

## **Gaming influencers and their advertising effectiveness on Twitch.TV**

How the visual presence of a gaming influencer affects the purchase intention and brand attitude  
of their spectators

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SNR: 2069217

Master's Thesis

Communication and Information Sciences

Specialization Business Communication and Digital Media

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June 2022

## Abstract

Influencer marketing has expanded onto new and diverse platforms attempting to reach different audiences. Using gaming influencers, particularly on Twitch.TV, to promote products and brands has been scarce. Therefore, this research investigated how the high visual presence of a Twitch gaming influencer, compared to the absence of visual presence, directly affected the purchase intention and brand attitude of their spectators after hearing a sponsored message. Parasocial interaction was investigated as a mediator in the relationship. Product congruence was investigated as a moderator. Previous studies have focused on Twitch.TV and gaming influencers but have disregarded how the visual presence of a gaming influencer affects purchase intention and brand attitude. The present research referenced several studies on influencer marketing, Twitch.TV, and used the media richness theory to postulate results. The experiment consisted of a 2 (visual presence: absent vs. present) x 2 (product congruence: congruent vs. incongruent) between-subjects design. Participants between the ages of 18 and 35 were selected and assigned to one of the conditions. Using a moderated mediation analysis, results showed a partially confirmed relationship. No direct effects occurred from visual presence, but PSI had a direct effect on both purchase intention and brand attitude. No mediation or moderation effects were found. The findings of this study indicate that influencer marketing techniques will need to vary from those widely known on other social media platforms that aim to persuade a follower's purchase intention and brand attitude. This research still endorses gaming influencers as valuable influencer marketing personas, although best practices will need to be identified and adopted. The final discussion considers further research suggestions.

*Keywords:* influencer marketing, gaming influencers, Twitch.TV, purchase intention, brand attitude, parasocial interaction, produce congruence

### **Gaming influencers and their advertising effectiveness on Twitch.TV**

With the proliferation and diversification of social media platforms, marketers have capitalized on various methods to advertise brands and products through influencers (Alalwan et al., 2017; Vrontis et al., 2021). An exciting industry that is progressively growing in influencer marketing opportunities today is the eSports and Gaming industry (Appel et al., 2019; Woodcock & Johnson, 2019a). Influencers are people of high status on social media platforms who have a large follower base and are seen as dependable sources of information by their followers (de Veirman et al., 2017). Influencers are used by marketers because they have demonstrated that they can positively impact their follower's brand attitudes and product purchase intentions (Jiménez-Castillo & Sánchez-Fernández, 2019). Brand attitude is defined as a positive or negative assessment of a company after hearing an influencer mention it (Rossiter, 2014). Purchase intention is the likelihood that a spectator or follower will want to buy a product after hearing an influencer mention it (Wu et al., 2011). Thus, the ability to impact followers' opinions and attitudes makes influencers an important marketing tactic (Bentley et al., 2021).

Within the eSports and Gaming industry, gaming influencers such as Tyler Blevins, better known by his gamer name Ninja, are admired influencers with a large following who showcase themselves playing video games on live-streaming platforms like Twitch.TV, or simply Twitch (Sjöblom et al., 2019). Twitch is one of the most popular social live-streaming platforms, predominately used by individuals to openly broadcast themselves playing video games while communicating and interacting with others simultaneously (Twitch Interactive, Inc., 2022). Previous marketing efforts have seen global energy drink company Red Bull sponsor Ninja with a Red Bull headband and refrigerator, which were seen by some of his 17 million followers on his live streams (Statista, 2022). Today, 75% of spectators on Twitch are between

the ages of 16 to 34, showcasing a young and digitally confident audience eager to watch others play video games live (Hernmarck, 2022; *Twitch.Tv*, 2022)

Compared to influencers of other social mediums, gaming influencers advantageously use different self-promotional strategies (Woodcock, 2020). Specifically, gaming influencers prioritize the video game on the screen but oftentimes will incorporate themselves also in the frame so that their audience can visually see them playing (Woodcock, 2020). Being visually present in the frame, alongside the ability to be observed in real-time can also be described as visual presence (Jodén & Strandell, 2021). For gaming influencers, visual presence plays a unique role because their real-time appeal and reaction help to enable positive spectator emotion and live engagement (X. Y. Xu et al., 2021). Live spectator engagement includes live chatting, donating, and critiquing the gaming influencer while they play (Smith et al., 2013). Thus spectators can interact with their favorite gaming influencers in real-time and visually see and hear their reactions and responses (PMG: Digital Marketing Agency et al., 2018).

Like sports spectating, the spectators of gaming influencers are enthusiasts captivated by the video game, the gaming influencer, and the action unfolding (Cheung & Huang, 2011). While the spectator is not physically playing the game, they can be viewed as an additional player, helping the streamer or player in control by offering advice and suggestions (Newman, 2002). In a recent research study by Hilvert-Bruce and colleagues (2018), researchers applied the uses and gratifications theory to determine the social motivations of spectators on Twitch. Their findings highlight that spectators are engaging in social interaction, a sense of community, and entertainment (Hilvert-Bruce et al., 2018). Thus, the want for positive psychological feelings is a contributing reason to why spectators actively participate continuously with gaming influencers on Twitch.

Purposely, brands have promoted products and brand names on top of consumer psychological experiences with influencers like parasocial interactions (Labrecque, 2014). A parasocial interaction (PSI) is a one-way fictional online experience in which a follower experiences fulfillment with an influencer as if they were close friends (Horton & Richard Wohl, 1956). Marketing efforts through influencers are especially notorious because if a follower of an influencer experiences PSI they may be keener to gravitate toward a product or brand the influencer is promoting (H. Kim, 2021). Previous research on influencers has indicated that PSI has influenced relationships between a consumer and purchase intention, as well as brand attitude (T. Y. Chen et al., 2021; Zhang et al., 2021). Specifically, on live streaming platforms, it is valuable that brands use personable influencers as PSI is dependent on the influencer's characteristics and self-presentation more than other factors (McLaughlin & Wohn, 2021).

Influencer marketing relies heavily on the trust and credibility the influencer has built with their followers (D. Y. Kim & Kim, 2021). In addition, influencers have also been more successful in marketing when the influencer's content aligns with the product or brand (Belanche et al., 2021). When a brand or product is harmonious with an influencer and their environment it is known as product congruence (Clemente et al., 2013; de Cicco et al., 2020). Because influencers tend to focus on a specific niche, certain products and brands align better with their content, ensuring a better influencer advertisement (Zogaj et al., 2020).

Previous research studies have been conducted on social media influencers and the aforementioned advertising factors (see, e.g., Belanche et al., 2020; Malodia et al., 2017; X. J. Lim et al., 2017). In the context of the present research, advertising effectiveness will relate to purchase intention and brand attitude. Gaming influencers on Twitch can serve as a unique and strategic marketing strategy that is different from influencers on other social media platforms

given their visual presence that helps to promote live engagement and appeal (Singh & Pillai, 2022; Xu, 2021). Yet, research on how gaming influencers can be used for influencer marketing purposes is limited. Specifically, no evident research on the element of a gaming influencer's visual presence and advertising effectiveness was found. Therefore, the present research furthers the understanding of gaming influencers on Twitch and their marketing purposes by addressing the following research questions:

R1: Does the high visual presence of a Twitch gaming influencer (vs. no visual presence) directly affect the advertising effectiveness (purchase intention, brand attitude) of their spectators after hearing a sponsored message?

RQ2: Is the relationship between visual presence and advertising effectiveness mediated by parasocial interaction?

RQ3: Does product congruence moderate the relationship between visual presence and advertising effectiveness?

Based on the present study, recommendations to marketers and advertising professionals can be formulated regarding the advertising effectiveness of gaming influencers on Twitch. Therefore, to answer these research questions, a theoretical framework was developed to help hypothesize the results.

### **Theoretical Framework**

Gaming influencers on Twitch can be used in company marketing campaigns through tactical communication (Woodcock & Johnson, 2019a). The affordances that Twitch offers its gaming influencers and spectators are abundant, contributing to successful interpersonal communication between the two (Catá, 2019; Sjöblom et al., 2019). Interpersonal communication consists of non-verbal, verbal, and written communication (Berger, 2010). Often

on Twitch, gaming influencers will be visually present in the gameplay frame showing non-verbal emotion, but will also take the time to verbally reply or write back to a spectator through the chat system (Harpstead et al., 2019). These affordances make influencer marketing on Twitch a distinctive option because gaming influencers can combine them in one mixed-media platform to deliver on marketing objectives (Hamilton et al., 2014; Pollack et al., 2020).

As indicated by the media richness theory, different forms of media technology and communication methods offer different levels of communication richness between individuals (Daft & Lengel, 1986). The online communities of Twitch connect through the platform's high media-rich features, elevating interpersonal communication and positive attitudes (Chang & Lee, 2022; Yang et al., 2020). An online survey of live stream users ( $N = 295$ ) confirmed through practical results that users positively perceived the media richness of live streaming based on the media richness factors of instant feedback, multiple cues, language variety, and personal focus (Daft et al., 1987; Hsu et al., 2020). Tseng et al. (2022) further identified and tested ( $N = 1,350$ ) a framework that posits that personal focus and immediate feedback positively influence both presence and interactivity for online gamers. Media richness can also impact gratifications of entertainment, contributing to online network communications and online interdependence, the degree an online user depends on others for help (Hsu et al., 2020; Liao et al., 2020). Therefore, it is important to note that rich media factors like visual presence contribute to successful interactions (see, e.g., Catá, 2019; Chang & Lee, 2022; Yang et al., 2020).

### ***Visual Presence, Parasocial Interaction, and Advertising Effectiveness***

Twitch is differentiated from other saturated-influencer social media platforms because of the synchronized communication tools taking effect in real-time while the gaming influencer is in view (visual presence) of a spectator (see, e.g., Deng et al., 2015; Jodén & Strandell, 2021;

Voorveld, 2019). Twitch is branded as a user-generated platform, meaning that individuals who access the website serve as the primary contributors and consumers of its content (Pires & Simon, 2015). Coinciding, live-streaming platforms like Twitch have progressed into social mediums with multiple interpersonal communication methods, enriching experiences for those involved (Ishii et al., 2019). Gaming influencers are thus encouraged by spectators to create quality experiences, which powers the need to be visually present and communicative to spectators as it helps integrate viewers into the community and gaming environment (Hilvert-Bruce et al., 2018; Lessel et al., 2017). What has then been revealed is the element of visual presence and other interactive features on Twitch assists in fostering engagement and improving communication relations between gaming influencers and spectators (el Afi & Ouiddad, 2021; Yang et al., 2020).

Gaming influencers progress in popularity through the amount of labor they invest into the online Twitch community and by the live stream experience they build for their spectators (Johnson & Woodcock, 2017; Spilker et al., 2018). This is because Twitch spectators are keen on community and favor gaming influencers whom they see recognize them and reply to them through verbal or written validation (Spilker et al., 2018). Hence visual presence helps to affirm interpersonal communication between a gaming influencer and their spectator given the various visual cues in sync. (M. Kim & Kim, 2022). Twitch has granted gaming influencers the opportunity to visually promote themselves and the live stream experience they produce in pursuit of growing their popularity and in hopes of generating monetized donations, an act known as digital patronage (Johnson & Woodcock, 2019; Wohn et al., 2019). But, limited knowledge is known of the potential benefits of gaming influencers and their visual promotional tactics in influencer marketing campaigns.

Similar to other influencers, serious gaming influencers attempt to engage a specific audience for promotional purposes and are critiqued by companies on their potential value (see, e.g., Johnson & Woodcock, 2017; Ouvrein et al., 2021; Silva et al., 2019). An influencer's overall value has facilitated their strategic expansion in marketing as endorsers and communicators for companies and products (Borchers & Enke, 2021). Influencers can impact their follower's brand attitudes and purchase intentions as previous work has shown this is possible, particularly through written and static posts on Instagram or Facebook (see, e.g., Chetioui et al., 2020; Kudeshia & Kumar, 2017; Weismueller et al., 2020). The particular benefit of utilizing gaming influencers for influencer marketing can be their visual presence directly in front of a spectator as they are bonding over a shared interest in real-time (Wohn & Freeman, 2020). Therefore, if other influencers can convey marketing power on specific audiences through written posts, a gaming influencer's visual presence may also generate a positive impact on purchase intention and brand attitude. Thus, this research formulates the first and second hypotheses.

H1: The visual presence of a gaming influencer (compared to no visual presence) will positively affect a spectator's purchase intention.

H2: The visual presence of a gaming influencer (compared to no visual presence) will positively affect a spectator's brand attitude.

The ability to be on screen and in the frame while performing in-game actions in real-time – visual presence – encourages shared emotion and genuine connections between the gaming influencer and spectator, qualities that benefit the experience for both (Jodén & Strandell, 2021; Woodcock & Johnson, 2019b). Shared emotions with popular figures like gaming influencers can lead to a parasocial interaction (PSI), the psychological experience in

which a spectator's exposure to a person of high popularity leads them to believe that they are in a reciprocal relationship with that popular figure (Horton & Richard Wohl, 1956; Wulf et al., 2021). As opposed to the related term parasocial relationship (PSR), PSI may occur in a single encounter whereas PSR is a deeper meaningful bond created over many interactions (Dibble et al., 2015). Through the effective use of visual exposure tools on Twitch, gaming influencers can withdraw more meaningful experiences with their spectators and create the psychological effect of PSI by just one interaction (Chen et al., 2020). Live streaming platforms like Twitch thus have transformed how individuals consume media and entertainment, opening new paths for gaming influencers and spectators to connect, creating a one-and-a-half relationship through visual and intuitive communication tools (Kowert & Daniel, 2021; Spilker & Colbjørnsen, 2020).

Visual presence on live streams incorporates a deeper level of interpersonal communication, which can help in aiding PSI (Ko & Chen, 2020). Furthermore, visual presence as a communication tool can help generate relationship development and can even serve as a coping mechanism in difficult life periods for some individuals (de Wit et al., 2020; Sheng & Kairam, 2020). Similar to other social media platforms, spectators on Twitch can subscribe to and watch the gaming influencers they relate to the most. But, because Twitch is a live streaming platform, spectators can develop feelings based on specific events they visually see in real-time, which can result in repeated watching behavior (M. Kim & Kim, 2022; Lim et al., 2020). On live streaming platforms, PSI has been influenced by a user's individual experience and self-congruity with a broadcaster, often leading toward watching repeatedly (Hu et al., 2017). The experience of watching live streams and visually seeing gaming influencers on Twitch is also affected by qualities of friendship, technology, and convenience, helping to defend the need for the visual presence of a gaming influencer in live streams (M. Kim & Kim, 2022). In relation,

repeated watching behavior has been a contributing factor in studies focused on video and television consumption, showcasing that the behavior can lead to a heightened feeling of PSI (Erickson et al., 2019; Nanda & Banerjee, 2020). In identifying how visual presence and PSI are connected, this research formulates the third hypothesis:

H3: The visual presence of a gaming influencer (compared to no visual presence) will positively affect parasocial interaction.

Influencer marketing campaigns must be coordinated carefully as investments into messages to reach specific audiences must be strategic and authentic (Borchers & Enke, 2021; Hudders & Lou, 2022). Research has indicated that the psychological experience of PSI that followers sense with influencers can help branded messages appear more authentic, genuine, and credible (Lou & Yuan, 2019; X. Chen et al., 2022). Influencer marketing and PSI across social media platforms have been widely researched, furthering the certainty that PSI can instill positive results on marketing objectives (Jin et al., 2021; Lou, 2021). These results can specifically influence a change in purchase intention and brand attitude (S. Lee & Kim, 2020).

Live streaming has become a popular marketing strategy to stimulate purchase intention (Su et al., 2020; D. Xu, 2021). Specifically, live streaming enables more visual and social elements that help an individual conceptualize a product (Clement Addo et al., 2021). Moreover, live streaming eliminates uncertainty in a product for individuals watching (Lu & Chen, 2021). In an influencer study conducted in France ( $N = 1,209$ ), Sokolova and Kefi (2020) showcased that YouTube and Instagram bloggers can create PSI through visual attraction which can lead to purchase intention. Therefore, gaming influencers on live streams may create similar connections of PSI with their spectators. In understanding the effects that can stem from PSI and influencers persuasion, this research formulates the fourth hypothesis:

H4: Parasocial interaction will positively affect purchase intention.

Attempting to change the perception of brand attitude through influencers on social media platforms has shown to be effective (Ong & Ito, 2018). PSI has also been depicted to influence brand attitude change in a pair of studies (Um, 2022; Haobin Ye et al., 2020). Similar to the motivates that stimulate purchase intention, influencers can build on PSI, relationship building, and genuine two-side messaging to transmit sincere messages to their audience (Aw & Labrecque, 2020; S. S. Lee & Johnson, 2021). In previous research focused on video blogging, Liu et al. (2019) interpreted that the motive of relationship building, closely related to PSI, improved an individual's attitude toward a brand (Liu et al., 2019). Acknowledging how PSI can affect attitude change on other social platforms, this research formulates the fifth hypothesis:

H5: Parasocial interaction will positively affect brand attitude.

#### ***Parasocial interaction as a mediator***

As noted, the factors of visual presence and parasocial interaction can each serve to have direct effects on purchase intention and brand attitude. But, important to note in influencer marketing is that PSI can also serve as a mediator between the influencer's presence and marketing objectives (Manchanda et al., 2021). Eluding the effect of PSI is not something that always occurs intentionally, nor is it always the primary objective for an influencer to create (Levin, 2019). This is because influencers are unique personas with important status and their followers actively seek them out as they resonate with their lifestyle (de Veirman et al., 2017; Gerrath & Usrey, 2021). Yet, the nature of social media and interconnectedness between influencers and followers helps to drive feelings of PSI, regardless of its purposeful intention (Hoffner & Bond, 2022; Fazli-Salehi et al., 2022). Therefore, although influencers and their followers are separated, they are connected by shared experiences and commonalities, in which

PSI naturally occurs, which has the potential of producing positive influencer marketing results. (Croes & Bartels, 2021; Dibble et al., 2015).

Parasocial interaction as a mediating variable in relationships leading to marketing objectives has been researched. In a recent study conducted by Folkvord et al. (2020) of 154 young adults, parasocial interaction was discovered to be a mediator between well-known influencers on Instagram and product attitude as well as purchase intention. Separately, research in Singapore has identified from 400 participants that parasocial interaction can act as a mediator between interactions on social media and the trustworthiness of the source, leading to heightened purchase intention (Chung & Cho, 2017). Yet, research has not provided many results focused on the media-rich element of visual presence for gaming influencers, specifically on Twitch. But, based on the previous influencer marketing research, this study proposes similar effects.

Therefore, this research formulates the sixth hypothesis:

H6: The relationship between visual presence and purchase intention will be mediated by an indirect effect of parasocial interaction.

In association, other influencer marketing work has been conducted in which PSI has shown to mediate a relationship leading towards brand attitude. Concerning influencers, Zhang and Hung (2020) researched natural celebrity endorsements, defined as real-life endorsements on social media. These are different from staged mass media advertisements. What they discovered from their empirical study of 345 respondents was that natural endorsements produced an overall better brand attitude and that this effect was mediated by PSI (Zhang & Hung, 2020). Adopting the findings from this study can help support claims that gaming influencers on Twitch are in a natural element as opposed to a staged environment. Furthermore, parasocial interaction has also been established to mediate relationships between customers on social media and their overall

brand attitude (S. A. Lee & Lee, 2017). Although this previous research focused on other platforms, the present study assumes similar outcomes can occur between the visual presence of a gaming influencer and brand attitude. Therefore, this research formulates the seventh hypothesis:

H7: The relationship between visual presence and brand attitude will be mediated by an indirect effect of parasocial interaction.

### ***Product congruence as a moderator***

Lastly, the present study focuses on product congruence, as limited influencer marketing research has focused on the concept as a moderation factor specifically on Twitch. Other wider influencer marketing research has used the factor of product congruence as a moderator, such as in the micro-blogging investigation on the Chinese social platform Sina Weibo (Gong & Li, 2018). This research investigated product congruence in celebrity endorsements and found that when celebrities and products were congruent, acceptance of the post was influenced positively (Gong & Li, 2018). Further focused on influencer marketing results, Janssen and colleagues (2021) cited that when influencers on Instagram promoted congruent products, individuals showed a better attitude toward the product and were more likely to purchase it. Further research has supported these findings as well. Research into the social media platforms of Facebook, Twitter, and Instagram indicated that when influencers were promoting congruent products, they appeared to have more expertise, resulting in better marketing outcomes (Martínez-López et al., 2020). When promoting products, influencers are known to have a better overall effect when the product matches their environment (Zamudio, 2016). Lastly, this research formulates the eighth and ninth hypotheses:

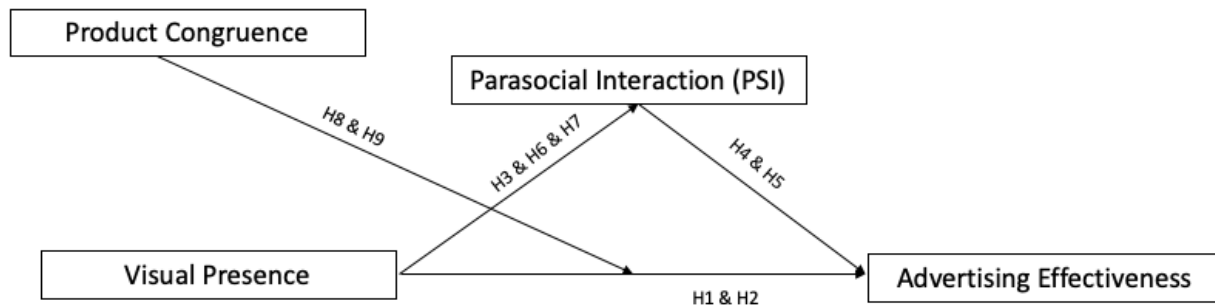
H8: The relationship between visual presence and purchase intention will be moderated by an interaction effect of product congruence.

H9: The relationship between visual presence and brand attitude will be moderated by an interaction effect of product congruence.

This research outlines the hypothesis and relationships through a moderated mediation model which can be seen in Figure 1.

### Figure 1

#### *Hypothesized Moderated Mediation Model*



*Note. Advertising effectiveness represents purchase intention and brand attitude.*

## Materials and Methods

### Experimental Design

The experiment consisted of a 2 (visual presence: absent vs. present) x 2 (product congruence: congruent vs. incongruent) between-subjects design. The dependent variables were purchase intention and brand attitude. Participants were randomly assigned to one of these conditions. In addition, parasocial interaction (PSI) served as a mediator and product congruence served as the moderator in the experiment. To test the abovementioned conceptual model, Hayes Process Macro (model number 5) was utilized.

## Participants

A total number of 148 participants originally contributed to this experiment. Ultimately, 127 participants were included in the final sample. Of the original sample size, 21 participants were excluded as 3 participants did not consent to the experiment, 5 were disqualified for not being in the appropriate age range, and 13 opted out midway or failed to complete the experiment in full.

Of the 127 participants, female participants accounted for 58.3% ( $N = 74$ ), male participants accounted for 37.8% ( $N = 48$ ), non-binary/third gender participants accounted for 2.4% ( $N = 3$ ), and 1.6% ( $N = 2$ ) preferred not to specify their gender. The sampled participants were within the desired age range of 18 to 35 ( $M = 23.80$ ,  $SD = 2.59$ ). Of these participants, 67.7% ( $N = 86$ ) achieved a bachelor's degree, 21.3% ( $N = 27$ ) attained a master's degree, and 11.1% ( $N = 14$ ) noted having another type of degree. The majority of participants, 89% ( $N = 113$ ) were from a European country, while 4.7% ( $N = 6$ ) were from North America, 3.1% ( $N = 4$ ) were from Asia, 2.4% ( $N = 3$ ) were from Africa, and 0.8% ( $N = 1$ ) was from South America. Further information can be found in Appendix A.

## Procedure

The experiment was hosted on Qualtrics.com from May 11, 2022, through May 30, 2022. Firstly, a website link to the experiment on Qualtrics was generated. Following this, the link was sent to all age-appropriate members of the researchers' network. This included friends and other university students. Secondly, the experiment link was posted on surveycircle.com to maximize the number of participants in the experiment. This website is a peer-to-peer website where individuals exchange survey or experiment questionnaires. The intention of utilizing this platform was to gather participants who were freely willing to help.

Once a participant opened the link to the experiment they were presented with a detailed description of the experiment. This description included all ethical information informing the participant that they could stop or opt-out of the experiment at any time and without prejudice. In addition, they were also notified that their information would remain anonymous, personal information would not be collected, and data would be deleted within a six-month time frame. At the end of this description, all participants had to give consent before starting the experiment. The consent form can be found in Appendix B. If a participant did not give consent, they were not allowed to continue with the experiment. Immediately after participants gave consent, they were directed to an age validation question to ensure they fit the age profile of the target audience. If they were younger or older than the required age, they were prompted to a thank you message and were asked to close their browser. If they fit the age profile, the remaining demographic questions were asked.

In starting the actual experiment, the participants read a short biography and cover story of the fictitious influencer, Anthony\_TheGamer. It was important to include the biography of Anthony so that the participant understood whom they were watching. This then gave the participant some general knowledge and insight into who Anthony the gaming influencer was. The cover story and biography for Anthony were the same across all conditions. Subsequently, the participant was then randomly assigned to one of four conditions: Visual Presence - Congruent Product; Visual Presence - Incongruent Product; No Visual Presence - Congruent Product; No Visual Presence - Incongruent Product.

Throughout the experiment, the participant was asked to watch a short video, roughly 4 minutes, of Anthony\_TheGamer playing Mario Kart. They were kindly asked to watch the video in full and with the volume on. On Twitch, gaming influencers can commentate live to their

spectators. Therefore, in these short videos, Anthony\_TheGamer was simulating playing Mario Kart but also was commenting on two separate brands and a specific product of that brand. Both brands were fake. The first congruent brand and product was a company called Dynamic Gaming. Anthony\_TheGamer was promoting their gaming headphones. The second brand, incongruent to gaming was called Spades, an eco-friendly clothing company.

Anthony\_TheGamer was promoting their unique sweaters and clothing. Within each video, there were three mentions of the brand and product and Anthony's opinion on the brand and product. The dialogue was intended to sound natural and free-flowing.

Once the video was completed, the participant then was presented with six questions each to measure purchase intention, brand attitude, parasocial interaction, and product congruence. After the participant finished answering these questions they were presented with a full debrief on the actual intention of the experiment, this can be seen in Appendix C. Lastly, they were thanked for their time and participation.

## **Materials**

### ***Pre-Test***

Before the experiment, a pre-test was conducted to test the stimulus materials. Two different formatted videos were tested for significant differences in social presence, the measuring factor for visual presence. The first video format included the visual presence of the gaming influencer whereas the second video format did not. This pre-test was conducted from April 26, 2022, to May 1, 2022. The same sampling methods and age criteria for participation in the pre-test were used for the actual experiment. All participants in the pre-test ( $N = 21$ ) partook voluntarily with the knowledge that they could stop at any time. Additionally, participants had to

consent to participate before partaking in the pre-test. Lastly, the participant in the pre-test was aware that their data would be deleted within six months after they participated.

To ensure if the video was successful in testing social presence, scales from H. Kim (2021) and Lee and Nass (2005) were replicated and adapted in the pre-test. The within-subjects designed pre-test showed both videos to the participants. The participants watched the videos and then answered five questions measuring social presence on a 5-point Likert scale (1 = *strongly agree* to 5 = *strongly disagree*). The scale had acceptable reliability ( $\alpha = .72$ ) when used to measure the video with no visual presence. The scale also had acceptable reliability ( $\alpha = .79$ ) when used to measure the video with visual presence. An example item is, “*While watching the video, I felt personally involved in what was happening.*”

A paired-samples t-test was performed to compare social presence using visual presence and non-visual presence of Anthony\_TheGamer in both video formats. Results indicated that social presence was statistically significantly different in the first video with visual presence ( $M = 2.25, SD = 0.74$ ) and after with no visual presence ( $M = 2.75, SD = 0.72$ ); [ $t(21) = 2.518, p = .020$ ]. Given these results, the video formats were then replicated for the experiment. The full list and participant results can be found in Appendix D.

## **Experiment**

Initially, a fictitious gaming influencer by the name of Anthony (Anthony\_TheGamer) was created with a backstory and biography. Two primary reasons contributed to the use of a fictitious gaming influencer rather than that of a real one. First, by using a fictitious gaming influencer, a possible existing relationship or attitude towards the gaming influencer was eliminated. Therefore, this research could argue no existing parasocial interaction had already occurred between the participant and the gaming influencer. Secondly, the idea to use a fictitious

gaming influencer stemmed from other marketing and influencer research that incorporated fabricated brands and influencers in their work (Gräve & Greff, 2018; Pick, 2020). There was only a need to create one fictitious gaming influencer since this experiment was measuring the visual presence and not comparing different types of gaming influencers. His fictitious information can be found in Appendix E. Therefore, all participants read the same backstory and biography, but only two conditions visually saw Anthony. The ability to see Anthony playing and speaking in the video is the condition of visual presence in this experiment.

To create the illusion that Anthony was playing Mario Kart, research was done on YouTube to discover Mario Kart gameplay. After some exploration on YouTube, a video was found of gameplay from Mario Kart 8 (InbetweenGamer, 2014). This video became the source of gameplay for the experiment. It is important to note that each video of the four conditions used the same gameplay footage. After obtaining the video, a volunteer was appointed to act as Anthony\_TheGamer. They helped in creating each of the four videos. Two videos consisted of his visual presence and the other two only consisted of his voice.

To replicate the Twitch platform, OBS Studio software was downloaded and used. OBS Studio software is free software that allows an individual to screencast themselves on a digital device. After investigation, it was understood that most Twitch streamers use this or other similar software when streaming. From here, the first two videos were created. This was done by watching the video on YouTube while screen recording using OBS Studio. The first two videos consisted of promotions for Dynamic Gaming and the gaming headphones. One video included Anthony's visual presence while the other only included his voice. This process was repeated for the other pair of videos promoting Spades and the sweater. It is important to note in the videos where Anthony is visually present, that both products were shown, therefore, the participant

visually saw the product as well. Anthony was also handed a gaming controller that can be seen in the video to further drive the illusion he was playing the game. Figures 2 and 3 below showcase the visual difference in stimuli.

## Figure 2

*Stimuli Showcasing Visual Presence of Anthony\_TheGamer*



## Figure 3

*Stimuli Showcasing No Visual Presence of Anthony\_TheGamer*



## **Measurement Instrument**

Each construct was measured using a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Within each itemized list, one attention check question was listed to ensure validity. In total, there were 31 questions that the participant had to answer. Of those, 24 questions were used to measure the constructs in the experiment. All scales can be referenced in Appendix F.

### ***Advertising Effectiveness***

To measure advertising effectiveness, purchase intention and brand attitude were measured as sub-constructs. A 5-point Likert scale was modified from the work of Jamieson and Bass (1989) and Lusk et al. (2006) to measure purchase intention. The purchase intention scale contained five items and had good reliability ( $\alpha = .84$ ). An example question is, “*I would purchase the product mentioned in the video for myself*”. The brand attitude itemized list was altered from the work of Ohanian (1990). The brand attitude scale contained five items and had good reliability ( $\alpha = .84$ ). An example question is, “*I would say that Dynamic Gaming focused on value and quality*”.

### ***Parasocial Interaction***

To gauge the mediator of parasocial interaction, a modified Parasocial Interaction Scale derived from Rubin et al. (1985) was used. The parasocial interaction scale contained five items and had good reliability ( $\alpha = .85$ ). An example question is, “*If Anthony\_TheGamer told me to follow him on another social platform, I would do so*”.

### ***Product Congruence***

The moderator of product congruence was measured using an itemized list modified from the work of M. Lee and Faber (2007). The product congruence scale contained five items and

had acceptable reliability ( $\alpha = .71$ ). Removing an item from the product congruence scale would not have resulted in higher reliability, therefore, all five items were used. An example question is, “*The product mentioned in the video is consistent video gaming*”.

## Results

### Manipulation Check

A manipulation test was inserted into the main experiment to grasp if the participants rated their product/brand as incongruent or congruent based on the video they received. This helped to ensure that the product/brand used were statistically significantly different. Results indicated that there was an association between product/brand congruence and overall congruence rating. Firstly, the participants were divided into two groups, those who saw or heard the congruent product/brand ( $N = 63$ ) and participants who saw or heard an incongruent product/brand ( $N = 64$ ). The observation clarified that 71.4% of participants who saw or heard the congruent product/brand agreed it was congruent with the gaming influencer. Contrary, 64.1% of participants who heard or saw the incongruent product/brand mostly agreed the product was incongruent with the gaming influencer. The detailed results are shown in Table 1. The final Chi-Square test showed there was a significant difference in the product/brand used,  $\chi^2(1) = 16.07, p < .001$ .

**Table 1**

#### *Manipulation Check Results*

Product	Congruence	Participant Rating – No	Participant Rating – Yes
Spades Clothing	Incongruent	41; 64.1%	23; 35.9%
Dynamic Gaming	Congruent	18; 28.6%	45; 71.4%

## Assumptions

Before the final analysis, the data was inspected and tested for the assumption of normality. Because the sample size for this experiment was not large, the Shapiro-Wilk test was prioritized. Regarding purchase intention, brand attitude, and product congruence, the null hypothesis was rejected since these variables showed significance ( $p < .05$ ) as well as skewness and kurtosis. Therefore the data was not normally distributed. Purchase intention ( $df = 127, p = .001$ ) showed moderate skewness and kurtosis ( $z\text{-score}_{\text{skewness}} = -.232, z\text{-score}_{\text{kurtosis}} = -.799$ ). Brand attitude ( $df = 127, p = .012$ ) showed moderate skewness and kurtosis ( $z\text{-score}_{\text{skewness}} = -.453, z\text{-score}_{\text{kurtosis}} = .742$ ). Product congruence ( $df = 127, p = .015$ ) showed moderate skewness and kurtosis interaction ( $z\text{-score}_{\text{skewness}} = -.279, z\text{-score}_{\text{kurtosis}} = -.215$ ). Regarding PSI ( $df = 127, p = .166$ ), the null hypothesis could not be rejected, therefore, the results presumes that PSI is normally distributed ( $z\text{-score}_{\text{skewness}} = -.030, z\text{-score}_{\text{kurtosis}} = -.352$ ). The Q-Q plots and histograms were also assessed.

Secondly, the assumption of homogeneity of variance was tested on the variable data. Regarding purchase intention, brand attitude, and PSI, the assumption of homogeneity of variance was met as these results were not significant. Specifically, Leven's Test showed that purchase intention ( $F(3,123) = .746, p = .527$ ), brand attitude ( $F(3,123) = .453, p = .716$ ), and PSI ( $F(3,123) = .243, p = .866$ ) were non-significant. Product congruence ( $F(3,123) = 7.41, p = .001$ ) was significant, hence violating the assumption. Therefore, it is important to note that the final data analyzed was bootstrapped at the 95% confidence interval automatically in the Hayes Process model. Nonetheless, the final results should be interpreted lightly as the outcomes may not be dependable.

### **Visual presence and the effect on purchase intention and brand attitude**

To interpret all the results, a moderated mediation analysis was utilized by using the Hayes Process Macro (model number 5). This process calculated regression for all paths and conditions in the hypothesized model, including the mediating and moderating variables. The data was automatically bootstrapped in the analyses.

The first hypothesis predicted that the visual presence of a gaming influencer (compared to no visual presence) would positively affect a spectators' purchase intention of a product after hearing a sponsored message. Visual presence did not have a significant effect on purchase intention ( $b = -0.06$ ,  $SE = 0.19$ ,  $t = -0.30$ ,  $p = 0.76$ , 95% BCa CI [-0.43, 0.32]). Those participants who visually saw the gaming influencer ( $N = 63$ ) ranked purchase intention of the product ( $M = 2.69$ ,  $SD = 0.89$ ). Those participants who did not visually see the gaming influencer ( $N = 64$ ) ranked purchase intention of the product ( $M = 2.87$ ,  $SD = 0.93$ ).

The second hypothesis predicted that the visual presence of a gaming influencer (compared to no visual presence) would positively affect a spectator's brand attitude after hearing a sponsored message. Visual presence did not have a significant effect on brand attitude ( $b = -0.14$ ,  $SE = 0.15$ ,  $t = -0.93$ ,  $p = 0.36$ , 95% BCa CI [-0.43, 0.15]). Those participants who visually saw the gaming influencer ( $N = 63$ ) ranked brand attitude ( $M = 3.16$ ,  $SD = 0.57$ ). Those participants who did not visually see the gaming influencer ( $N = 64$ ) ranked brand attitude ( $M = 3.27$ ,  $SD = 0.79$ ).

These results indicate hypotheses 1 and 2 were not supported. There was no clear differential evidence in purchase intention and brand attitude between those participants who visually saw the gaming influencer and those who did not.

### **Visual presence and the effect on parasocial interaction**

The third hypothesis predicted that the visual presence of a gaming influencer (compared to no visual presence) would positively affect parasocial interaction. Visual presence did not have a significant effect on PSI ( $b = -0.06$ ,  $SE = 0.16$ ,  $t = -0.40$ ,  $p = 0.69$ , 95% BCa CI [-0.38, 0.25]). Those participants who visually saw the gaming influencer ( $N = 63$ ) ranked PSI ( $M = 2.73$ ,  $SD = 0.85$ ). Those participants who did not visually see the gaming influencer ( $N = 64$ ) ranked PSI ( $M = 2.80$ ,  $SD = 0.93$ ). These results indicate hypothesis 3 was not supported. There was no clear differential evidence in PSI between those participants who visually saw the gaming influencer and those who did not.

### **Parasocial interaction and the effect on purchase intention and brand attitude**

The fourth hypothesis predicted that parasocial interaction would positively affect a spectators purchase intention. PSI did have a statistical significant effect on purchase intention ( $b = 0.58$ ,  $SE = 0.08$ ,  $t = 7.60$ ,  $p < .001$ , 95% BCa CI [0.43, 0.73]). Those participants who averaged a ranked low PSI ( $N = 22$ ) ranked purchase intention of the product ( $M = 1.87$ ,  $SD = 0.82$ ). Participants who averaged a ranked moderately low PSI ( $N = 45$ ) ranked purchase intention of the product ( $M = 2.72$ ,  $SD = 0.77$ ). Participants who averaged a ranked neutral PSI ( $N = 46$ ) ranked purchase intention of the product ( $M = 3.0$ ,  $SD = 0.78$ ). Participants who averaged a ranked moderately high PSI ( $N = 13$ ) ranked purchase intention of the product ( $M = 3.45$ ,  $SD = 0.79$ ). Participants who averaged a ranked high PSI ( $N = 1$ ) ranked purchase intention of the product ( $M = 4.2$ ,  $SD = 0.00$ ).

The fifth hypothesis predicted that parasocial interaction would positively affect a spectator's brand attitude. PSI did have a statistical significant effect on brand attitude ( $b = 0.43$ ,  $SE = 0.06$ ,  $t = 7.24$ ,  $p < .001$ , 95% BCa CI [0.31, 0.54]). Those participants who averaged a

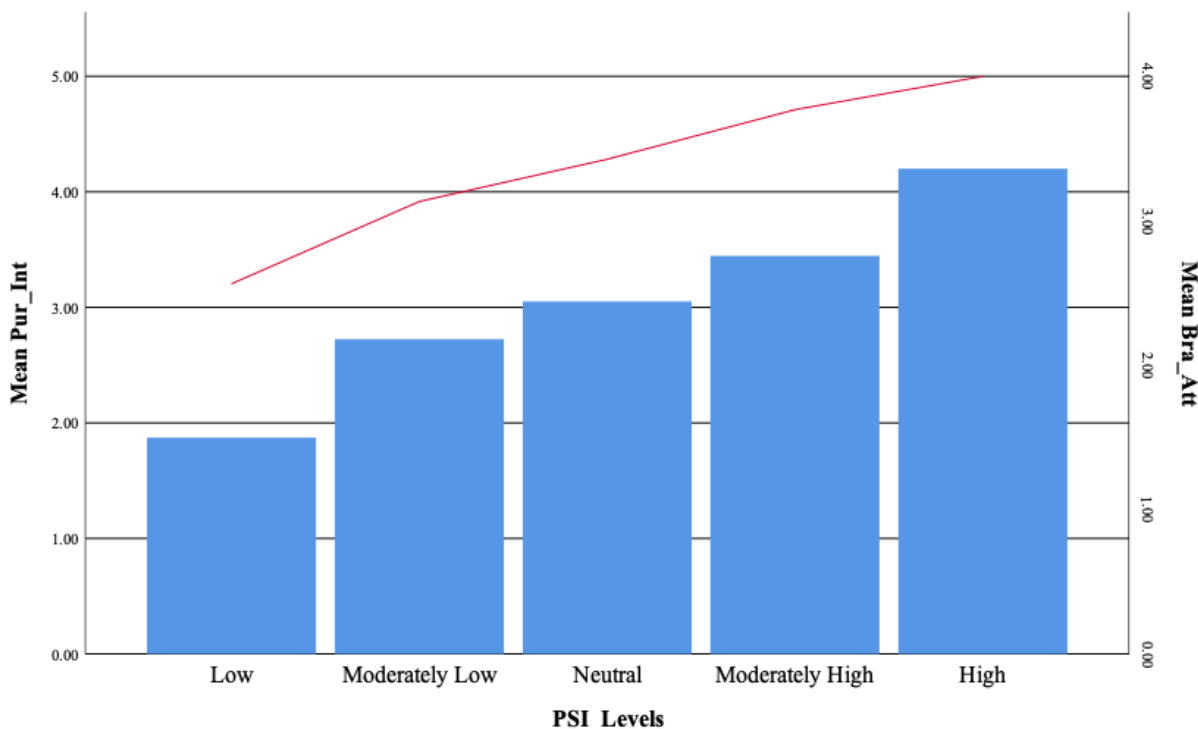
ranked low PSI ( $N = 22$ ) ranked brand attitude ( $M = 2.56$ ,  $SD = 0.78$ ). Participants who averaged a ranked moderately low PSI ( $N = 45$ ) ranked brand attitude ( $M = 3.13$ ,  $SD = 0.59$ ). Participants who averaged a ranked neutral PSI ( $N = 46$ ) ranked brand attitude ( $M = 3.43$ ,  $SD = 0.52$ ).

Participants who averaged a ranked moderately high PSI ( $N = 13$ ) ranked brand attitude ( $M = 3.77$ ,  $SD = 0.58$ ). Participants who averaged a ranked high PSI ( $N = 1$ ) ranked brand attitude ( $M = 4.00$ ,  $SD = 0.00$ ). These results indicate hypotheses 4 and 5 were supported. There was clear evidence that PSI directly influenced the purchase intention of the product and brand attitude.

Further detailed evidence can be seen in Figure 4.

#### Figure 4

*Dual Y-Axes Graph of Results*



*Note. The bar chart represents mean purchase intention while the line graph represents mean brand attitude. Means score of PSI were averaged to derive to these results.*

### **Parasocial interaction and the mediated effect**

The sixth hypothesis predicted that the relationship between visual presence and purchase intention would be mediated by an indirect effect of parasocial interaction. PSI did not have a significant mediation effect on purchase intention ( $R^2 = -0.04$ ,  $SE = 0.09$ , 95% BCa CI [-0.22, 0.14]).

The seventh hypothesis predicted that the relationship between visual presence and brand attitude would be mediated by an indirect effect of parasocial interaction. PSI did not have a significant mediation effect on brand attitude ( $R^2 = -0.03$ ,  $SE = 0.07$ , 95% BCa CI [-0.16, 0.12]).

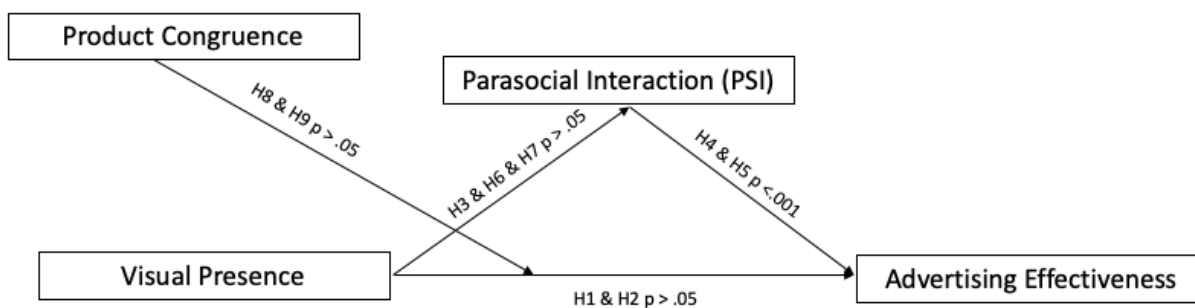
These results indicate hypotheses 6 and 7 were not supported. There was no clear evidence that the relationship between visual presence and purchase intention or brand attitude was mediated by a parasocial interaction.

### **Product congruence and the moderation effect**

The eighth hypothesis predicted that the relationship between visual presence and purchase intention would be moderated by an interaction effect of product congruence. Product congruence did not have a significant interaction effect on purchase intention ( $b = -0.18$ ,  $SE = 0.27$ ,  $t = -0.66$ ,  $p = 0.51$ , 95% BCa CI [-0.71, 0.36]).

The ninth hypothesis predicted that the relationship between visual presence and brand attitude would be moderated by an interaction effect of product congruence. Product congruence did not have a significant interaction effect on brand attitude ( $b = 0.11$ ,  $SE = 0.21$ ,  $t = 0.54$ ,  $p = 0.59$ , 95% BCa CI [-0.30, 0.53]).

These results indicate that hypotheses 8 and 9 were not supported. There was no clear evidence that the relationship between visual presence and purchase intention or brand attitude was moderated by product congruence. The final model is shown in Figure 5.

**Figure 5***Final Moderated Mediation Model*

## Discussion

### Key Findings & Analyses

The primary goal of this research was to determine if the high visual presence of a Twitch gaming influencer, compared to no visual presence, directly affected the advertising effectiveness of their spectators after hearing a sponsored message. Furthermore, an additional goal was to interpret the hypothesized model to understand if the conditions of parasocial interaction and product congruence changed the relationship between visual presence and advertising effectiveness. The results highlight findings that are valuable in further understanding gaming influencers and their marketing potential and ability.

First, the ability to physically view a gaming influencer while they play a video game did not affect the gaming influencers advertising effectiveness. This result is in contrast with the original expectations founded on the media richness theory (Daft & Lengel, 1986) and previous research work on gaming influencers and their psychological effects on their spectators (M. Kim & Kim, 2022). This results also impedes assumptions made based on previous Twitch and marketing influencer research (Hilvert-Bruce et al., 2018; Jiménez-Castillo & Sánchez-Fernández, 2019). One possible explanation for this finding might be that in a live streaming

environment, the visual presence of the gaming influencer may not have mattered to the participants because they were more focused on the gameplay. When watching live streaming videos on Twitch, the video gameplay is prioritized while the gaming influencer is only seen in a small area on the screen. Because of this, the primary attention of the participants may have gravitated toward the action occurring and not toward the gaming influencer talking and showing off the products.

Secondly, whether a gaming influencer was present did not matter regarding the formation of PSI. This finding might also relate to the reason why visual presence did not affect advertising effectiveness. This finding contrasts with previous research on followers of influencers and the stimulation of PSI (Hu et al., 2017; Wulf et al., 2021). Practical reasoning suggests that the behavioral intention of the participant was not breached between the gaming influencer and the participant, contrary to the work of Chen et al. (2020). If a change in the psychological state of the participant was not influenced by the visual presence of the influencer, gratification towards the gaming influencer may have seized to occur in the experiment. The research work of McLaughlin and Wohn (2021) emphasized PSI was dependent on an influencer's characteristics and self-presentation on live streaming platforms, hence, in the experiment, participants may have not been appealed by the fictitious influencer used.

Thirdly, PSI had a direct effect on both advertising effectiveness conditions of purchase intention and brand attitude. Important to note is that while overall PSI levels were low between all groups, PSI still affected the participants' purchase intention and brand attitude. The belief in this study as to why this occurred is that although participants generally rated low PSI, they still were somewhat influenced by the gaming influencer toward the product and brand.

Research on celebrity-endorsed products by Zhang et al. (2021) indicated that the expertise of a celebrity can influence PSI and then brand attitude. The findings of the present study may be a result of participants believing the gaming influencer was an expert in what he was doing. Thus, PSI could have then influenced both purchase intention and brand attitude in the experiment. It is also noted that the trust of an influencer can lead to positive marketing outcomes, specifically, product attitude and purchase intention (D. Y. Kim & Kim, 2021). Perhaps then, a dual experience of expertise and trust in the gaming influencer led PSI to affect advertising effectiveness.

Lastly, whether the product or brand advertised was congruent with the gaming influencer and environment did not matter to the participant's purchase intention or brand attitude. The congruity theory states that humans align themselves with personas or groups that match their identities (Sirgy, 1982). Hu et al. (2017) specifically showed that humans participate on live streaming platforms that are self-congruent with a human's personality, in line with the congruity theory. Furthermore, research work on influencers has shown that more successful marketing ploys have occurred when an influencer is congruent with the brand or product they are advertising (Belanche et al., 2021; Zogaj et al., 2020). Yet, the findings of the present study are contrary to the aforementioned influencer research. A possible explanation for this finding is that the participant did not actively care to reason the association of the product and brand mentioned with the gaming influencer, which resulted in no effect.

### **Implications**

The results from the present study firstly provide practical implications on influencer marketing techniques. Marketers and advertisers looking to collaborate with gaming influencers on Twitch will have to find and adopt best practices to use on the platform to execute influencer

campaigns. Twitch is distinctive as compared to other social media platforms such as Instagram where paid advertising social cues such as brand tags are identifiable (Boerman & Müller, 2021). Because gaming influencers are constantly live streaming themselves playing video games, the primary focus lies on the game and not always what the gaming influencer is saying or doing on the shared screen. This may be especially true also if what the gaming influencer is saying or doing is not relevant to the game. In understanding, marketers and advertisers will also have to shift how to evaluate a successful collaborative campaign with a gaming influencer. This predominately means new metrics to gauge success will have to be selected, as opposed to the ones used on other social media platforms.

Secondly, the present study provides theoretical implications on parasocial interaction in the context of gaming influencers. Overall PSI can influence marketing results as shown in the present study and synced with other research (D. Y. Kim & Kim, 2021). Previous research by McLaughlin and Wohn (2021) has suggested that PSI is dependent on the specific characteristics of an influencer. Although the visual presence of the gaming influencer did not influence PSI in the study, PSI was still a contributing influence on purchase intention and brand attitude. Therefore, theoretical progression on PSI is evident in this study as it provides value in continuing to showcase the relationship between PSI and marketing results. Practically, this may mean that companies should collaborate with gaming influencers on Twitch who are more extroverted and appealing to their audience, although this suggested implication needs further evidence.

Thirdly, the present study provides theoretical and practical implications regarding product congruence from the perspective of influencer marketing. Previous research has indicated that there is value in selecting congruent influencers to advertise a product on

Instagram (Belanche et al., 2021; Xiao et al., 2021). Yet, this study showcased that product congruence on Twitch through a gaming influencer did not affect the purchase intention or brand attitude. Practically, because product congruence showed to have no effect on advertising effectiveness, brands or products not associated with gaming could also enter the Twitch platform and collaborate with a gaming influencer for marketing purposes.

### **Limitations**

This study had a few limitations that deterred potentially more fitting results. The first deals with the precise replication of the Twitch platform and environment. The study made use of a popular open broadcast system that is used for live streaming for recording the stimuli. But, the overall physical environment of the Twitch platform was not replicated precisely. As opposed to posting a video to Twitch, the study implemented a pre-recorded video into the Qualtrics platform, therefore, the Twitch environment was not seen by the participant. Furthermore, the context of the community was not replicated. Frequent Twitch spectators access the platform for a sense of community, yet this was missing from the experiment (Hilvert-Bruce et al., 2018). Overall, this may have deterred the participant from the physical feeling and overall authentic experience of being on the Twitch platform.

The second limitation trails the first in the lack of legitimacy. The gaming influencer that was used in the study was fictitious as opposed to authentic. This decision was originally decided to avoid preconceived thoughts and feelings toward the influencer. But, because the volunteer who acted as the gaming influencer did not have practice in performing this role, authenticity and credibility may have been impeded. This may have been too evident for the participant. In creating the stimuli, several attempts were completed to capture the best video possible, but, the inexperience of the volunteer in performing the role of a gaming influencer may have still

damaged the realness of watching a true gaming influencer. Additionally, because he was a fictitious influencer, being able to visually see and observe him may have even given reverse results than those originally projected. This limitation is mentioned because participants could have also been too distracted by his performance as opposed to focusing on what he was saying and doing.

Limitations of media-rich factors used in the experiment should also be revealed. The visual presence of the gaming influencer may have not had a significant impact because it was not synced with other rich Twitch affordances like direct chat responses, live video, or spectator donation controls. The work of Spilker et al. (2018) showed that spectators enjoyed it when the gaming influencer would speak or chat back to them directly. Furthermore, Tseng et al. (2022) indicated that immediate feedback was one factor that influenced presence and interactivity, eventually affecting gamer loyalty. Previous work also has shown that the more a Twitch gaming influencer pays attention to their spectators, the higher level of PSI exists (Wulf et al., 2021).

However, the present study only made use of visual presence in a pre-recorded video as a media-rich factor. Therefore, a meaningful experience between the fictitious gaming influencer and the participant may have not occurred as projected. Hence, the results of the study could be a result of the limitation of synchronized media-rich factors.

Lastly, sampling size & generation could have skewed the results. The sampling size gathered was appropriate but the results are likely not generalizable to a greater population. In addition, most participants were from the European continent. Results could vary if participants were from other continents such as North America or Asia, where gaming and Twitch are also very popular.

## **Further Research Suggestions**

Further research on Twitch and gaming influencers should be carried out to understand further the impact gaming influencers have on their spectators. Based on this study, the primary suggestion would be to replicate the Twitch platform more accurately in a live environment. This would involve incorporating the rich affordances that Twitch offers such as a chatting system and donation button. These suggestions could entail hosting a live video on the actual platform and having registered participants log in to watch. Afterward, conditions can be tested. In creating a more realistic environment with a live influencer, direct feedback from the influencer to the participant could be enabled, as highlighted in the media richness theory and previous work (Daft et al., 1987; Tseng et al., 2022). Furthermore, hosting the experiment live and with other participants could generate a more community-style feeling, similar to what occurs on Twitch and why spectators continuously visit the platform (Hilvert-Bruce et al., 2018; Spilker et al., 2018).

Lastly, one enigma in the study came from trying to understand if participants were more focused on the gameplay or the gaming influencer on the frame. A potential research suggestion would be to incorporate eye-tracking software into a study that detects the movement of a spectator's eyes on the screen. This research could help clarify where on the screen spectators are watching and the amount of time spent.

## **Conclusion**

The primary goal of this research was to discover if the visual presence of a gaming influencer on Twitch influenced a spectator's purchase intention of a product and brand attitude after hearing a sponsored message. Furthermore, the goal was to uncover if parasocial interaction and product congruence manipulated advertising effectiveness. In conclusion, the visual presence

of a gaming influencer bared no influence on either purchase intention or brand attitude but PSI did. Twitch thus differs from other social media platforms and influencer techniques as it is a new form of entertainment that involves multi-synchronized media-rich factors. Influencer marketing techniques will need to be altered and tested in the field to further understand best practices. The present study contributes to the overall research of Twitch and influencer marketing, positively aiding further conversation for marketers and advertisers who will collaborate with a gaming influencer.

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## Appendix A

**Table 2**

*Participants Mean Advertising Effectiveness and PSI Scores by Gender*

<b>Gender</b>		<b>Purchase Intention</b>	<b>Brand Attitude</b>	<b>PSI</b>
Female (N = 74)	<i>Mean</i>	2.72	3.25	2.81
	<i>Std. Deviation</i>	0.97	0.76	0.92
Male (N = 48)	<i>Mean</i>	2.85	3.13	2.66
	<i>Std. Deviation</i>	0.83	0.60	0.79
Non-Binary/Third Gender (N = 3)	<i>Mean</i>	3.27	3.60	3.13
	<i>Std. Deviation</i>	1.13	0.40	1.72
Prefer not to say (N = 2)	<i>Mean</i>	2.60	3.00	3.10
	<i>Std. Deviation</i>	0.57	0.00	0.42

**Table 3**

*Participants Mean Advertising Effectiveness and PSI Scores by Age*

<b>Age</b>		<b>Purchase Intention</b>	<b>Brand Attitude</b>	<b>PSI</b>
18 – 23 (N = 71)	<i>Mean</i>	2.66	3.26	2.70
	<i>Std. Deviation</i>	0.91	0.67	0.83
24 – 29 (N = 47)	<i>Mean</i>	2.94	3.16	2.93
	<i>Std. Deviation</i>	0.94	0.76	1.00
30 – 35 (N = 9)	<i>Mean</i>	2.96	3.11	2.49
	<i>Std. Deviation</i>	0.68	0.56	0.61

## Appendix B

### Informed Consent

Welcome to the research study!

Dear participant,

Thank you for taking the time to participate in this experiment.

This research is interested in understanding gaming influencers on Twitch, a live streaming platform that focuses on broadcasting video games. You will be presented with videos relevant to gaming influencers (a.k.a live streamers) and asked to answer some questions about them.

While watching these videos, please imagine that you have taken a new interest in video gaming.

Please be assured that strict confidentiality of the data will be upheld and your responses will be kept confidential and terminated after a maximum of six months.

This survey should take you around 5-10 minutes to complete. Your participation in this research is voluntary. You have the right to withdraw at any point during the study, for any reason, and without any prejudice. If you would like to contact the Principal Investigator in the study to discuss this research, please e-mail [d.martinez@tilburguniversity.edu](mailto:d.martinez@tilburguniversity.edu).

By clicking the button below, you acknowledge that your participation in the study is voluntary and are aware that you may choose to terminate your participation in the study at any time and for any reason.

\*This survey contains a completion code for SurveyCircle and SurveySwap.\*

## Appendix C

### Debrief

Thank you for participating in this experiment.

Throughout this experiment, you were asked to rate your attitude toward a fictitious gaming influencer on Twitch and the product/s he was advertising. You were shown 1 of 2 different video formats that either included the visual presence of Anthony\_TheGamer or that did not.

This experiment is seeking to understand three questions in relation to advertising and gaming influencers. Primarily, whether the visual presence of the gaming influencer has an affect on advertising effectiveness (measured by purchase intention and brand attitude). Secondly, is visual presence and advertising effectiveness mediated by a para-social relationship with the gaming influencer. Lastly is whether product congruency moderates the relationship between visual presence and advertising effectiveness.

Ultimately, your responses will help in determining gaming influencers marketing abilities and their psychological outcomes on their spectators. If you would like to know the results of the study, please contact [d.martinez@tilburguniversity.edu](mailto:d.martinez@tilburguniversity.edu).

**For SurveyCircle users ([www.surveycircle.com](http://www.surveycircle.com)):**

The Survey Code is: 24RS-XMLU-9TKD-8MQN

**For SurveySwap users ([www.SurveySwap.io](http://www.SurveySwap.io)):**

The Survey Code is: 1D63-PT9A-8RVB

## Appendix D

**Table 4**

*Results of the Pre-Test*

Participant ID	Not Present	Present
1	3.40	1.80
2	3.60	3.60
3	1.80	1.60
4	2.80	2.80
5	4.00	1.40
6	2.20	2.20
7	2.00	3.00
8	2.00	1.40
9	2.00	2.00
10	2.80	2.00
11	3.80	3.80
12	2.40	1.20
13	2.40	3.00
14	4.20	2.20
15	2.40	2.00
16	3.00	3.20
17	2.20	1.80
18	1.80	3.00
19	3.20	1.80
20	3.00	1.80
21	3.00	2.40
22	2.60	1.60

*Note. Mean score is noted for each participant. Time 1 indicates the gaming influencer is not visually present. Time 2 indicates the gaming influencer is visually present.*

## Appendix E

### Anthony\_TheGamer Biography

Please read the following text carefully.

Following this page, you will see a short video of Anthony, better known as Anthony\_TheGamer on Twitch. Recently, Anthony\_TheGamer has increased in popularity for his live streams on Twitch, becoming a Top 20 streamer globally in only two years.

Anthony\_TheGamer is best known for playing Mario Kart, a classic and entertaining game for all audiences. Aside from streaming himself playing this game, he has done reviews of games and products he likes and does not like.

Throughout his rise to popularity, Anthony\_TheGamer has been characterized as very likable and personable. This is due to his honesty, transparency, and interaction with his spectators while he broadcasts. He has consistently created an open and respectful environment on Twitch for people of all ages to come together to watch, chat, and be entertained.

Please click the button below to continue. We ask that you watch the video in full and then answer the questions after. Please also note you will have to watch with your volume on.

## Appendix F

### Purchase Intention Q

Please answer the following questions:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I would purchase the product mentioned in the video for myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would purchase the product mentioned in the video for a friend or family member.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would consult or talk to somebody prior to purchasing the product.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend the product mentioned in the video to a friend or family member.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would purchase the product mentioned in the video if I happened to see it in the store.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The product, Aces-10, is a product for healthcare.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Brand Attitude Q

Please answer the following questions:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I would rate Dynamic Gaming as a good brand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would say that Dynamic Gaming focuses on value and quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dynamic Gaming is a brand in the gaming industry.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would not say that Dynamic Gaming is cheap and mediocre.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find Dynamic Gaming attractive and interesting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would say that Dynamic Gaming is ethical and noble in their business practices.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Parasocial Q

Please answer the following questions:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I enjoyed the gameplay more because Anthony_TheGamer was speaking towards me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anthony_TheGamer is a likeable and interesting person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like to meet Anthony_TheGamer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If Anthony_TheGamer told me to follow him on another social platform, I would do so.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The favorite game of Anthony_TheGamer is Halo.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I was watching the video, I felt as if I was part of Anthony's social group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Congruency Q

Please answer the following questions:

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I associate the product mentioned by Anthony_TheGamer with the gaming industry.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The product mentioned in the video sounded natural to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did not question why Anthony_TheGamer was promoting the product.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The product mentioned by Anthony_TheGamer is typically found at a grocery store.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The product mentioned in the video is consistent video gaming.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The product mentioned in the video is well matched with Anthony_TheGamer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>