted to the evolving landscape of influencer marketing.

Influencer marketing has become an essential part of many companies' brand strategies. BMW was not the only example, as British Airways also worked with various influencers to increase their visibility and interaction with their audiences (Barnett, 2022). However, the influencer marketing landscape changed rapidly. Whereas companies previously collaborated with influencers with a big following, many now shift toward micro-influencers, creators with a smaller but often more engaged audience (Mason, 2025). Recent studies showed that 77% of marketers considered micro-influencers among their top choices, valuing their ability to drive engagement (Mason, 2025). Nevertheless, some marketers continue to advocate for partnerships with celebrities and mega-influencers, credible for their broader reach (Whateley & Bradley, 2024).

This tension between reach and engagement marks a relevant distinction between small and larger influencers regarding digital marketing strategies. While big influencers provide access to large audiences, smaller ones often foster greater interaction and trust. Understanding how these differences affect consumer-brand engagement is crucial for optimizing these marketing strategies (Şenyapar, 2024).

This study aimed to investigate the influence of influencer type (nano, micro, macro) impact customer-brand engagement (CBE) on social media platforms. Additionally, it examined how the message strategy, advertisement message type (rational versus emotional), impacted this. Whereas engagement was measured through likes, shares, and comments. Furthermore, the study accounted for differences between social media platforms, incorporating this as a covariate. Overall, this led to the following research question: *How do influencer type (nano, micro, vs. macro) and advertisement message type (rational vs. emotional) impact customer-brand engagement (e.g., likes, shares, and comments), while accounting for differences across social media platforms?* To address this, a 3x2 between-subjects online experiment was conducted, testing six combinations of influencer type and advertisement message type. The experiment was shared widely online, including those with prior familiarity with social media marketing.

This study is relevant from both an academic and social perspective. Academically, it contributed to the understanding of influencer marketing by examining the main and interaction effects of influencer type and advertisement message type on customer-brand engagement. While previous research focused primarily separately on these aspects of influencer type (e.g., Kay et al., 2020; Park et

al., 2021) or the impact of message strategies (e.g., Manchón et al., 2015; Ahmadi et al., 2023), this study addressed this notable gap by analyzing both aspects with one experimental design. This allowed for the analysis of their main effects and their interaction, providing more extensive insight into customer behavior. Moreover, it answered recent suggestions in prior research, such as Pan et al. (2024), by incorporating social media platform as a covariate. Societally, the findings offered practical value for marketers and brands seeking guidance in developing new marketing strategies, contributing to the refinement of compelling marketing messages.

1.1 Structure of Thesis

This thesis is divided into five chapters. Following this introduction, it will take the reader along the existing knowledge of influencer marketing, and the various relevant concepts measured in this study, such as influencer type, advertisement message type, and customer-brand engagement. The methodology chapter will explain how the 3x2 experimental design of this study was conducted and elaborate on the final sample. This chapter will be followed by the results chapter, which is focused on reporting the results, answering the hypotheses, H1, H2, and H3, and furthermore examining the control for the covariate. Finally, the last chapter contains the discussion and conclusion of this study, explaining the meaning of the results in a broader sense.

2. Theoretical Framework

This chapter provides an overview of the existing relevant literature for this thesis, defining key concepts and outlining the main theories in the field. Structured in several subsections: *online influencer marketing (2.1.), the history of influencer marketing (2.1.1), types of influencers (2.2), nano-influencers (2.2.1), micro-influencers (2.2.2), macro-influencers (2.2.3), advertisement message types (2.3), rational advertisement messaging (2.3.1) emotional advertisement messaging (2.3.2), social media platforms as a contextual factor (2.4), Instagram (2.4.1), TikTok (2.4.2), and customer brand engagement (2.5).* The two independent variables, influencer type and advertisement message type, and their impact on customer brand engagement were the focus. As mentioned before, to account for possible platform-related effects, platform type was used as a covariate. The hypotheses are presented at the end of this chapter.

2.1. Online Influencer Marketing

Online influencer marketing has become an increasingly important part of digital marketing. Platforms such as Facebook, Instagram, and X serve as channels for promoting products and services, building brand awareness, and enhancing customer engagement (Şenyapar, 2024, p. 75). Influencers are crucial because they use their knowledge, relatability, and personal experiences to drive brand conversations, shape trends, and influence consumer decisions (Şenyapar, 2024, p. 81).

There are various forms of Influencer content, such as videos, photos, blogs, and podcasts. Often including personal stories, recommendations, and insights tailored to the interests of their audience. Influencers are commonly categorized as nano-, micro-, macro-, blog-, and vlog influencers, each playing a distinct role within the influencer marketing landscape (Şenyapar, 2024, p 77). This study focused specifically on nano-, micro-, and macro-influencers, as they differ significantly in follower base, engagement style, and strategic marketing value. According to Şenyapar (2024, p. 77), nano-influencers offer localized authenticity; micro-influencers foster trust in niche markets; and macro-influencers combine reach with authority. Because of their different marketing goals (such as SEO optimization or long-form storytelling) and time constraints, bloggers and vloggers are not included in this study.

Influencers work together with brands through ambassadorships, sponsored posts, and co-created products. According to Şenyapar (2024, p. 76), digital marketing continues to change. Emphasizing the importance of strategic alignment between influencers, audiences, platforms, and marketing goals to maximize impact. The following section provides a brief overview of the evaluation of influencer marketing to get a better understanding of their current function in digital marketing.

2.1.1 Evolution of Influencer Marketing

The roots of influencer marketing lie in the concept of opinion leadership, where individuals influence others' behavior through word-of-mouth communication (Vrontis et al., 2021, p. 618). These individuals frequently outperform conventional advertisements in terms of effectiveness (Casaló et al., 2018, p. 512). The effectiveness of opinion leadership led to celebrity endorsements, where well-known figures promote products based on their public image (Knoll & Matthes, 2017, p. 55; McCracken, 1989, p. 310). Correspondingly, the rise of social media introduced the social media influencer (SMI) – ordinary users with large followings who share relatable content (Vrontis et al., 2021, 618; Selvakkumar, 2024, p. 111). In contrast to celebrities, SMIs build trust through authenticity and consistent engagement (Selvakkumar, 2024, pp. 110-111). Chiara Ferragni served as an early example, growing from a fashion blog to global influencer (Vrontis et al., 2021, 618). By 2018, 50% of internet users followed influencers, and 40% made purchases based on recommendations (Audrezet & Charry, 2019). This highlights the credibility and authenticity of influencers, which often surpasses that of traditional advertising (Djafarova & Rushworth, 2017, p. 6).

2.2 Types of Influencers: Nano, Micro, Macro

Influencers differ in follower count, cost-effectiveness, perceived authenticity, and audience engagement. Generally, smaller influencers – such as nano- and micro-influencers – are perceived as more approachable and authentic, often resulting in higher engagement. In contrast, macro-influencers offer broader reach and more polished content. The following subsections elaborate on the characteristics of nano-, micro-, and macro-influencers.

2.2.1 Nano-Influencers

Nano-influencers usually maintain a small but active following, with an average of 1,000-10,000 followers. Based on common interests and relevant experiences, they establish a personal and genuine relationship with their followers, which is their strength (Şenyapar, 2024, p. 83). Their specialized knowledge often closely matches the tastes of their audience, resulting in relevant and engaging content (Balaji et al., 2021, p. 300). According to Kay et al. (2020, p. 256), people view smaller influencers as highly trustworthy.

The relatively modest size of their following enables more direct and community-like interaction, contributing to high engagement rates, such as likes, comments, and shares, and reinforcing the perceived impact of their content (Macalik, 2021, pp. 849-850). Rather than appearing commercial or distant, nano-influencers are often seen as offering recommendations similar to those from trusted peers (Lie & Aprilianty, 2022). Finally, from a brand perspective, nano-influencers are cost-effective and accessible. They are attractive to smaller firms or those with lower marketing budgets because of their low collaboration fees. Additionally, long-term connections and brand loyalty are also supported by their hyper-local reach and approachability (Şenyapar, 2024, pp. 83-84).

Overall, nano-influencers are an authentic and cost-effective influencer type. Their effectiveness in building close relationships with small audiences makes them valuable for targeted engagement and smaller marketing efforts.

2.2.2 Micro-Influencers

Social media users who maintain a relatively small but active following, typically ranging between 10,000 and 100,000 followers, are referred to as micro-influencers. Their strong community participation allows them to have a large influence while having a relatively small following (Şenyapar, 2024, pp. 81-82; Park et al., 2021, 585-586; S. Wang et al., 2021, 2596-2597).

What sets them apart is their concentration on certain content niches, which creates close-knit communities and strong connections with their audience around shared interests and areas of expertise (Park et al., 2021, 584-587). This enhances the impression that their information is genuine, knowledgeable, and well matched with their audience's values and needs (Şenyapar, 2024, pp. 81-82).

The relatively small scale of their follower base enables more direct interaction, often reflected in high engagement metrics such as likes, comments, and shares (Kay et al., 2020, 256). Because of this relationship, they are especially successful at gaining the trust of their audience, which is a crucial aspect that distinguishes them from larger influencers (Park et al., 2021, 585-586). According to Djafarova and Rushworth (2017, pp. 4-5), young female Instagram users perceive micro-influencers as more credible and relatable than traditional celebrities, which significantly enhances their persuasive power. Lastly, micro-influencers are a cost-effective option for small and medium-sized brands. They are valuable marketing partners because of their targeted reach, high credibility, and comparatively modest partnership fees (Şenyapar, 2024, pp. 81-83).

Overall, micro-influencers are regarded as a unique and influential marketing tool because of their genuineness, specialized knowledge, and ability to build genuine connections with their audience. According to some academics, micro-influencers will be crucial to the future of influencer marketing because of these capacities, suggesting their increasing role in influencer marketing (Şenyapar, 2024, p. 83).

2.2.3 Macro-Influencers

Macro-influencers tend to have between 100,000 to 1 million followers. Thanks to this big following, they have a wide audience reach, making them particularly useful for brands looking to increase their visibility. Because many macro-influencers also maintain specialized expertise or focus on certain niches, deeper interaction with audience segments is made possible. Making them useful for both awareness and targeted marketing campaigns (Şenyapar, 2024, p. 80).

Most macro-influencers begin as smaller-scale creators, developing their skills through experience and consistent audience interaction. As a result, professional content creation becomes a key characteristic of their work, positioning them as credible and capable brand partners (Şenyapar,

2024, p. 81). Their content often reflects a high level of polish and strategic alignment with brand messaging, appealing to companies looking for a blend of professionalism and relatability.

However, this visibility also comes with limitations. Research by De Veirman et al. (2017, pp. 800-801) indicates that although macro-influencers are often perceived as more likable and popular due to their follower count, this does not necessarily lead to higher perceived expertise or trustworthiness. Furthermore, when endorsing niche or exclusive products, the perceived uniqueness may diminish, potentially weakening overall brand attitudes. Finally, from a brand collaboration perspective, macro-influencers provide a strategic middle ground, combining reach and connection, making them attractive to businesses looking to engage with a wide yet relevant customer base. (Lv et al., 2023, p. 3032; Şenyapar, 2024, p. 81).

Overall, macro-influencers hold the ability to combine broad reach with professional content, making them attractive for collaborations focused on visibility. However, their effectiveness may depend on context and product type.

2.3. Advertisement Messaging Types: Rational vs. Emotional

Advertisement messaging aims to persuade by addressing consumer uncertainties and motivating purchase decisions, going beyond merely introducing products and services. It includes all content elements (e.g., visual, textual, auditory) that communicate the advertisement's core message (Abdalaziz, 2022, p. 8). In influencer marketing, message types are particularly impactful. Emotional and rational messages yield distinct outcomes, and the effectiveness of each message type may vary depending on the product category and the platform on which it appears (Ahmadi et al., 2023, pp.119-121; Pan et al., 2021, pp. 53 & 61). This underscores the importance of understanding message strategies within a broader contextual setting.

2.3.1 Rational Advertisement Messaging

Rational advertisement messaging emphasizes objective information about a product or service. Common elements include features, benefits, data, pricing, and logistics (Ahmadi et al., 2023, p.121). This type of advertisement messaging encourages well-informed decisions (Abdalaziz, 2022, p. 9). It is deemed to be useful for functional products, as customers depend more on unbiased assessments with these types of products. Stimulating the cognitive aspect of attitude, which includes thoughts, beliefs, and knowledge (Manchón et al., 2015, pp. 260-262).

The effectiveness of rational advertisement messaging increases with customer involvement; consumers who are motivated to process detailed information tend to respond well to logical appeals (Ahmadi et al., 2023, pp. 122-123). Such messages enhance the utilitarian value of a product – its practical usefulness – and help build cognitive trust, or a logical belief in the credibility and functionality of the product. However, the perceived credibility of the influencer also plays a role in the effectiveness of logical arguments in influencer marketing. According to Ahmadi et al. (2023, pp.

122-123), the audience becomes far less receptive to logical content and less motivated to process it when the influencer is perceived as untrustworthy. This makes influencer selection a crucial factor, as credibility varies significantly across influencer types. Rational messaging is therefore most effective when delivered by influencers perceived as knowledgeable, authentic, and trustworthy.

In addition to these interpersonal factors, the platform environment also shapes how rational messages are received. As Pan et al. (2021, p. 61) note, on utilitarian platforms such as LinkedIn or YouTube, users are typically more cognitively engaged and goal-directed, making them more receptive to detailed or fact-based content. In contrast, hedonic platforms like Instagram or TikTok, where users primarily seek entertainment and passive content consumption, attention to informational detail is lower, which reduces the persuasive effect of rational messages (Lou et al., 2022, p. 61). This suggests that the success of rational messaging depends not only on the message itself or the influencer's traits, but also on the alignment with the product type and the processing style typical of the platform context.

2.3.2 Emotional Advertisement Messaging

Emotional advertisement messaging leverages feelings, experiences, and personal connections to engage consumers. Unlike rational messaging, which targets logical reasoning, emotional messaging appeals to the affective component of attitude – emotions, moods, and values (Abdalaziz, 2022, p. 9). The aim is to create emotional connections with products or services. Rather than relying on logic, these messages evoke emotions such as adventure, fear, romance, or status. The goal is to generate affective responses that may not directly lead to purchase but strengthen brand associations and consumer-brand relationships (Manchón et al., 2015, pp. 262-263; Zhang et al., 2014, p. 2107).

Emotional content is highly relevant in influencer marketing, where storytelling and relatability often drive audience engagement (Ahmadi et al., 2023, p. 119; Zhang et al., 2014, p. 2107). As Ahmadi et al. (2023, p. 122) and Manchón et al. (2015, pp. 262-263) note, emotional messages focus more on shaping attitudes and feelings rather than providing detailed product information. Therefore, they are particularly effective in low-involvement contexts, where consumers are more likely to respond to emotional cues than to analytical processing. Furthermore, these messages strengthen brand relationships, particularly when delivered by authentic, relatable influencers (De Veirman et al., 2017, p. 801; Kim et al., 2020, p. 5).

This makes emotional messaging especially suitable for hedonic platforms such as Instagram and TikTok, where users are primarily driven by entertainment, enjoyment, and passive browsing behavior (Pan et al., 2024, p. 61). Therefore, the effectiveness of emotional messages depends not only on the emotional tone itself, but also on the fitting platform context that supports and amplifies the intended affective impact.

2.4 Social Media Platforms as a Contextual Factor

Social media platforms play a crucial role in influencer marketing by enabling interaction and engagement between users and influencers (Hurley, 2019, p. 2; Lou, 2021, p.7). However, platforms differ in their architecture, usage goals, and content styles, which can influence how audiences respond to influencer content (Lou et al., 2022, pp. 62-63). While platform differences were not the main focus of this study, they were included as a covariate to control for their potential impact on engagement.

Instagram and TikTok are especially relevant, as they attract younger audiences who prefer dynamic, entertaining, and personalized content (Haenlein et al., 2020, p. 7; Pan et al., 2024, p .61). Both platforms emphasize short-form visual and user-generated content, fostering a sense of connection and community that benefits influencer marketing (Pan et al., 2024, p. 73). As hedonic platforms, Instagram and TikTok are environments where users primarily seek entertainment and emotional experiences, making them particularly receptive to emotionally driven influencer content (Pan et al., 2024, p. 61; Lou et al., 2022, p. 61).

Although platform type can influence customer-brand engagement, it was not treated as an independent variable in this study, but rather as a covariate to account for its potential impact on engagement outcomes.

2.4.1 Instagram

Launched in 2010, Instagram has developed into one of the leading social media platforms, especially appealing to millennials under the age of 34 (Haenlein et al., 2020, p. 6). The platform originally focused on photo sharing, allowing users to post, like, comment on, and share content, often accompanied by captions and hashtags. Since 2016, Instagram has introduced new features such as Stories (temporary videos, images, or text lasting 15 to 60 seconds that disappear after 24 hours) and IGTV (for longer videos ranging from 15 to 60 minutes), expanding the range of content options (Haenlein et al., 2020, p. 23). Additionally, users can interact through direct messaging, enabling them to share content and communicate with each other.

A key feature of Instagram is its algorithm, which curates user feeds based on interests, meaning that not all followers see every post. This can result in lower visibility than the follower count might suggest (Haenlein et al., 2020, p. 23). The platform strongly emphasizes visual content and building personal connections, making it especially suitable for influencer marketing.

2.4.2 TikTok

TikTok, launched in 2018, distinguishes itself from Instagram by focusing on short videos, typically ranging from 15 to 60 seconds, often featuring music snippets or famous dialogues from movies and TV shows (Haenlein et al., 2020, p. 24). While Instagram centers on visual content and hashtags, TikTok places audio at the heart of its platform: users can search for specific sound clips and view all associated videos.

TikTok attracts a younger audience than Instagram; for instance, in the United States, 40% of users are between 10 and 19 years old (Haenlein et al., 2020, p. 6). Content on TikTok varies from users speaking directly to the camera (as in traditional vlogs) to dance videos, lip-syncs, and comedic sketches. Trends play a crucial role on the platform, with popular sound clips inspiring users to replicate specific actions and leading to the formation of vibrant subcultures, sometimes with a meme-like character (Haenlein et al., 2020, p. 24).

TikTok displays content through two main feeds: the ‘’Following’’ feed, which shows videos from accounts that the user follows, and the ‘’For You’’ feed, curated by an AI algorithm and tailored to the user’s interests. The emphasis on entertainment and discovery sets TikTok apart from Instagram, where the focus is more on personal connections (Haenlein et al., 2020, p. 24).

2.5 Customer-Brand Engagement

Customer-brand engagement is a multidimensional term referring to the level of a customer’s cognitive, emotional, and behavioral investment in specific brand interactions (Hollebeek, 2011, pp. 558-565). Cognitive engagement involves processing product information, while emotional engagement describes the feeling or emotional connections evoked by the brand, such as attachment, passion, or sense of belonging. Behavioral engagement, on the other hand, relates to the physical actions taken by the customer, including sharing, purchasing, or recommending the brand (Hollebeek, 2011, p. 558).

Hollebeek (2010, pp. 786-790) further identifies three key dimensions of customer engagement: activation, identification, and absorption. These dimensions are essential for understanding customer-brand engagement in interactive environments such as social media. Activation refers to the effort or enthusiasm that customers invest in their engagement with the brand; it encompasses their physical acts of engagement, such as liking, sharing, and commenting. These behaviors are particularly relevant in interactive environments like social media, where users are encouraged to participate actively (Hollebeek, 2010, pp. 786-790). Identification refers to the emotional aspect of engagement, referring to the extent to which the customer identifies with the brand. Social media platforms, which allow for personal expression and interaction, strongly emphasize this aspect of customer engagement (Hollebeek, 2010, pp. 786-790). Absorption relates to the level of dedication or deep involvement with the brand. This can be demonstrated through activities such as reading reviews, browsing product pages, or participating in brand-related discussions. Such behaviors indicate deep cognitive engagement, which can contribute to increased brand loyalty (Hollebeek, 2010, pp. 786-790). These dimensions are critical for measuring the impact of influencer marketing, as they provide a comprehensive framework for understanding how customers interact with and respond to brand-related content on social media (Gross et al., 2023, p. 392).

While customer-brand engagement is a multidimensional concept, this research concentrated

on activation solely due to its direct link to measurable behavioral outcomes and its central role in influencer marketing effectiveness.

2.6 Hypotheses

Based on the reviewed literature, this study aimed to investigate how different types of influencers and advertisement messages influence customer-brand engagement, while controlling for social media platform. The theoretical concepts outlined in this chapter form the foundation for the research hypotheses. The study focused on two independent variables: (1) influencer type and (2) advertisement message type, with platform type (Instagram vs. TikTok) included as a covariate to account for potential contextual influences. The following sections present the hypothesized main effects and their interaction.

2.6.1 Main Effect 1: Influencer Type and Customer-Brand Engagement

Micro-influencers are widely recognized for their ability to foster authenticity and establish deeper connections with their audiences (Wang et al., 2021, pp. 2595-2597). In the context of social media advertising, Park et al. (2021, 585-586) argue that micro-influencers are generally more effective than macro-influencers, primarily due to their perceived authenticity. This authenticity facilitates greater intimacy, transparency, and relatability, which strengthens brand alignment and encourages personalized interactions. These qualities contribute to increased consumer trust, brand credibility, and overall engagement (Park et al., 2021, pp. 584-588).

Furthermore, micro-influencers typically achieve higher interaction rates than macro-influencers, and their niche expertise makes them more relatable and trustworthy (Şenyapar, 2024, p. 81). Research demonstrates that this credibility significantly influences consumer decision-making and has tangible impacts on customer-brand engagement. For example, Marques et al. (2021, p. 140) found that partnerships with micro-influencers effectively increase social media engagement metrics such as views, likes, and comments. Similarly, Campbell and Farrell (2020, p. 472) emphasize the strong link between micro-influencers and elevated engagement rates.

Macro-influences, while sometimes less trusted than micro-influencers, offer significant advantages in terms of audience reach and professionalism. De Veirman et al. (2017, pp. 800-802) found that macro-influencers are often perceived as more popular but not necessarily as credible or trustworthy. In some cases, their endorsement of niche products may even weaken perceived exclusivity, negatively affecting brand attitudes and engagement. Recent perspectives, however, present a more complex view. According to Şenyapar (2024, p. 92), macro-influencers tend to hold a strategic position by combining broad reach with niche expertise. When their knowledge closely relates to a brand's products or services, their polished and authoritative communication style can strengthen their credibility and favorably impact brand perception. Similarly, Lv et al. (2023, pp.

3031-3032) argue that macro-influencers can effectively enhance brand exposure and drive consumer engagement, especially when there is strong brand familiarity and a good influencer-product fit.

Nano-influencers, although often overlooked, have emerged as increasingly effective drivers of brand engagement. They maintain highly personal and interactive relationships with their audiences (Şenyapar, 2024, pp. 83-84). Kay et al. (2020, p. 256) emphasize that their trustworthiness and perceived relatability contribute to high engagement metrics. Macalik (2021, pp. 849-850) supports this, noting that nano-influencer content tends to generate strong interaction, manifested in likes, comments, and shares, due to the community-driven and personal nature of their communication. Additionally, Şenyapar (2024) notes their cost-effectiveness for localized campaigns seeking authenticity and long-term consumer relationships, making nano-influencers particularly valuable in engagement-focused strategies.

Overall, the literature suggests that both micro- and nano-influencers possess characteristics that foster higher customer-brand engagement compared to macro-influencers. While micro-influencers have been extensively associated with increased engagement due to authenticity and niche expertise, nano-influencers show similar potential due to their relatability and personal audience connection. Based on this reasoning, the following hypothesis was proposed:

H1: Micro- and nano-influencers generate significantly higher customer-brand engagement than macro-influencers.

2.6.2 Main Effect 2: Advertisement Message Type and Customer-Brand Engagement

Research has shown that consumers often perceive rational advertisement messages as more useful and appropriate for making informed decisions (Manchón et al., 2015, p. 264). Rational advertisements stimulate the cognitive component of consumer attitudes by promoting logical evaluation, relevance, and the recall of factual information, resulting in better recall of product details and factual information (Manchón et al., 2015, p. 264).

On the other hand, emotional advertisements, while less effective in stimulating cognitive engagement, evoke emotional responses that can enhance brand awareness and foster positive attitudes toward the product (Manchón et al., 2015, pp. 268-270). Although emotional messages are less effective in encouraging direct action or purchase decisions, they can create a stronger emotional connection with consumers (Manchón et al., 2015, p. 270). Furthermore, emotional appeals are particularly effective when delivered by influencers who are perceived as authentic and relatable, increasing consumer engagement, such as likes, shares, and comments on social media platforms (Ahmadi et al., 2023, pp. 121-122).

Grigaliunaite and Pileliene (2016, p. 403) further support the argument that emotional advertisements tend to generate more positive implicit attitudes and are perceived as more interesting and aesthetically appealing, suggesting a stronger emotional connection compared to rational

advertisements. Participants in their study found emotional advertisements to be more aesthetically pleasing and emotionally engaging. As previously mentioned, such messages are frequently associated with hedonic platforms like TikTok and Instagram, where entertainment and emotional resonance are key (Pan et al., 2024, p.61; Lou et al., 2022, p. 61). However, rational advertisements, although less engaging emotionally, tend to have a stronger alignment with the product's functional benefits, making them more effective in driving purchase intentions (Grigaliunaite & Pileliene, 2016, pp. 408-410).

Overall, the literature suggests that rational advertisements lead to higher cognitive engagement, whereas emotional advertisements drive higher affective engagement. Considering the focus of this study on engagement in social media environments, where emotional resonance is central, the following hypothesis was proposed:

H2: Emotional advertisement messages will lead to significantly higher customer-brand engagement than rational advertisement messages.

2.6.3 The Interaction Effect: Influencer Type and Advertisement Message Type on Customer-Brand Engagement

The interaction between influencer type (nano, micro, vs. macro) and advertisement message type (rational vs. emotional) reveals how their combined influence may shape customer-brand engagement. As outlined in the previous sections, micro- and nano-influencers are often perceived as more authentic and relatable (Kay et al., 2020, p. 256; Djafarova & Rushworth, 2017, pp. 4-5), while macro-influencers tend to be seen as more professional and polished (Şenyapar, 2024, p. 81). At the same time, emotional advertisement messages are typically more effective in driving engagement on social media, particularly when the message evokes personal experience or emotional storytelling (Ahmadi et al., 2023, p.122; Grigaliunaite & Pileliene, 2016, p. 408).

Given this, it makes sense to assume that emotional messages would be especially powerful when delivered by nano- or micro-influencers, who are seen as more relatable to their audience and less driven by economic interests. Their perceived authenticity can strengthen the emotional tone of the message and make it more persuasive. Conversely, macro-influencers may be more advantageous for rational messages that demand confidence in factual information and product attributes due to their professional look and wider reach. Potentially increasing perceived credibility. (Manchón et al., 2015, pp. 260-262; Şenyapar, 2024, p.81).

This suggests that the combination of the influencer type and the message type determines a communication's effectiveness rather than either alone. Which led to the following hypothesis:

H3: The effect of influencer type on customer-brand engagement will be influenced by the advertisement message type.

3. Method

This chapter outlines the research methodology, including the justification of the experimental design, sample, and sampling procedures, operationalization of variables, materials used, the pretest, data collection procedure, and discussion on validity, reliability, and ethical considerations. All methodological decisions are grounded in relevant literature to ensure precision and transparency.

3.1 Justification of Method

Quantitative research in the social sciences is typically deductive, aiming to test theoretically derived hypotheses through statistical analysis and generalizable findings (Babbie, 2017, p. 28). Since this study investigated the effects of influencer type and advertisement message type on customer-brand engagement, a quantitative design was chosen to enable causal inference, systematic control, and comparative analysis of effects across conditions (Neuman, 2014, p. 282; Vargas et al., 2017, p. 101).

A 3x2 factorial experimental design was employed, manipulating two independent variables: influencer type (nano-, micro-, vs. macro) and advertisement message type (rational vs. emotional). To account for potential platform-related influence, social media platform (Instagram vs. TikTok) was included as a covariate, enabling statistical control of platform-related variance without increasing design complexity. Prior research indicates that user perceptions and engagement behavior can differ across platforms, which made it essential to control for these effects (Lou et al., 2022, p.61).

As both Neuman (2014, p. 282) and Vargas et al. (2017, p. 101) note, experimental research enables the assessment of causal relationships, group comparisons, and control over extraneous variables. This made it particularly well suited for examining how advertising strategies influence consumer responses through systematic manipulation of independent variables while minimizing external interference (Neuman, 2014, p. 282; Vargas et al., 2017, p. 101).

The 3x2 factorial design in this study facilitated testing both main effects (H1 and H2) and the interaction effect (H3) between influencer type and advertisement message type. A between-subjects design was used to ensure control over the variables and analyze separate and combined effects of influencer type and advertisement message type. Six conditions reflected the realistic combinations of the three influencer types and two advertisement message types. Participants were randomly assigned to one of these six experimental conditions. This approach minimized order effects, prevented contamination between groups, and improved internal validity (Neuman, 2014, pp. 300-303; Vargas et al., 2017, pp. 108-110). It also prevented participants from influencing one another and reduced participant fatigue, particularly important in online survey-based experiments (Neuman, 2014, pp. 300-303).

To control for variations in platform-related behavior, participants' use and attitudes towards Instagram and TikTok were measured and included as a covariate using an Analysis of Covariance (ANCOVA). The decision to use ANCOVA was made because this analysis allows for the comparison

of the average engagement levels across different conditions, while controlling for potential differences caused by platform preference (Pallant, 2020, p. 104). Compared to ANOVA, conducting ANCOVA offers advantages for its ability to increase the accuracy of the analysis by reducing error variance. As a result, it enhances statistical power and enables more exact estimation of the effect of independent variables (Pallant, 2020, p. 291). The overall combination of random assignment, factorial manipulation, and covariate control strengthened the reliability and validity of the findings (see 3.8).

3.2 Sampling

Participation in this study was voluntary and open to individuals aged 18 or older. A non-probability, convenience sampling method was used as the survey was distributed through various channels such as social media and messaging platforms (e.g., Instagram and WhatsApp) without targeting any specific group (Etikan, Musa & Alkassim, 2016, pp. 3-4). While this method may introduce bias and limit generalizability (Neuman, 2014, pp. 287-290), it was appropriate given the study's aims. Finally, since the study contained influencer-style content, basic familiarity with social media advertisement was implicitly required, but no formal screening was conducted.

The target sample size was at least 180 participants, with a minimum of 30 per condition, enabling meaningful statistical analysis (Janssen & Verboord, 2024, p. 11). To address potential sampling bias and improve representativeness, recruitment was diversified through multiple platforms, and demographic diversity was monitored via a questionnaire covering age, gender, geographic region, and education (Etikan, 2016, pp. 2-3). This approach aimed to ensure sufficient heterogeneity within the sample while maintaining relevance to the research topic.

3.3 Sample

The final sample consisted of 223 participants (N = 223), randomly assigned to one of six experimental conditions in a 3 (influencer type) x 2 (advertisement message type) between-subjects design. Group sizes ranged from 33 to 40 (see Table A.1 in Appendix A). Distribution is as follows: Group 1 (n = 36), Group 2 (n = 34), Group 3 (n = 37), Group 4 (n = 40), Group 5 (n = 36), and Group 6 (n = 40). Although Qualtrics was set to distribute participants evenly, final group sizes were affected by the removal of incomplete responses, preview-status entries, participants unfamiliar with social media marketing, and those who failed the manipulation check. The final sample size (N = 223) was considered sufficient for producing generalizable results (Janssen & Verboord, 2024, p. 11).

Sociodemographic information was collected to describe the sample (see Table A.2 in Appendix A). The majority of participants identified as female (n = 121), specifically, 54.3% of participants, followed by male (n = 99). Additionally, 0.9% identified as non-binary or third gender (n = 2), and 0.4% preferred not to disclose their gender (n = 1). Participants ranged in age from 18 to 66 years, with a mean age of 28 years (M = 28.01, SD = 8.96) (see Table A.3 in Appendix A).

Furthermore, participants represented various nationalities (see Table 3.3a and Table A.4 in Appendix A), with the majority originating from Europe (95.5%). Educational levels also varied (see Table 3.3b and Table A.2 in Appendix A), with the largest group having completed a 4-year degree (44.4%), followed by participants with a master's level education (17.9%).

Table 3.3a

Participants' Nationality (N = 223).

Nationality	***n***	**%**
Europe	**213**	**95.5%**
- Belgian	2	0.9%
- British	6	2.7%
- Dutch	201	90.1%
- French	3	1.3%
- German	1	0.4%
Oceania	**4**	**1.8%**
- Oceanian (Australian, Kiwi, Māori, NZ)	4	1.8%
	2	0.9%
Asia		
- Asian (Taiwan, Indonesia)	2	0.9%
Total	**223**	**100%**

Note: the nationalities are grouped per continent.

Table 3.3b

Participants' Educational Level (N = 223).

Education Level	***n***	**%**
Doctorate (e.g. PhD)	2	0.9%
Master's degree or equivalent	40	17.9%
Professional degree (e.g. medical, law)	5	2.2%
4-year degree (Bachelor, HBO, etc.)	99	44.4%
2-year degree (e.g. associate, propedeuse)	31	13.9%
Some college, no degree	17	7.6%
High school or secondary education	27	12.1%
Prefer not to say	2	0.9%
Total	223	100%

3.4 Operationalization

This section outlines the operationalization of the two independent variables (influencer type and advertisement message type), the dependent variable (customer-brand engagement), the covariate (social media platform), and the manipulation check. The study included six experimental conditions (3 influencer types x 2 advertisement message types), as shown in Table 3.4a.

Table 3.4a

Visualization of the six experimental conditions.

	Nano-influencer	Micro-influencer	Macro-influencer
Rational advertisement message	Group 1	Group 2	Group 3
Emotional advertisement message	Group 4	Group 5	Group 6

Influencer type. Influencer type was categorized by follower count, perceived expertise, and engagement rate, with nano-influencers having between 1,000 and 10,000 followers, micro-influencers 10,000 – 100,000, and macro-influencers 100,000 – 1,000,000 (Şenyapar, 2024, pp. 80-84; Park et al., 2021). Visual cues such as follower count and profile layout were manipulated in the mock profiles to reflect these categories, following publicly available benchmarks.

Advertisement message type. Advertisement message types were constructed in two formats. Rational messages focused on factual content, such as product features and specifications, whereas emotional messages emphasized personal storytelling and feelings (Abdalaziz, 2022, p. 9; Manchón et al., 2015, pp. 262-263). Each stimulus combined a specific influencer type with one of these message types in a simulated social media post.

Customer-brand engagement. Engagement was measured using four items adapted from Schivinski et al. (2016), reflecting behavioral intentions for liking, commenting, sharing, and following. Items were rated on a 5-point Likert scale (1=very unlikely, 5=very likely), in line with evidence that such scales reduce complexity and respondent fatigue in online surveys (Revilla et al., 2013, pp. 89-92). The items are: (1) I would like this post, (2) I would comment on this post, (3) I would share this post with others, (4) I would follow the influencer after seeing this post (see Table 3.4b). A composite engagement score was calculated by averaging the four responses, where higher scores indicate greater engagement intention.

Covariate. Participants answered four items assessing their familiarity with and perception of Instagram and TikTok: (1) How often do you use the following platforms? (2) On which platform do you find advertisements more trustworthy or attractive? (3) How do you feel about each platform? (4) How often do you encounter advertisements on the following platforms? Frequency and attitude items used 5-point scales (1 = never, 5 = always), consistent with practices in social media research, where 5-point scales have been effectively utilized to capture usage frequency and evaluative judgements (Dawes, 2008, pp. 67-69; Chen, 2015; Khan, Azhar, Rahman, Akhtar, 2022). Following Krosnick's self-administration questions note (2017, p. 290), the second item is formatted as a forced-choice question, and its outcome is used as a covariate to control for platform-based bias.

Manipulation checks. To assess whether participants perceive the stimuli as intended, three items followed the stimulus exposure: (1) ‘’The influencer in the post seemed like a well-known professional content creator,’’ (2) ‘’The post focused mostly on factual product information,’’ and (3) ‘’The post focused mostly on personal feelings and experience.’’ Each is rated on a 5-point Likert scale (1= strongly disagree, 5= strongly agree). The first item distinguished influencer types; the second and third validated message tone. This approach supported interval validity and aligned with recommendations for low-load perception measurement in online environments (Dawes, 2008, pp. 67-69; Joshi et al., 2015). Agreement with the second item was expected in the rational message condition, while higher agreement on the third item was expected in the emotional message condition.

Table 3.4b

Four item Customer-Brand Engagement Sale modified from Schivinski et al. (2016).

Variable	Item	Measurement
Customer brand engagement	CBE1	I would like this post
	CME2	I would comment on this post
	CME3	I would share this post with others
	CBE4	I would follow the influencer after seeing this post.

3.5 Materials

This section describes the six experimental conditions used in the study, in more detail. Each condition presented a mock social media profile and post, constructed using fictional influencer profiles and shown as static images resembling social media content. The post consistently showed the same product (a speaker) and layout, while varying only in influencer type (nano, micro, or macro) and advertisement message type (rational or emotional). The specific design elements and combinations of these variables were as follows: In the rational message conditions, participants in Group 1 were shown a nano-influencer profile with 1,802 followers paired with a rational advertisement message. The profile featured a modest visual design, and the advertisement message focused on product features and specifications. Similarly, Group 2 participants viewed a post from a micro-influencer with 46,000 followers and a more polished profile description. Group 3 viewed a macro-influencer profile with 615,000 followers, also paired with a rational message. In contrast, the emotional message conditions used the same influencer profiles as with the rational message, however, featuring a more emotional and storytelling caption for the product post. Group 4 viewed the nano-influencer profile from Group 1, now paired with an emotional message. Group 5 presented the same micro-influencer as Group 2, with the emotional message, and Group 6 viewed the macro-influencer profile from Group 3, again paired with the emotional message. The full set of stimuli is included in Appendix F.

3.6 Pretest

Before the main experiment, a pretest was conducted to assess the clarity and effectiveness of the experimental manipulations. Two pretests were carried out: the first evaluates the recognizability of influencer types, and the second verifies the interpretation of advertisement message types. The goal was to ensure that participants interpreted the mock social media posts in line with the intended conditions, thereby enhancing internal validity (Neuman, 2014, p. 304; Vargas et al., 2017, pp. 105-106).

In the first pretest, approximately 30 participants were shown three simulated influencer profiles, each representing a specific influencer type (nano, micro, or macro). The profiles included a name, follower count, image, and post content, and were presented in random order. Participants were asked to (1) classify the influencer type (nano, micro, or macro) and (2) recall the follower count

Following the approach of Neuman (2014, p. 304) and Vargas et al. (2017, pp. 105-106), who emphasize the importance of pretesting without prescribing fixed thresholds, this study adopted a pragmatic benchmark of 70% agreement for influencer type classification and acceptable recall within predefined follower count ranges. Stimuli that did not meet these thresholds were revised before inclusion in the main experiment.

The second pretest evaluated the clarity of the advertisement message type. Participants viewed two mock advertisements: one conveyed factual product information, and one emphasized personal storytelling. They were asked to (1) categorize each advertisement as either ‘informational’ or ‘storytelling/emotional,’ and (2) indicate the degree to which each ad felt either rational or emotional on a 7-point Likert scale. As with the first pretest, a minimum of 70% agreement and an average Likert rating of at least 4.0 on the intended dimension were required. Stimuli that failed to meet these benchmarks were refined accordingly.

The results confirmed that participants were able to classify influencer types with over 70% agreement and interpreted the advertisements in line with their intended message framing. Likert ratings on the rational and emotional dimensions exceeded the 4.0 threshold, validating the clarity and effectiveness of the stimuli (see Section 4.1).

3.7 Procedure

The experiment was conducted using Qualtrics, an online platform for creating and distributing surveys and experiments. The procedure began with informed consent, which outlined the general purpose of the study, data confidentiality and voluntary participation.

Immediately after the consent, participants answered a screening question to assess their prior familiarity with social media marketing. Since this study focused solely on individuals with such familiarity, those who indicated no prior knowledge were excluded. In total, 217 participants were screened out at this stage and were removed from the final dataset during the analysis.

Participants who passed the filter question were randomly assigned to one of the six experimental conditions in a 3 (influencer type: nano, micro, macro) x 2 (advertisement message type: rational, emotional) between-subjects design. Each participant viewed one mock social media post and profile, tailored to their assigned condition. This included a fictional influencer's name, follower count, profile photo, product image, and an advertisement message written in either a rational or emotional tone (see paragraph 3.6 and Appendix F).

After viewing the stimulus, participants responded to four items measuring customer brand engagement (see paragraph 3.5), assessing their intention to like, comment on, share the post, or follow the influencer. They also answered three manipulation check questions to determine whether they correctly perceived the influencer type and the message tone. These items differed slightly from those used in the pretest, and a different Likert scale was applied; for full explanation, see Section 3.8.

Subsequently, participants completed a short demographic questionnaire, including age, gender, nationality, education level, and social media usage. These questions were placed at the end of the survey to minimize priming effects or response bias (Matthews & Ross, 2010, p. 212).

Finally, participants were shown a debriefing message explaining the true purpose of the study. They were thanked for their participation and asked not to share details of the experiment with others to avoid contaminating the sample. Contact information was provided for any additional questions, comments, or requests to receive the study results.

3.8 Validity, Reliability, and Ethics

This section outlines how the validity, reliability, and ethical standards of this study are addressed. In quantitative research, validity refers to the extent to which the study accurately measures the intended constructs, ensuring that variables align with theoretical concepts (Vargas, Duff, & Faber, 2017, p. 104; Babbie, 2017, pp. 149-152). To strengthen internal validity, several safeguards were implemented. First, a pretest was conducted to verify whether participants correctly interpreted the manipulations of influencer type and advertisement message type. Stimuli that did not meet the predefined thresholds were revised accordingly (see section 3.6).

In addition, manipulation check questions were included in the main experiment to assess whether participants perceived the conditions as intended. This helped support construct validity, referring to how well the experiment measured the idea or concept it aimed to assess (Vargas et al., 2017, p. 104), and reduced the risk of alternative explanations by confirming the manipulations were interpreted as expected (Vargas et al., 2017, p. 106). While both the pretest and the main experiment included manipulation checks, the format and function of these measures differed. The pretest used a 7-point Likert scale to allow a more nuanced, exploratory evaluation of the stimuli. In contrast the main experiment employed a 5-point Likert scale to reduce cognitive load and enhance clarity in an online setting, in line with recommendations by Revilla et al. (2013, p. 89).

Reliability refers to the consistency and replicability of the measurements across conditions

(Babbie, 2017, pp. 149-152). To ensure reliability, clear and consistent operational definitions were applied. For example, customer-brand engagement was measured using four items adapted from Schivinski et al. (2016), uniformly implemented across all six conditions. Enhancing not only construct but also content validity: how well a measure or scale covers the topics or ideas it aims to represent (Pallant, 2020, p. 7). Additionally, the use of a 5-point Likert scale and identical post layouts further contributed to measurement consistency, and random assignment of participants to experimental groups minimized systematic bias and enhanced replicability (Neuman, 2014, p. 291).

Regarding ethical considerations, all participants were presented with informed consent before participation. Participation was entirely voluntary, and participants were informed that they may withdraw at any point without consequences. Data was collected anonymously, with no personally identifiable information gathered. Furthermore, as the study involved only fictional social media content and adult participants, no significant ethical risks were identified. Full transparency of the study was ensured through a debriefing message at the end of the survey, explaining the true purpose of the study (Neuman, 2014, p. 303).

4. Results

This section presents the results of this study, namely from the online experiment in Qualtrics. The survey ran from May 7 to May 20, 2024, and the initial dataset includes 475 respondents. The data gathered through the questionnaire was exported from Qualtrics and then uploaded to IBM SPSS Statistics, an online software for statistical analysis. The data was analyzed by using multiple statistical techniques on SPSS version 29. Firstly, the data set was cleaned to reduce it from incomplete and invalid data, then descriptive statistics and frequencies were looked at to describe the final sample. These results are discussed in the previous chapter.

The three hypotheses of this research, H1, H2, and H3, were tested via two-way analysis of covariance (ANCOVA), with platform preference included as a covariate to control for potential confounding effects. More detailed information about the statistical tests is presented in the paragraphs below.

4.1 Pretest results

Two pretests were conducted before the main study to validate the experimental stimuli; the results are elaborated in the following sections.

4.1.1. Influencer Profile Validation

To assess whether participants recognize the intended influencer types, a pretest was conducted ($N = 26$). Participants evaluated three mock influencer profiles (nano, micro, and macro) on two aspects: influencer type classification and follower count recall. Results indicated that both classification and recall accuracy exceeded the predefined threshold of 70% for all profiles. Specifically, 96.2% of participants correctly identified the nano-influencer, 84.6% the micro-influencer, and 73.1% the macro-influencer. Follower count recall ranged from 88.5% to 92.3%, supporting the recognizability and clarity of the influencer profiles (see Table 4.1.1 and all results in Table B.1 and Table B.2 in Appendix B).

Table 4.1.1

Classification and Follower Count Recall Accuracy per influencer Profile (N = 26).

Influencer profile	Correct Classification (%)	Accurate Recall (%)
Nano (1,000-10,000)	96.2%	92.3%
Micro (10,000-100,000)	84.6%	92.3%
Macro (100,000-1,000,000)	73.1%	88.5%

Note. Classification and recall thresholds are set at ≥ 70%.

4.1.2. Advertisement Validation

In the second pretest, participants evaluated two mock advertisements (emotional or rational). Participants were asked to classify each advertisement accordingly. The emotional advertisement was

correctly identified by 96.2% of participants (*n = 25* of 26), and the rational advertisement by 84.6% (*n = 22* of 26), both exceeded the predefined 70% threshold. These results indicated that participants interpreted the message framing as intended.

Furthermore, participants rated the degree to which each advertisement was perceived as emotional or rational on 7-point Likert scales. The emotional advertisement was rated as highly emotional ($M = 6.35$, $SD = 0.98$) and low in rationality ($M = 1.85$, $SD = 1.29$). Conversely, the rational advertisement was perceived as highly rational ($M = 6.35$, $SD = 1.13$) and low in emotionality ($M = 2.19$, $SD = 1.88$). These mean scores exceeded the predefined threshold of a mean rating above 4.0 in the intended dimension, supporting the clarity of the emotional and rational distinctions (see Table 4.1.2).

The results aligned with the expectations based on the stimulus design, suggesting that participants interpret the advertisements as intended and thereby supporting the clarity and construct validity of the advertisement stimuli, see Table 4.1.2 and Table B.3 in Appendix B for the results.

Table 4.1.2

Classification Accuracy and Perceived Message Framing for Advertisement Stimuli (N = 26).

Advertisement Type	Correct Classification (%)	Emotionality M (SD)	Rationality M (SD)
Emotional	96.2%	6.35 (0.98)	1.85 (1.29)
Rational	84.6%	2.19 (1.88)	6.35 (1.13)

Note. The classification threshold is set at ≥ 70%.

4.2 Final Sample Data Preparation

Before the main analysis, several data cleaning procedures were performed using SPSS (IBM, 2021). The dataset initially contained 475 responses. First, incomplete responses were removed, resulting in 291 valid cases. Next, as previously mentioned in section 3.7, participants were filtered based on their prior familiarity with social media marketing by a screening question. Only participants who indicated prior familiarity were retained, reducing the sample to 258 respondents. Furthermore, participants were also required to report their age in numeric form. Although participants under the age of 18 were excluded, no such cases were found in the data.

Additionally, to detect straight-lining behavior, a new variable called ‘RangeScore’ was created by calculating the difference between the highest and lowest values on the Likert-scale items for each participant. Respondents with a ‘RangeScore’ of 0 were considered straight-liners and excluded using the *Select Cases* function in SPSS (IBM, 2021). This reduced the sample to 257 valid responses.

Lastly, responses submitted in preview mode were excluded, as they may not reflect genuine participation. This was identified through the variable *Status,* where cases marked with ‘1’ (preview) were removed. After this final step, the cleaned dataset consisted of 256 valid responses.

4.2.1 Main Experiment Manipulation Check and Exclusion Criteria

A manipulation check was conducted to assess whether participants correctly recognized the advertisement message type they were exposed to (emotional or rational). As described in Section 3.7, participants answered two items: ‘’The post focused mostly on factual product information’’ and ‘’The post focused mostly on personal feelings and experience.’’ Both items were rated on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Participants in the rational condition (Groups 1-3) were expected to score ≥ 3 on the factual item, while those in the emotional condition (Groups 4-6) were expected to score ≥ 3 on the emotional item.

Participants who did not meet this threshold were excluded from the sample; this resulted in a final sample of 223 valid responses ($N = 223$). The ≥ 3threshold was pre-established to ensure that only participants who minimally recognized the message as intended were retained. As Kotzian et al. (2020, pp. 470-473) note, excluding participants based on manipulation checks can pose risks if done post hoc. However, in this study, criteria were clearly defined in advance (see Section 3.6) and applied consistently across conditions. This resulted in only excluding participants if they did not meet the basic recognition thresholds, and the manipulation check served solely to confirm minimal message comprehension.

4.2.2 Main Experiment Manipulation Check Results

To assess the effectiveness of the experimental manipulations, participants’ perceptions of the influencer’s professionalism and advertisement message type were evaluated using 5-point Likert scale items. As previously mentioned, these manipulation check items were included in the main experiment and differed from the exploratory perceptual measures used in the pretest (see Section 4.1.1 and 3.8).

Participants rated both the factual focus and the emotional focus of the advertisement. These items served to assess whether participants perceived the manipulations as intended; the full results are presented in Table C.1 in Appendix C.

Although group means differed in inspected directions, no statistical tests were conducted at this stage. Therefore, differences were described as indicative trends rather than statistically confirmed effects. These descriptive results suggested that participants in the rational message conditions (group 1-3) generally reported higher scores on the factual focus item, whereas participants in the emotional conditions (Group 4-6) tended to rate the emotional focus item more strongly.

4.4 Reliability Analysis

To assess whether the four items from the customer-brand engagement scale from Schivinski et al. (2016) measured a single construct, a reliability analysis was conducted in SPSS before further analyses. According to Pallant (2020, p. 95), Cronbach’s Alpha should be at least .70 (a < .7) for the scale to be considered reliable. The 4-item scale demonstrated acceptable internal consistency, $a = .72$.

Although the item ‘’I would like this post’’ showed a lower item-total correlation (r = .33), the overall alpha remained within acceptable limits (see Table D.1 and D.2 in Appendix D).

4.5 ANCOVA

A 3 (Influencer type: nano, micro, macro) x 2 (Advertisement message type: rational vs. emotional) between-subjects Univariate Analysis of Covariance (ANCOVA) was conducted to examine the effects of influencer type and advertisement message type on customer-brand engagement. This analysis controlled for the three covariate items: (1) platform usage frequency, (2) attitudes toward the platform, and (3) exposure to advertising. These covariates were included based on theoretical relevance and significant correlations with the dependent variable (see section 3.4).

A univariate ANCOVA was considered appropriate as it allows for testing differences between experimental groups while statistically controlling for continuous covariates (Pallant, 2020, p. 104). This approach helped isolate the unique contribution of the independent variables by adjusting for potential cofounding influences.

This analysis tested the three hypotheses: H1 predicted that micro-influencers generate higher levels of customer brand-engagement than macro- and nano-influencers; H2 predicted that emotional advertisement messages have a stronger effect on customer-brand engagement than rational messages; and H3 predicted an interaction effect between influencer type and the type of advertisement message on customer-brand engagement.

4.5.1 Assumptions of Parametric Techniques

ANCOVA is a parametric technique that relies on several key assumptions regarding the population and the data (Pallant, 2020, pp. 292-293). These assumptions include: the influence of treatment on covariate measurement, reliability of covariates, correlations among covariates, linear relationships between the dependent variable and covariate, and homogeneity of regression slopes (Pallant, 2020, pp. 292-293). Violations of these assumptions may result in inaccurate adjustments, reduced statistical power, or invalid conclusions. In particular, the assumption of homogeneity of regression slopes is critical: if regression slopes differ across groups (i.e., significant interaction between covariate and treatment), the ANCOVA results may be biased and the analysis may be inappropriate (Pallant, 2020, p. 293).

Given that ANCOVA was the most suitable analytic technique for this study, since non-parametric alternatives do not allow covariate adjustment, several steps were taken to test these assumptions. To maintain scope and focus, only the key assumptions mentioned above were evaluated.

In this study, three covariates were included: (1) platform usage frequency, (2) exposure to advertising, and (3) platform attitude. These were measured using six Likert-scale items, three per platform (Instagram and TikTok) (see section 3.4). A multiple-choice item on platform preference for

advertising was included in the questionnaire but excluded from all assumption tests due to its categorical format.

First, a Multivariate Analysis of Variance (MANOVA) was conducted. No significant multivariate effects were found for influencer type, Wilks' $\Lambda = 0.94$, $F\ (14, 422) = 1.02$, $p = .43$, partial $\eta 2 = .03$, nor for advertisement message type, Wilks' $\Lambda = 0.97$, $F\ (7, 211) = 0.96$, $p = .47$, partial $\eta 2 = .03$. The interaction effect was also not significant, Wilks' $\Lambda = 0.91$, $F\ (14, 422) = 1.39$, $p = .16$, partial $\eta 2 = .04$. These results indicated that the covariates did not differ significantly across treatment groups, which was desirable, suggesting that the covariates were not influenced by the treatment conditions and supporting their inclusion in the model (Pallant, 2020, p. 292) (see Table D.3 in Appendix D).

Second, internal consistency of the six covariate items was evaluated using Cronbach's alpha. The reliability was $a = .67$, which was slightly below the conventional threshold of .70, but was considered acceptable for exploratory research (Pallant, 2020, p. 292) (see Table D.4 in Appendix D).

Third, Pearson correlation analysis confirmed that the six covariate items were not too strongly correlated with one another. Correlation coefficients ranged from $r = -.17$ to $r = .65$, below the critical threshold of .80 for multicollinearity concerns (Pallant, 2020, p. 293) (see Table D.5 in Appendix D).

Fourth, to examine the assumption of linearity, scatterplots were visually inspected for the covariate items concerning the dependent variable. For the linearity assumption only, these items were averaged into two platform-specific composite scores (Instagram and TikTok), to simplify visual inspection and regression line analysis (Pallant, 2020, pp. 81 & 86-87). For Instagram, the regression line was $y = 1.34 + 0.06*x;$ for TikTok, $y = 1.19 + 0.15*x,$ both indicated linear trends (see Figure D.6.1 and D.6.2 in Appendix D). A regression line for the two covariates themselves, $y = 0.80 + 0.50*x,$ showed a moderate positive association, supporting that the assumption of linearity was not violated (Pallant, 2020, pp. 293, 296-298) (see Figure D.6.3 in Appendix D).

Finally, to test for homogeneity of regression slopes, interaction terms between each covariate item and the independent variables were analyzed. Most interaction terms were non-significant ($p > .05$), indicating that the assumption was generally met. However, one significant interaction was observed between advertisement message type and participants' trust/attraction toward advertisements ($p = .015$). This indicated a potential violation of the assumption and suggested caution when interpreting adjusted effects involving this covariate (see Table D.7 in Appendix D).

To conclude, most assumptions for ANCOVA were met or only marginally violated. The identified violation related to advertisement message type and perceived trust warranted a cautious interpretation of results. Future research may consider alternative strategies or conduct sensitivity analyses to address such issues and strengthen robustness.

4.5.2 Hypothesis Testing

Descriptive statistics for customer-brand engagement across influencer type (nano, micro, macro) and advertisement message type (rational vs. emotional) are presented in Table 4.5.2. The full output of the ANCOVA results can be found in Appendix E.

For the nano-influencer group, mean engagement scores were $M = 1.51$ ($SD = .61$, $n = 36$) for rational advertisements, and $M = 1.65$ ($SD = .79$, $n = 40$) for the emotional advertisement. Micro-influencers showed engagement scores of $M = 1.58$ ($SD = .78$, $n = 34$) for the rational message, and $M = 1.60$ ($SD = .82$, $n = 36$) for the emotional advertisement. Macro-influencers showed engagement scores of $M = 1.53$ ($SD = .72$, $n = 37$) for the rational advertisement, and $M = 1.59$ ($SD = .83$, $n = 40$) for the emotional advertisement. Overall, engagement scores appeared relatively consistent across both independent variables.

After verifying that all relevant assumptions for ANCOVA were met (see sections 4.5.1 and Appendix D), a two-way between-subjects ANCOVA was performed. The independent variables were influencer type (nano, micro, macro) and advertisement message type (rational vs. emotional). The dependent variable was customer-brand engagement, and platform (Instagram vs. TikTok) was included as a covariate.

Levene's test indicated homogeneity of variances, $F(5, 217) = 0.79$, $p = .556$. The overall model was statistically significant, $F(12, 210) = 2.17$, $p = .014$, partial $\eta 2 = .110$, indicating that the model explained approximately 11% of the variance in engagement scores.

First, there was no significant main effect of influencer type, $F(2, 210) = 0.00$, $p = .997$, partial $\eta 2 < .001$. This result failed to support H1, which predicted higher engagement for micro- and nano-influencers compared to macro-influencers. Similarly, the main effect of advertisement message type was also non-significant, $F(1, 210) = 1.23$, $p = .269$, partial $\eta 2 = .006$. Thus, H2, predicting stronger engagement for emotional advertisement messages, is not supported.

Moreover, the interaction effect between influencer type and advertisement message type was also non-significant, $F(2, 210) = 0.44$, $p = .643$, partial $\eta 2 = .004$, failing to support H3, which hypothesized that the effect of influencer type would depend on advertisement message type.

Nevertheless, the covariate item measuring platform preference for Instagram and TikTok had a significant effect on engagement, $F(1, 210) = 8.40$, $p = .004$, partial $\eta 2 = .038$. This indicated that individual platform preferences (Instagram vs. TikTok) significantly influenced how participants engaged with the content, independently of the experimental manipulation.

Table 4.5.2

Descriptive statistics for customer-brand engagement (where IV = independent variable).

Influencer type (IV1)	Advertisement message type (IV2)	*M*	*SD*	*n*
Nano-influencer	Rational	1.51	.61	36
Micro-influencer		1.58	.78	40
Macro-influencer		1.53	.72	34

Nano-influencer	Emotional	1.65	.79	36
Micro-influencer		1.60	.82	37
Macro-influencer		1.59	.83	40

4.6 Additional Analysis: Comparison of Extremes

An additional analysis was conducted to explore whether comparing only the most extreme influencer types, nano vs. macro and micro vs. macro, would provide stronger or marginal effects on customer-brand engagement. This comparison was executed as a follow-up to the ANCOVA, since that indicated small descriptive differences across influencer types, though not statistically significant. By focusing on the extremes, the aim was to assess whether a more distinct contrast might reveal effects. The first t-test compared nano-influencers (n = 76) and macro-influencers (n = 77) on customer-brand engagement. Results showed no significant difference in engagement $t(151) = 0.23$, p =.821, d = 0.04, 95% CI [-0.28, 0.35], indicating a minor effect. Similarly, when comparing micro-influencers (n = 70) and macro-influencers (n = 77), no significant difference emerged, $t(145) = 0.27$, p =.791, with a small effect size (d = 0.03).

These findings indicated that even when examining the most extreme influencer types, no significant or marginal differences in engagement are found.

5. Conclusion

This chapter concludes the study by addressing the central research question and reflecting on the implications and suggestions for further research. Firstly, there will be a discussion of the sample characteristics, followed by a general discussion of the results of the study, concerning prior literature. Limitations and suggestions for future research are then addressed, followed by a general conclusion and reflection on the academic and societal relevance.

5.1 Discussion of Sample

The final sample consisted of 223 participants, distributed relatively evenly across the six experimental groups. Slight differences in group size occurred due to data cleaning procedures (e.g., removing incomplete responses and failed manipulation checks). Nevertheless, the sample size was considered sufficient for meaningful statistical analysis and internal comparisons, aligning with standards for experimental research (Janssen & Verboord, 2024, p. 11).

The sample was relatively young, with a mean age of 28.01 years. This was an expected outcome, considering the study's focus on social media and influencer marketing (domains that are particularly prevalent and influential among younger demographics, specifically those aged 19 to 34 years) (Haenlein et al., 2020, p. 6). While this underlined the relevance of the sample to the research topic, it also limited the generalizability of the findings to older populations, who may engage differently with influencers or digital advertising. Additionally. 90.1% of participants were Dutch, with a minority from other European, Oceanian, and Asian countries. This reflected the context of the study, which was mainly conducted in the Netherlands and distributed internationally through various WhatsApp groups. However, this composition presented limitations in terms of cross-cultural generalizability as responses to influencers and digital marketing can vary considerably across cultures (Ganeshkumar et al., 2023, p. 43).

5.2 Discussion of Results

This study investigated how influencer type (nano, micro, macro) and advertisement message type (rational vs. emotional) affect customer-brand engagement (measured through likes, shares, and comments). While additionally accounting for platform type as a covariate. None of the hypotheses were statistically supported. However, descriptive trends revealed a potential trend toward higher engagement for nano-influencers in emotional contexts and for micro-influencers in rational conditions.

These descriptive patterns align with prior literature, such as Kay et al. (2020) and Park et al. (2021), suggesting that authenticity and perceived expertise influence engagement. The lack of significant effects may be attributed to methodological factors such as the brief exposure to fictional influencers and a general (non-experimental) product. In addition, the static and hypothetical nature of the stimuli likely to reduced ecological validity, limiting participants' emotional and cognitive

involvement.

To conclude, platform type had a significant effect on engagement, highlighting the pivotal role of platform-specific affordances and user attitudes in shaping consumer responses. This suggests that platform characteristics should not merely be controlled for, but explored as an independent variable in future studies.

5.2.1 Hypothesis 1: Influencer Type

The first hypothesis (H1), which predicted that nano- and micro-influencers would generate higher engagement compared to macro-influencers, was rejected. Although the descriptive means showed slight variation across conditions in the expected directions, none of these differences reached statistical significance.

Several explanations are possible. First, despite pretesting and successful manipulation checks, the distinctions between influencer types may have been too subtle to meaningfully impact engagement. Participants only saw the influencer once, which reduced the likelihood of deep processing. Additionally they may not have paid close attention to specific profile details, particularly since they were unaware of the manipulation. As a result, the hypothetical scenario may have failed to create a sufficiently compelling or distinctive influencer profile to influence engagement levels. Compared to previous research, providing a rich, more visual, and substantive profile, as conducted in Wang et al. (2021, pp. 2595-2596), could have clarified these distinctions, even with brief exposure. Second, the artificial nature of the experiment may have limited the impact of the influencer type. Participants were exposed to hypothetical influencer content in a one-time setting with unfamiliar, fictitious profiles. As Hollebeek (2011, pp. 556-565) notes, emotional or cognitive engagement often develops through repeated, authentic interactions, conditions that could not be replicated in this study.

Third, the choice of a general product (a speaker) may have weakened the impact of the influencers. Prior research by Pan et al. (2024, p. 62) shows that influencers are typically more effective when promoting experience products, which rely more on subjective evaluations and personal endorsements. To have a more positive effect on customer-brand engagement, the advertisement should have featured a more experience-based product.

Although H1 was not statistically supported, descriptive trends indicated slight differences acorss groups that were consistent with prior research. While not statistically significant, this highlighted that influencer effectiveness may depend on contextual factors such as product type, platform, and exposure. Suggesting that future research should examine this complexity of factors in ecologically valid conditions.

5.2.2 Hypothesis 2: Advertisement Message Type

The second hypothesis (H2), which predicted higher engagement for emotional messages, was also rejected. Although descriptive results showed slightly higher mean scores for emotional messages

across influencer types, these differences were not statistically significant. Several explanations are possible. First, the emotional cues may have been too subtle, even though they were correctly recognized. According to Pan et al. (2024), emotional content only enhances engagement when it is perceived as valuable and immersive. This was likely limited by the brief, one-time exposure to unfamiliar influencers in this study, as discussed in Section 5.2.1.

Second, Pan et al. (2024, pp. 69-70) highlight the important role of platform and product context. Emotional content is particularly effective on content-based platforms (e.g., TikTok) and with experience-based products, as these settings align more closely with consumers' expectations and motivations. As mentioned in Section 5.2.1, this may have negatively impacted the results; if this study had involved experience-based products, the emotional message might have better matched user expectations, thereby increasing the effectiveness (Pan et al., 2024, p. 70).

Despite the rejection of H2, descriptive results showed a slight advantage for emotional messages across influencer types. Suggesting that, according to the literature, emotional content holds potential to increase engagement; however, its effectiveness may depend on contextual alignment, similar to the first hypothesis. Therefore, future research should test the effectiveness of emotional messages regarding influencer marketing under more immersive and ecologically valid conditions.

5.2.3 Hypothesis 3: The Interaction Effect

The final hypothesis (H3) predicted that the effect of influencer type on customer-brand engagement would depend on the type of advertisement message. This assumption was grounded in previous literature, which suggests that message-influencer fit plays a critical role in shaping consumer responses. Specifically, emotional messages were expected to perform better when delivered by nano- or micro-influencers, due to their perceived authenticity and emotional closeness to followers (Ahmadi et al., 2023; Grigaliunaite & Pileliene, 2016). In contrast, rational messages were expected to benefit from the credibility and authority often associated with macro-influencers (Manchón et al., 2015; Şenyapar, 2024). However, no significant interaction was found. Engagement remained consistent across all combinations of influencer and message type. This may be due to several factors.

As with H1 and H2, the manipulations may not have been strong or realistic enough to activate the expected fit effects (see Section 5.2.1 and 5.2.2). Additionally, platform-related factors may have exerted a stronger influence. Pan et al. (2024, p. 70) emphasize that engagement is shaped not only by message and source but also by users' expectations within specific platforms. Since Instagram and TikTok are hedonic platforms where users seek entertainment and visually engaging content, audiences may be less sensitive to subtle differences in influencer credibility or message framing. This was supported by the finding that platform preference, included as a covariate, significantly predicted engagement outcomes in the analysis.

Taken together, the lack of an interaction effect did not contradict theory but suggested that message-influencer fit may only become evident under more immersive and ecologically valid conditions. Future research should replicate this study using richer content, longitudinal designs, and a closer alignment between influencer and platform to better detect these nuanced effects.

5.2.4 Discussion of Covariate

In this study, platform type (Instagram vs. TikTok) was included as a covariate to account for potential differences in customer-brand engagement. This approach was theoretically supported by prior research demonstrating that social media platforms differ significantly in their digital architecture, user base, and content dynamics (Haenlein et al., 2020, p. 23; Lou et al., 2022, pp. 62-63). Rather than including platform as a third independent variable, including it as a covariate allowed the analysis to control for underlying bias related to participants' attitudes toward the platform. This decision resulted in a more focused test of the main effects.

The results revealed that platform preference had a significant effect on customer-brand engagement. Participants who reported more positive attitudes toward Instagram or TikTok were more likely to engage with the content, regardless of influencer type or message strategy. This finding underscored the importance of considering platform-specific affordances in influencer marketing research. It also supported prior work suggesting that user behavior is shaped not only by the message or source but also by the platform environment in which it is delivered (Haenlein et al., 2020, p. 23; Lou et al., 2022, pp. 64 & 67).

Although platform type was not the central focus of this study, the results suggested it may be more than just a contextual factor. Future research should therefore explore the role of platform preference or platform characteristics as potential moderators, and examine how specific platform features, such as content modality (video vs. image), algorithmic feeds, and community norms, shape consumer engagement with influencer content (Pan et al., 2024, p. 61; Lou et al., 2022, pp. 64-67).

5.3 Answering the Research Question

The central research question of this study was: *How do influencer type (nano, micro, macro) and advertisement message type (rational vs. emotional) impact customer-brand engagement (e.g., likes, shares, and comments), while accounting for differences across social media platforms?*

Based on the results, the study showed that within the research conditions influencer type (nano, micro, macro) nor advertisement message type (rational vs. emotional) had an impact on customer-brand engagement. As no significant effect of either influencer type or advertisement message type on customer-brand engagement was found.

However, although the hypotheses were not statistically supported, the findings do not rule out the theoretical relevance of the variables used. Descriptive results indicated slight differences in engagement for certain conditions, for example, nano-influencers in the emotional message condition

and micro-influencers in the rational condition. These trends align with prior findings that link smaller influencers to authenticity and expertise in driving engagement (e.g., Kay et al., 2020; Park et al., 2021).

In contrast, the study showed a significant effect of the covariate, platform type, highlighting that engagement is not solely impacted by influencer type and advertisement message type, but by its broader digital context. Underlining the importance of platform-specific affordances and user attitudes in determining how consumers respond to influencer marketing content.

In conclusion, while the researcu question could not be answered through statistically significant findings, the results do suggest that future research should incorporate platform type as a central factor, rather treating it as a covariate, to effectively address the research question.

5.4 Limitations

While this study employed a controlled experimental design to examine the influence of influencer type and advertisement message type on customer-brand engagement, several limitations must be acknowledged that may have subtly influenced the results.

Firstly, as discussed in Sections 5.2, 5.2.1, and 5.2.2, the use of hypothetical stimulus materials (mock-up social media posts) ensured a high degree of experimental control and consistency across conditions, but likely reduced ecological validity; the extent to which results apply to real-world settings (Vargas et al., 2017, p. 107). Real social media engagement involves more dynamic, emotionally rich, and familiar content, including video and audio elements common to platforms like TikTok and Instagram (Haenlein et al., 2020, p. 24; Pan et al., 2024, pp. 75-76). As a result, the static experimental setting may not have failed to capture this complexity and richness of real-world user experiences, limiting the generalizability of the findings.

Second, although a between-subjects design and a cover story were used to reduce social desirability bias, demand characteristics cannot be fully eliminated (Neumand, 2014, p. 292). As noted in Section 5.2.1, some participants may have guessed the study's purpose or responded in ways they believed were expected. Future research could include additional control questions to verify the effectiveness of the cover story and further strengthen internal validity.

Third, as described in Section 5.1, a notable number of participants were removed from the final sample due to incomplete responses, failed attention checks, or insufficient familiarity with the topic. This experimental mortality (Neuman, 2014, p. 301) may have introduced bias, as it is unclear how excluded paeticipants might have responded. In particular, the phrasing of the familiarity question, referring to ‘’social media marketing,’’ may have been too narrow. Phrasing this question differently, using ‘’social media advertisements’’ might have reduced unnecessary exclusions. Furthermore, the relatively homogeneous sample, predominantly consisting of Dutch participants, limit the generalizability of the findings. Although these are common challenges in online experiments, future studies might use pre-screening methods, stronger incentives, or shorter surveys to

reduce dropout rates.

Fourth, the study relied on a single measurement of engagement after a single exposure to one post, which may not fully reflect actual engagement patterns that evolve through repeated exposure. As influencer marketing campaigns often involve ongoing exposure, future research should consider longitudinal designs or multiple stimulus exposure (see Sections 5.2.1 and 5.2.2).

Finally, as already mentioned in Section 5.2.4, platform preference was statistically controlled for as a covariate. The significant effect of platform attitudes suggests that platform characteristics play a central role in influencing engagement. Future research could benefit from treating platform type as a main independent or impactful variable. Moreover, by including more than two platforms, allowing for a deeper investigation of how different platform features influence user responses to influencer content (Lou et al., 2022, pp. 64, 67; Haenlein et al., 2020, p. 23).

5.5 Directions for Future Research

Building on the limitations and findings in Sections 5.2 and 5.3, several recommendations for future research can be made.

Firstly, to enhance ecological validity, implement real-time or field experiments on actual social media platforms (see Section 5.3). This would allow future research to capture more authentic user behavior and increase generalizability.

Second, as suggested in Sections 5.2.1 and 5.2.2, future research should compare engagement across different product categories (experience-based vs. functional products) and examine a broader range of engagement metrics (such as likes, shares, comments, and viewing duration). To enhance the ability to clarify under which conditions influencer and message effects are most pronounced (Pan et al., 2024, pp. 62, 70).

Thirdly, the significant role of platform preference, as identified in Section 5.2.4, indicates that future research should treat platform characteristics as the main independent variable rather than a covariate. Thereby, explicitly examine how features such as algorithmic feeds, content discovery mechanisms, and community norms shape engagement with influencer content per platform (Lou et al., 2022, pp. 64-67; Pan et al., 2024, p. 61).

Fourth, future research should consider employing longitudinal designs or repeated exposure to multiple posts, as single-exposure measurement may not reflect how engagement develops over time, as discussed in the limitations (see Section 5.3).

Finally, as noted in Section 5.1, future studies should aim for more diverse and representative samples in terms of age, cultural background, and social media usage to enhance the generalizability of the findings (Ganeshkumar et al., 2023, p. 43).

In sum, addressing these directions will contribute to a deeper and more nuanced understanding of how influencer marketing strategies operate across different contexts.

5.6 Reliability and Validity

This study employed several strategies to ensure reliability and validity as described in Chapter 3, This section will critically reflect on these strategies used.

Reliability refers to the consistency and stability of the measurement instruments and procedures (Neuman, 2014, p. 190). It was supported through the use of previously validated multi-item scales for customer-brand engagement, as well as uniform survey administration. Additionally, random assignment to experimental conditions and a between-subjects design minimized systematic bias and reduced the risk of learning or fatigue effects (see Sections 3.1 and 3.4), contributing to overall data reliability. However, as discussed in Section 5.2, several factors may have impacted reliability. Engagement was measured through a self-report, which can introduce subjectivity, attention variance, and social desirability bias, despite the inclusion of control questions to check attentiveness.

Validity, refers to the extent to which the research truly measured what it intended to measure (Neuman, 2014, p. 195). Internal validity was strenghtened by the controlled experimental design, systematic manipulation of influencer and message type, and random assignment, which reduced potential confounding variables. The use of a cover story and control questions further helped to mitigate demand characteristics (Neuman, 2014, p. 292) (see Section 5.2).

Construct validity was addressed by using established measurement instruments and conducting a pretest, which indicated that participants generally interpreted influencer type and message type as intended.

External validity, referring to the generalizability of the findings to other contexts and populations (Vargas et al., 2017, p. 107), was limited by the sample composition (as noted in Section 5.1), consisting mainly of young Dutch adults. Furthermore, external validity was limited by the use of only one static, simulated social media post and profiles. These factors limited the generalizability of the findings to broader populations and real-world contexts.

Finally, ecological validity may also be limited. Despite efforts to design realistic-looking posts, the static and silent nature of the stimuli did not fully replicate the multimedia, algorithm-driven, and interactive environments of real social media feeds (see Sections 5.2 and 5.2.4). As a result, generalizations to real-world engagement should be made with caution.

5.7 Conclusion

In October 2023, BMW's campaign with the virtual influencer Lil Miquela illustrated how brands are embracing innovation to connect with audiences in an ever-evolving digital landscape. This example, introduced at the start of this study, highlights the promise and complexity of influencer marketing strategies in practice. Yet, the findings of this study nuanced that while neither influencer type nor advertisement message type, nor their interaction, provided statistically significant effects on customer-brand engagement, the results did not negate the potential relevance of these factors.

Instead, the study underscored that successful influencer marketing depends on more than simply choosing between an influencer like Lil Miquela or a celebrity with a massive following. The effectiveness of such campaigns lies in a complex interplay of context, including platform characteristics, product type, and the authenticity of influencer content. The limited effects observed in this study can be attributed to factors such as the artificial nature of the setting, brief exposure to the stimuli, and the use of fictitious influencer profiles. In other words, conditions that differ significantly from the dynamic, emotionally resonant environments in which real campaigns like BMWs unfold.

Despite the absence of significant effects, this research contributed to the growing literature that highlights the complex nature of influencer marketing. Suggesting that successful engagement strategies require a careful alignment between message, influencer characteristics, product type, and the specific platform context. As the BMW campaign with Lil Miquela demonstrates, innovation in influencer marketing is not just about reach or novelty, but about crafting authentic, contextually relevant connections with audiences. Therefore, it is suggested that future research should investigate these dynamics more ecologically valid, to better reflect the realities of contemporary influencer marketing.

5.8 Reflect on Academic/Societal Relevance

This study contributed academically by deepening the understanding of influencer marketing, specifically focusing on the impact and interplay of influencer type and advertisement message type on customer-brand engagement. While additionally controlling for the potential influence of platform type. By doing so, this research aimed to fill a notable gap in the existing literature by providing generalizable insights to enhance these existing theories. Addressing both variables (influencer type and advertisement message type) in a quantitative framework.

Furthermore, this study provided social relevance by offering guidance in optimizing influencer collaborations and message strategies for brands and marketers. To enable crafting authentic and meaningful interactions between brands and customers. This guidance is essential in the ever-evolving social media environment, in which the way brands and audiences communicate is transforming and is responsible for new developments.

To conclude, understanding the interplay between influencer type and advertisement message type is crucial in both academic and social aspects in today’s dynamic digital environment.

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Appendix A

Table A.1

Group Distribution in the Experimental Design (N = 223).

Group	*n*
1	36
2	34
3	37
4	40
5	36
6	40

Table A.2

Sociodemographic characteristics of participants.

Variable		*N*	%	*M*	*SD*
Gender		223		1.57	0.54
	Male	99	44.4%		
	Female	121	54.3%		
	Non-binary/Third gender	2	0.9%		
	Prefer not to say	1	0.4%		
Education		223		4.63	1.38
	High school graduate /Secondary education	27	12.1%		
	Some college	17	7.6%		
	2 year degree (e.g.associate degree, Proedeuse, or equivalent)	31	13.9%		
	4 year degree (e.g. Bachelor's degree, HBO, or equivalent)	99	44.4%		
	Master's degree or equivalent	40	17.9%		
	Professional degree (e.g. medical, law)	5	2.2%		
	Doctorate (e.g., PhD)	2	0.9%		
	Prefer not to say	2	0.9%		

Table A.3

The age of participants.

Age	Amount
18	3
19	6
20	11
21	15
22	16
23	21
24	19
25	24
26	13
27	7
28	14
29	15
30	11
31	4
32	3
33	5

34	4
35	5
36	1
37	3
38	3
39	1
40	3
41	1
43	1
44	2
47	1
51	1
54	1
55	1
58	1
59	1
60	2
61	2
65	1
66	1

Table A.4

The different nationalities of participants.

Nationality	Amount
Argentina	1
Australian	1
Belgian	2
Dutch	201
English	6
French	3
German	1
Indonesian	1
Irish	1
Israeli	1
Kiwi	1
Nz/samoa	1
Swedish	1
Taiwan	1

Appendix B

Table B.1

Pretest Outcomes: Influencer Type Classification by Profile (N = 26).

Profile	Influencer type	Frequency	%
Profile 1	Nano-influencer (1,000–10,000 followers)	25	96.2%
	Micro-influencers (10,000–100,000 followers)	1	3.8%
	Total	26	100.0%
Profile 2	Nano-influencer (1,000–10,000 followers)	2	7.7%
	Micro-influencers (10,000–100,000 followers)	22	84.6%
	Macro-influencer (100,000–1,000,000 followers)	2	7.7%
	Total	26	100%
Profile 3	Nano-influencer (1,000–10,000 followers)	1	3.8%
	Micro-influencers (10,000–100,000 followers)	6	23.1%
	Macro-influencer (100,000–1,000,000 followers)	19	73.1%
	Total	26	100.0%

Table B.2

Pretest Outcomes: Follower Count Question Coding by Profile (N = 26).

Profile	Response	Frequency	%
Profile 1	.00 (missing/wrong)	2	7.7%
	1.00 (correct)	24	92.3%
	Total	26	100.0%
Profile 2	.00 (missing/wrong)	2	7.7%
	1.00 (correct)	24	92.3%
	Total	26	100.0%
Profile 3	.00 (missing/wrong)	3	11.5%
	1.00 (correct)	23	88.5%
	Total	26	100.0%

Table B.3

Classification Accuracy and Perceived Message Framing for Advertisement Stimuli (N = 26).

Advertisement Type	Correct Classification *n* (%)	Emotionality *M*(*SD*)	Rationality *M*(*SD*)
Emotional	25 (96.2%)	6.35 (0.98)	1.85 (1.29)
Rational	22 (84.6%)	2.19 (1.88)	6.35 (1.13)

Note. Correct classification refers to the number (and percentage) of participants who identified the advertisement as intended. Emotionality and rationality are rated on a 7-point Likert scale. Classification threshold is set at ≥ 70%.

Appendix C

Table C.1

Manipulation Check: Mean Scores for Perceived Factual and Emotional Focus by Condition (N = 223).

Condition	Factual Focus *M* (*SD*)	Emotional Focus *M* (*SD*)	*n*
Nano-Influencer Rational	3.67 (1.04)	2.81 (1.01)	36
Micro-Influencer Rational	3.35 (0.85)	3.12 (1.09)	34
Macro-Influencer Rational	3.65 (0.89)	2.89 (1.15)	37
Nano-Influencer Emotional	2.45 (1.20)	4.00 (0.96)	40
Micro-Influencer Emotional	2.58 (0.87)	3.72 (0.85)	36
Macro- Influencer Emotional	2.40 (0.98)	3.73 (1.11)	40
Total	3.00 (1.12)	3.39 (1.12)	223

Note. All items were rated on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).
Factual Focus: ‘’The post focused mostly on factual product information.’’
Emotional Focus: ‘’The post focused mostly on personal feelings and experience.’’

Appendix D

Table D.1

Reliability Statistics for the Customer-Brand Engagement Scale (N = 223).

Cronbach's Alpha	Number of Items
.72	4

Table D.2

Item-Total Statistics for the Customer-Brand Engagement Scale.

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I would like this post	3.92	3.34	.33	.83
I would comment on this post	4.75	3.79	.65	.59
I would share this post with others	4.86	4.07	.66	.61
I would follow the influencer after seeing this post	4.64	3.44	.58	.61

Note. All values are rounded to two decimal places. The overall Cronbach's alpha fort he 4-item scale was .72. The item ''I would like this post'' showed the lowest item-total correlation (r = .33), but the overall reliability remained acceptable.

Table D.3

Multivariate Test Results for Covariates by Treatment Group.

Effect	Wilks' Λ	F	df1	df2	*p*	Partial η^2
Influencer Type	0.94	1.17	12	424	0.30	.03
Advertisement Message Type	0.97	0.12	6	212	.35	.03
Influencer x Message Type	0.92	1.55	12	424	.11	.04

Note. The table shows the results of the MANOVA testing whether the covariates differ across treatment groups.

Table D.4

Reliability Statistics for Covariate Items

Cronbach's Alpha	Number of Items
.68	6

Note. Cronbach's alpha for the six covariate items.

Table D.5

Correlations Between Covariate Items (N = 223).

Item	1	2	3	4	5	6
1. How often do you use the following platforms – Instagram	1	.16*	.34**	.14*	.23**	.11
1. How often do you use the following platforms – TikTok	.16*	1	.24*	.65**	-.02	.60**
2. How do you feel about each	.34**	.24**	1	.46**	.02	.2

platform – Instagram						0**
3. How do you feel about each platform – TikTok	.14*	.65**	.46**	1	-.06	.38**
4. How often do you encounter ads on the following platforms – Instagram	.23**	-.02	.02	-.06	1	.29**
5. How often do you encounter ads on the following platforms – TikTok	.11	.60**	.20**	.38**	.29**	1

Note. Pearson correlations
*p < .05, ** p < .01 (two-tailed).
Item 1: How often do you use the following platforms – Instagram
Item 2: How often do you use the following platforms – TikTok
Item 3: How do you feel about each platform? – Instaram
Item 4: How do you feel about each platform? – TikTok
Item 5: How often do you encounter ads on the following platforms? – Instagram
Item 6: How often do you encounter ads on the following platforms? – TikTok.

Figure D.6.1

Scatterplot of Instagram_Score versus Engagement Score.

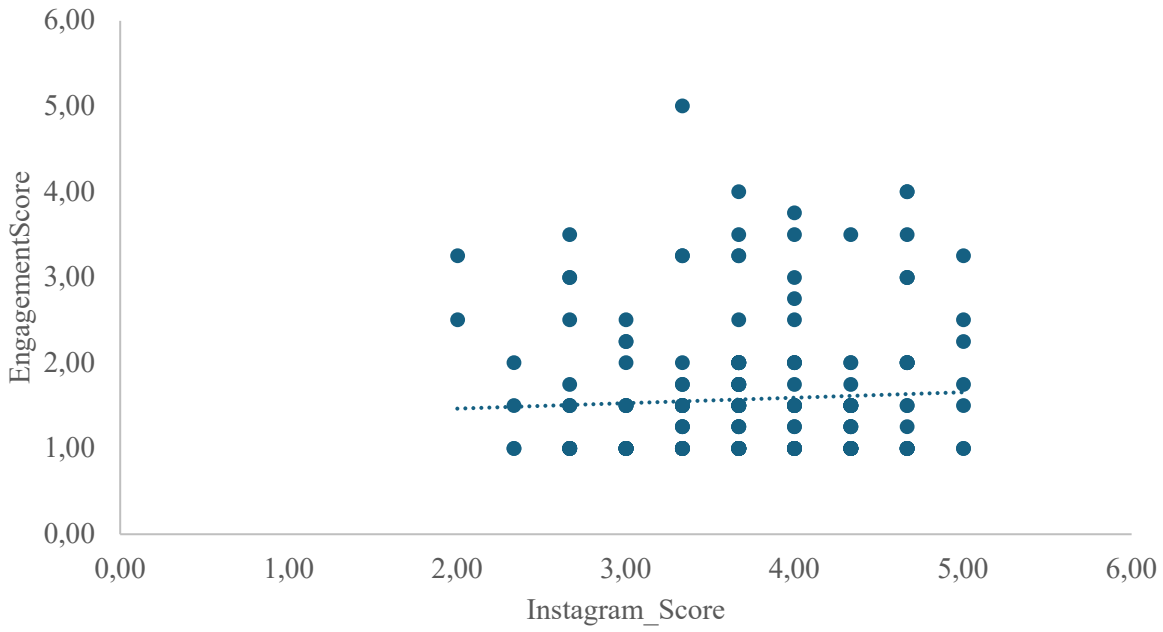

Figure D.6.3.2

Scatterplot of TikTok/-Score versus EngagementScore.

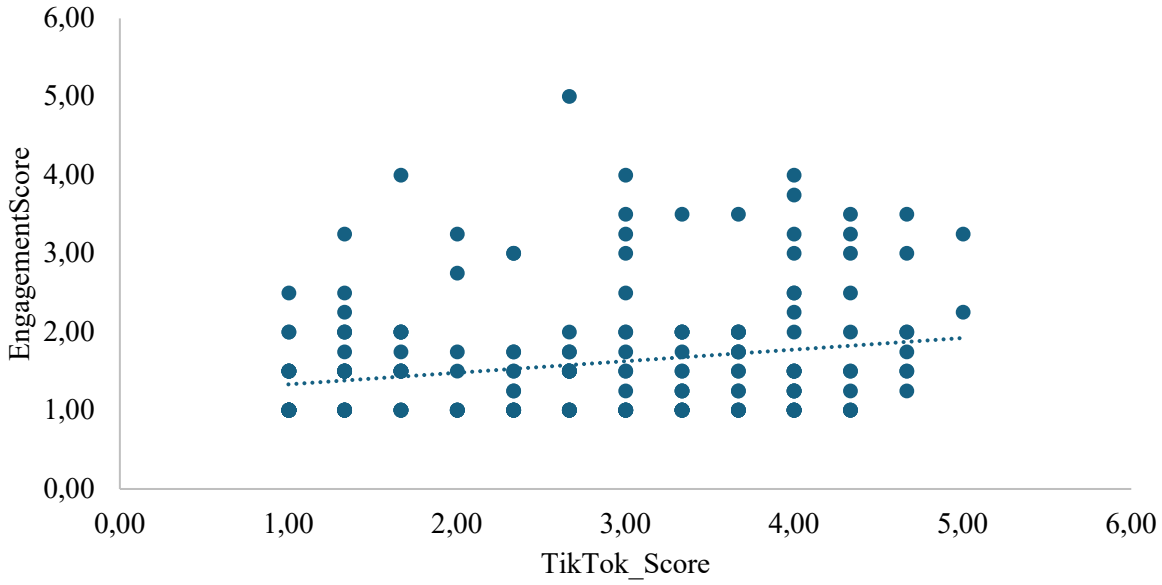

Figure D.6.3

Scatterplot of Instagram_Score versus Engagement Score.

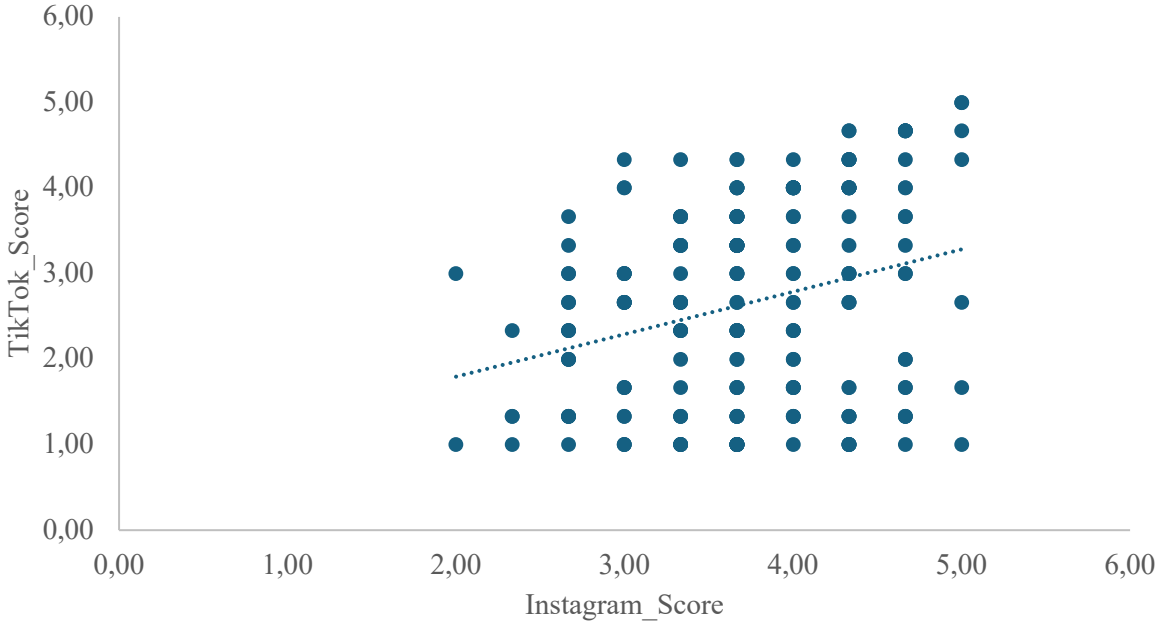

Table D.7

Tests of Between-Subjects Effects for EngagementScore

Source	SS	df	MS	F	p	η^2
Corrected model	22.31	27	0.83	1.54	.050	.18
Intercept	7.13	1	7.13	13.31	< .001	.06
Influencer Type	0.39	2	0.20	0.37	.695	.00
AdMessageType	0.05	1	0.05	0.09	.761	.00
How often do you use the following platforms – Instagram	0.15	1	0.15	0.29	.593	.00
How often do you use the following platforms – TikTok	0.76	1	0.76	1.42	.235	.01
How do you feel about each platform? – Instaram	0.10	1	0.10	0.19	.661	.00
How do you feel about each platform? – TikTok	4.68	1	4.68	8.75	.003	.04
How often do you encounter ads on the following platforms? – Instagram	0.18	1	0.18	0.34	.560	.00
How often do you encounter ads on the following platforms? – TikTok	1.27	1	1.27	2.37	.125	.01
InfluencerType x Q3_!	0.38	2	0.19	0.36	.700	.00
InfluencerType x Q3_2	3.15	2	1.57	2.94	.055	.03
InfluencerType x Q5_!	0.88	2	0.44	0.83	.439	.01
InfluencerType x Q5_2	2.66	2	1.33	2.49	.086	.03
InfluencerType x Q6_!	1.50	2	0.75	1.40	.248	.01
InfluencerType x Q6_2	0.34	2	0.17	0.31	.732	.00
AdMessageType x Q3_1	0.93	1	0.93	1.74	.189	.01
AdMessageType x Q3_2	0.05	1	0.05	0.10	.756	.00
AdMessageType x Q5_1	0.70	1	0.70	1.31	.254	.01
AdMessageType x Q5_2	0.53	1	0.53	0.98	.323	.01
AdMessageType x Q6_1	0.49	1	0.49	0.92	.338	.01
AdMessageType x Q6_2	0.00	1	0.00	0.00	.959	.00
Error	104.44	195	0.54			
Total	682.38	223				
Corrected Total	126.75	222				

Note. $R^2 = .18$ (Adjusted $R^2 = .06$).

Table D.8

Item Statistics for Covariate Items (N = 223).

Item	Mean	Std. Deviation
How often do you use the following platforms – Instagram	4.10	0.93
How often do you use the following platforms – TikTok	2.65	1.53
How do you feel about each platform – Instagram	3.51	0.83
How do you feel about each platform – TikTok	2.78	1.18
How often do you encounter ads on the following platforms –Instagram	3.60	1.08
How often do you encounter ads on the following platforms – TikTok	2.53	1.46

Appendix E

Table E.1

Descriptive Statistics for EngagementScore by Condition and Platform (N = 223).

Group	Platform	Mean	*SD*	*n*
1	Instagram	1.48	0.58	28
	TikTok	1.63	0.73	8
	Total	1.51	0.61	36
2	Instagram	1.64	0.81	30
	TikTok	1.13	0.14	4
	Total	1.58	0.78	34
3	Instagram	1.55	0.76	32
	TikTok	1.40	0.38	5
	Total	1.53	0.72	37
4	Instagram	1.55	0.71	35
	TikTok	2.35	0.99	5
	Total	1.65	0.79	40
5	Instagram	1.46	0.74	29
	TikTok	2.21	0.94	7
	Total	1.60	0.82	36
6	Instagram	1.53	0.83	34
	TikTok	1.92	0.82	6
	Total	1.59	0.83	40
Total	Instagram	1.54	0.74	188
	TikTok	1.81	0.82	35
	Total	1.58	0.76	223

Note. Group refers to experimental condition; SD = Standard Deviation; n = sample size per cell.

Table E.2

Results of Two-Way Between-Subjects ANCOVA for Customer-Brand Engagement.

Effect	F	df1	df2	P	Partial η^2
Influencer Type	0.00	2	210	.997	<.001
Advertisement Message Type	1.23	1	210	.269	.006
Influencer x Message Type	0.44	2	210	.643	.004
Platform (Covariate)	8.40	1	210	.004	.038
Model	2.17	12	210	.014	.110

Note. Dependent variable: EngagementScore; Covariate: Platform (Instagram vs. TikTok). Levene's test indicated homogeneity of variances, F (5, 217) = 0.79, p = .556.

Appendix F

Link to online experiment:

https://erasmusuniversity.eu.qualtrics.com/jfe/form/SV_2oaTixZ9tKzUaJ8

Experiment:

1. **Informed consent**

‘’Welcome and thank you for participating in this study.

This survey is part of my Master's thesis project at Erasmus University Rotterdam.
The purpose of the study is to gain insight into how people perceive social media influencers and advertising messages. You will be shown a short example post, similar to content you might encounter on platforms such as Instagram or TikTok, and asked a few follow-up questions.

The survey will take approximately 2-3 minutes to complete.
Your participation is entirely voluntary. You may stop the survey at any time without any consequences. There are no anticipated risks or discomforts related to this study. All your responses will be treated with strict confidentiality and stored securely. No personally identifying information will be collected, and your data will only be used for academic research purposes. Only the researcher will have access to the results.

By continuing, you confirm that:
- You have read and understood the information above
- You voluntarily agree to take part in this study
- You are 18 years of age or older

Agree (yes/no)’’

2. **Filter question:** participants’ previous familiarity with social media marketing

‘’Are you familiar with social media marketing? (Yes/No)’’

3. **Covarate: social media platform**

‘’How often do you use the following platforms’’ (never/sometimes/about half the time/ most of the time/ always, for both Instagram and TikTok).
‘’On which platform do you find ads more trustworthy or attractive? (Instagram/TikTok).
‘’How do you feel about each platform?’’ (Extremely negative/somewhat negative/ neither positive nor negative/ somewhat positive/ extremely positive, for both Instagram and TikTok).

‘’How often do you encounter ads on the following platforms?’’ (Never/sometimes/about half of the time/most of the time/always, for both Instagram and TikTok).

4. Experiment instructions/cover story

‘’ You will first be shown a social media profile, and then the corresponding message. Please examine both carefully before answering the following questions.’’

5. Stimulus material (different for each 6 conditions)

Figure E.1

Influencer profile stimuli.

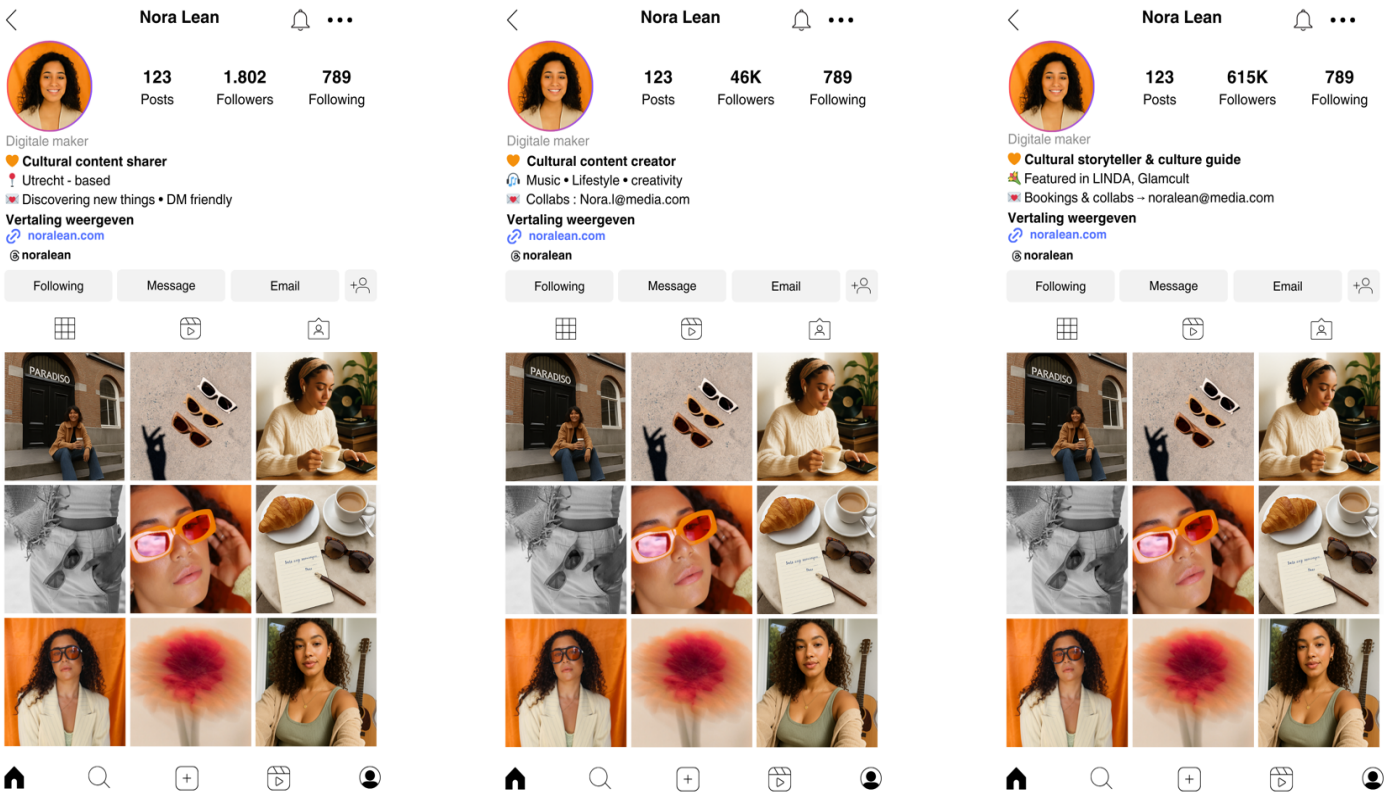

Figure E.2

Advertisement message type stimuli.

6. 4 item customer-brand engagement

''On a scale of 1 (very unlikely) to 5 (very likely) fill out the following statements:

I would like this post

I would comment on this post

I would share this post with others

I would follow the influencer after seeing this post.''

7. Control questions (3 for each participant, one for influencer professionality and two for the advertisement message type)

''The influencer in the post seemed like a well-known professional content creator'''

''The post focused mostly on factual product information''

''The post focused mostly on personal feelings and experience.''

8. Socio-demographic questions:

- Age (write as numbers)
- Gender (male/female/non-binary/third gender/prefer not to say)
- Nationality (written)
- Education (Less than high school/some college/2 year degree (e.g. associate degree, Propedeuse, or equivalent)/4 year degree (e.g. Bachelor's degree, HBO, or

equivalent)/Master's degree or equivalent/Professional degree (e.g. medical, law)/Doctorate (e.g., PhD)/Prefer not to say)

What is you gender identity (select what suits you best) (male/female

9. Debrief & end of survey

‘’Thank you for your participation. The aim of this study is to investigate how different types of influencers and advertisement message types influence customer brand engagement. The profiles and products used were fictitious. You are kindly requested not to share this information with others.

In case you have any questions or want to be informed about the results, please contact me via 548211sr@eur.nl.’’