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Understanding the Persuasive Attributes of Twitch Advertisements: A Study on the Effects of  
Current Advertisements and Sponsorships

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A thesis  
presented to  
the faculty of the Department of Media and Communication  
East Tennessee State University

In partial fulfillment  
of the requirements for the degree  
Master of Arts in Brand and Media Strategy

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by  
Colleen Catherine Sharkey  
May 2023

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*Keywords:* Twitch, livestreaming, gaming, video gaming, marketing, advertising

## ABSTRACT

Understanding the Persuasive Attributes of Twitch Advertisements: A Study on the Effects of  
Current Advertisements and Sponsorships

by

Colleen Catherine Sharkey

This study investigates the effectiveness of Twitch's current advertising options on the platform's unique community-driven audience. The study focuses on content usefulness, brand credibility, purchase intent, and streamer credibility. Despite Twitch's popularity as an entertainment platform, little research has been conducted on the impact of its advertising options on brand perception. The study aims to address this gap in literature by employing a mixed-methods approach, utilizing both quantitative and qualitative data collection methods. A pre-survey was administered to gather data on demographics, video game usage, and experience with Twitch.tv. Participants viewed a 5-minute video containing different types of Twitch ads and completed a post-survey to measure their perception of purchase intent and brand credibility. Overall, the study aims to provide insights for those seeking to leverage Twitch's growth as an advertising platform.

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## Chapter 1. Introduction

Video games have become increasingly popular, especially since the 2019 pandemic. According to the Entertainment Software Association (2021), 226 million Americans play video games and 89% believe gaming can bring people together. Of that 227 million 67% are adults aged 18-years-old and older, with 38% of them being aged 18-34 years old (Entertainment Software Association, 2021). The use of video games can help foster a sense of community by providing a platform for players to connect over common interests. Twitch is a livestreaming platform that allows gamers to connect, engage, and stimulate conversation on a wide range of gaming and cultural topics.

As entertainment continues to shift towards a more digital landscape, the advertising industry is adapting to keep up with the change. One platform that has emerged as a major player in the advertising industry is Twitch. With over 140 million monthly active users and an average of 30 million daily visitors, Twitch has become one of the largest online communities for gamers, content creators, and esports fans (Twitch Sales, 2022). Over the last decade, Twitch has become one of the most popular streaming platforms, holding 73% of the market share (Twitch Demographic & Growth Statistics, 2022). However, advertising on Twitch is a complex and rapidly evolving field. While traditional advertising strategies may work on other digital platforms, they may not translate equally to Twitch. The livestreaming platform provides a unique opportunity for advertisers to reach a highly engaged and loyal audience, making it an emerging market for brands. According to a study conducted by Twitch, 84% of its users believe showing support for streamers via advertising exposure is an important part of the Twitch experience and 76% appreciate brands that sponsor their favorite creators (*Ad Products | Twitch*

*Advertising*, 2023). However, the effectiveness of the current landscape for advertising on Twitch remains largely unexplored.

Twitch is a unique platform that offers a different type of engagement compared to other traditional forms of media and it allows its users to interact with content creators and other users (Barnhart, 2020). This creates a sense of community and engagement, strengthening the user's relationship with their favorite streamer. Furthermore, streamers on the platform are emerging as influencers, meeting a niche market demand. These streamers promote products and services to their loyal and engaged fanbase in real time. Influencer marketing has become a popular form of advertising on the platform, but it is unclear how effective it is compared to other forms of advertising (Barnhart, 2020).

This thesis aims to investigate the effectiveness of advertising on Twitch and explore whether the current content influences user's perception of brand credibility, streamer credibility, and usefulness of adverts. The study will begin by reviewing the literature on Twitch, online advertising, and consumer behavior. This research will also explore the different formats of advertising on Twitch, such as pre-roll, mid-roll, and user-generated sponsored advertisements to assess their effectiveness in reaching and engaging with audiences. The goal of this paper is to explore the existing literature of advertising on Twitch and contribute to the understanding of the effectiveness of advertising on the platform. Ultimately, this thesis aims to provide a comprehensive understanding of the current landscape of advertising on the livestreaming platform.

## Chapter 2. Literature Review

Twitch is an online streaming platform that caters to the live streaming of video game content and more. It was founded in 2011 and is currently owned by Amazon (Sheng & Kairam, 2020). The site is a widely known platform for gamers, streamers, and esports enthusiasts to watch and stream their favorite games, music, and creative endeavors (Sheng & Kairam, 2020). Twitch allows streamers to showcase their skills and interact with their viewers through a variety of features such as chat, donations, subscriptions, and more. Twitch is a place for gamers to come together and watch their favorite streamers, and for streamers to share their gaming experiences with their viewers. It is a great way for gamers to learn new tips and tricks, or to experience cooking, music, and art. Streamers can also use their Twitch channel to make money by way of earning revenue from advertising, subscriptions, and donations (Sheng & Kairam, 2020).

The combination of livestreaming, youthful viewership, and an advertiser-friendly attitude towards content creators provide a novel way for brands to create content. Streaming platforms have also emerged to reach significant levels of engagement with video game titles, celebrities, political figures, and popular mainstream brands. This is an important market to understand as people ages 18-25 have significant levels of spending power. This age group is often referred to as “Gen Z”. Gen Z is the demographic cohort following Millennials, born between the mid-1990s and the mid-2000s. They are the first generation to be raised in the age of the Internet and social media, and they are digital natives. This cohort is more diverse, independent, and socially conscious than previous generations (Parker & Igielnik, 2020). On average, Gen Z has nearly \$360 billion in disposable income (Pollard, 2021, para. 1). This target market spends their time in social places and place trust in brands based off influencer referral

and social discovery. The best way to engage this market is to create organic authentic campaigns with influencers that align with a brand's message.

Creators of content on Twitch are known as “streamers.” These streamers can create videos in a variety of genres on the livestreaming platform, and anyone with a computer, phone, and camera can go live on Twitch. Streamers on Twitch can generate income by reaching affiliate status and later partner status, provided they are able to grow a sizeable community. The affiliate program is the first step in earning revenue. A creator must reach 50 followers, eight hours streamed, stream on seven different days, and average at least three viewers (Twitch Affiliate Program FAQ, 2022). After this they may begin receiving a percentage of revenue generated from pre-roll ads and mid-roll ads, referred to as Twitch premium video. Reaching partner status is more intensive, requiring streaming for 25 hours, 12 separate days of streaming, and an average of 75 viewers (Twitch Partner Program FAQ, 2022). Affiliate and partner streamers are the only creators on the platform who are eligible to receive revenue split from subscriptions and advertisements. Pre-roll ads are 30 seconds and run before a viewer can engage with an affiliate or partner stream, and mid-roll ads can be 30-60 seconds and run like an ad break during the streams, similar to traditional television commercials (Hayes, 2022, para. 22).

### **Ad Options**

Twitch has recently rolled out an Ads Incentive Program to encourage partnered streamers to earn “reliable, fixed, monthly ads revenue” (Twitch Ads Incentive Program, 2022). The new program builds off Twitch's Ads Manager feature, which allows creators to control how often ads play, how many ads play in a row, and the timing of mid-roll ad breaks. Creators have control over whether a single 30-second pre-roll ad plays or if viewers are hit with up to 10 minutes' worth of ads. A pre-roll ad is a digital advertisement that plays at the beginning of a

video whereas a mid-roll is a digital advertisement that plays in the middle of a video (Carlitz, 2020, pg. 12). Both types of advertisements are typically short, between 30 and 60 seconds in length. These advertising formats are designed to monetize longer-form content, such as Twitch livestreams (Vijayanagar, 2021).

The Ads Incentive Program is to encourage creators to embrace advertisements on their platform and take advantage of monetizing their personal brand. These offers are personalized and calculated based off audience size, geography, hours broadcast, time of year, and number of ad-free viewers (Twitch Ads Incentive Program, 2022). Ad-free viewers are either subscribed to the channel in question, meaning they paid a flat rate subscription fee, which is split between the creator and Twitch, or are subscribed to Twitch Turbo. Turbo is another subscription program that allows ad-free viewing across the platform (Twitch Turbo Guide, 2022). Twitch Turbo eliminates the chance of coming across any ad on the platform except for “First Impression Takeovers.” A First Impression Takeover is when a brand controls the front page of Twitch for a limited period of time. This content sits prominently on the website, becoming the first thing viewers will see as they enter Twitch (First Impression Takeover, n.d.). This gives the brand an opportunity to gain additional exposure and reach a much larger audience. The brands content will appear at the top of the Twitch homepage and be featured prominently on the other Twitch pages. The brand may also be given additional promotional tools such as digital assets or special Twitch emotes.

Another option for advertising on the platform comes in the form of sponsorships. Sponsorships are a direct partnership between Twitch streamers and a third-party company. These third parties have an opportunity to engage directly and more organically with streamers and their established communities (Twitch Creator Camp Sponsorships, 2022). The opportunities

include working with developers to debut new games, promoting clothing brands, and interactive events with big brands, such as Dorito's Twitch Rival events. According to Tuten & Solomon (2015), consumer-generated positive, organic, and brand-centric content like livestream content, can positively influence brand equity and consumer attitudes towards the brand. Sponsored streams work as a form of crowdsourcing; the streamer introduces the branded content to their community and the community in return gets to engage with the brand activation. This also gives companies access to a concentrated target audience, allowing brands to seek out communities that are directly related to their target market. There is a high interaction between viewers and the streams, conversations shared between viewers, and raw dialog from the streamer themselves. This can help maximize potential reach for any brand.

The audience on Twitch is diverse, incredibly engaged, and growing at a tremendous rate. An aspect that makes Twitch such a unique platform for advertising is that the entire social construction of the site is based around user-generated content (UGC). UGC is "original, brand-specific content created by customers and published on social media or other channels" (Tuten & Solomon, 2015, p). A study conducted by Zhu and Zhang (2010), examined the effect of UGC in video game reviews, and discovered that positive and negative reviews for game titles had an influence on sales. Content marketing can yield positive influence on the attitude and behavior of consumers towards a brand where brand produced content lacks.

Ad animation is an important aspect of positive advertisement within the video gaming industry. Understanding how animation can influence individuals' behavior is an important step for creating engaging marketing campaigns. A study conducted by Cheung et al. (2017), showed participants exposed to online banner ads with moving advertising cues paid significantly more attention to the ads compared to participants who were exposed to static banners. Participants

were more engaged where animation was used, with evidence of increased engagement when individuals were casually browsing content. The study also suggests that even if a viewer does not remember seeing an ad for a product, being exposed to an ad that features animation can affect their evaluation and recall of the product (Cheung et al., 2017, p. 624).

Recent studies expand on the concern of effectiveness of gaming related advertising. One concern is interactivity, which is measured by how much a player is able to change and manipulate in-game content (De Pelsmacker et al., 2019, para. 9). Playing a video game is immersive, individuals are able control and alter events in a game. This emotional stimulus encourages people to see the characters as oneself which creates an attachment. Singer and Witmer (1999) describe immersion as “the psychological state characterized by perceiving oneself to be enveloped by, included in, and interacting with an environment that contains a continuous stream of stimuli and experiences” (p. 566). As a result, games that incorporate interactivity have higher levels of positive outcomes. Interactivity offers the ability for individuals to feel like an active participant in advertising. Consumers enjoy the game, and advertisements do not interrupt the immersion of gameplay.

A concern with Twitch’s traditional style of adverts, pre- and mid-roll advertisements, is that they are intrusive. They interrupt the viewing experience and remove chatters on Twitch from the conversation. If something important is happening live on stream and ads roll out, viewers are frustrated and miss the in-real-time activity. There is no way to re-wind and “catch-up” on a livestream. This intrusiveness can lead to a negative feeling regarding the advertisements and the brand associated with it (De Pelsmacker et al., 2019, para. 10).

Brand authenticity can be defined as “the extent to which consumers perceive a brand to be faithful and true toward itself and consumers, and to support consumers being true to

themselves” (Morhart et al., 2015, p. 202). Brand authenticity is the concept of being true to a brand’s core values, mission, and purpose. It is important for businesses to be authentic to build trust with their customers and create a strong, positive brand image. In today’s marketing space consumers want to engage and purchase services and goods from brands they identify as reliable and trustworthy. According to Miller (2021), 86% of consumers prefer an authentic brand image and honest personality and 77% of consumers purchase items because of the brand name.

This concept of authenticity is based on the idea that customers are more likely to purchase from and support a brand that they perceive to be genuine and honest. These identifiers are how consumers decide which brands to trust and are willing to spend time and money on companies that share similar values. Price and quality are not enough to differentiate a brand in the market – they are features that are expected by consumers. Brand authenticity is derived from real, verifiable facts regarding a brand, such as origin, reviews, age, or performance (Rifon et al., 2004). These concepts can be measured by potential consumers and are incredibly important when considering brand authenticity (Morhart, 2015, pg. 201). To stand out, brands can focus on purpose-related factors, creating more personal and tailored connections through authenticity.

A brand’s ability to repeatedly deliver on their promises and commitment to values is how to establish credibility. Similarly, “consumers associate authentic brands with a high level of credibility” (Morhart et al., 2015, p. 202). Credibility helps to influence consumer opinion and behavior regarding a brand. If consumers perceive a lack of credibility in a brand it will negatively affect the perception of the brand and the likelihood of engagement. Credibility can be established through continuity, the ability to deliver the same level of professionalism or product repeatedly. Similarly, aligning with brand representatives that consumers trust can help establish credibility.



Representatives of a brand, or individuals that have source credibility must have some level of “expertise” in order to help influence purchase intention. This can be referred to as a communicator’s positive characteristics that affect the consumers acceptance of the message (Ohanian 1990, p. 41). In order to extend trust, these experts must express trustworthiness and integrity with the target audience. Expertise is referred to as “authoritativeness, competence, expertness or qualification” (Ohanian 1990). Furthermore, a consumer’s perception of an influencer’s expertise or trustworthiness of a brand can affect the consumer’s evaluation of a brand in a positive or negative manner. According to Anridho and Liao (2013), a brand with a source of high expertise, trustworthiness, and attractiveness, leads to consumers evaluating their product or service positively. This is because the high credibility awarded by a likeable and trusted source creates perceived high quality, greater value, leading to a more positive attitude from consumers (Chin et al., 2020, pg. 901).

Brand recall helps to measure the effectiveness of purchase intention. Recall is the term used “when one prompts with a brand name while looking for feedback on the memory of the advertisement” (Plessis, 2005, p. 164). Brand recall is directly applicable to the likelihood of consumers making the decision to purchase a product or service and assists when consumers are faced with multiple options. Positive brand recall ensures repeat purchasing behavior and consumer loyalty to a particular brand. According to Nedungadi et al. (2001), brand recall is directly related to a consumer’s exposure and experience with a brand. There is intense competition in the market space for a brand to stand out.

Brand recall is an important factor in marketing and advertising, it is a measurement of how well a consumer can remember a brand name. It is a key indicator for how successful a brand’s marketing efforts are and is an essential tool for measuring the effectiveness of a brand’s

advertising campaigns (Baumann et al., 2015, pg. 21). It also has a direct impact on purchase intent. Consumers who remember a brand are more likely to purchase its products or services than those who do not, or who better remember a competitor with similar products. This is because they are familiar with the brand and are more likely to trust it (Baumann et al., 2015, pg. 28). As such, brands should strive to create an emotional connection with their customers to increase brand recall and ultimately strengthen the relationship they develop with consumers (Bashisht & Royne, 2016, pg 167). As a result, this increases brands return on investment. Successful campaigns that create brand recall increase consumer loyalty. This is because consumers who remember a brand are more likely to purchase its products and services (Al-Ekam, 2016, pg. 88).

Furthermore, brand recall is an important success factor as it represents the ability of a customer to remember a company's name, logo, or other marketing materials (Al-Ekam, 2016, pg. 91). When a customer remembers a brand, they are more likely to purchase from that company. This is because the consumer has already established a positive relationship with the brand, is able to identify it, meaning they are more likely to trust it (Al-Ekam, 2016, pg. 91). This affects purchase intent, as well as the perceptions consumers hold of a brand, and can help companies make better decisions about how to market their brand and reach their target audience.

To study the effectiveness of advertising on Twitch it is important to understand the motivation of the audience that consume livestream media. Twitch streams incorporate different methods of interactivity with their audience, from mono-directional performances (one way broadcasting) to collaboration within their chat and other livestreaming content creators (Diwanji et al., 2020, para 4.). Twitch creates a space where individual gamers interact with each other but

also allows entire fan bases to interact together as a community (Sheng & Kairam, 2020).

Furthermore, Hilvert-Bruce et al. (2018) observed that social motivations are more influential for people who engage with livestreams than those who consume traditional mass media. The team determined that “communication with others” was a major factor for livestreaming sites, implying that this motivation is applicable to more than just Twitch (Hilvert-Bruce et al., 2018). People gather in these online communities to cohesively watch, discuss, and consume similar media.

In a 2006 survey of Everquest players, Yee (2006), found that 47% of online users felt that their in-game friendships were “comparable to” their real-life friendships. This platform creates a sense of digital copresence among users and is emerging as a social networking site that is an important source of information and entertainment for the communities that actively utilize it (Sheng, 2020, pg. 99). A study by Hamilton et al. (2014), examined Twitch livestreams as a “virtual third place” which serves as a meeting ground for player communities (para. 2). Viewers have a unique opportunity to socialize and participate with others who share a similar identity and interest in the content.

These streams provide a shared experience and allow other viewers to feel connected with one another. The study suggests that people engage with livestream content for two reasons: people are attracted to the unique content of a particular stream and people enjoy the social interaction of participating in the stream’s community. Hamilton et al. (2014), defined Twitch streams as “participatory communities” (para. 6). Participatory communities are categorized by the openness and encouragement of members to engage with being active during and after a livestream broadcast. Furthermore, the primary activity communities engage in is “sociability” defined by George Simmel as “a playful experience of social association characterized by the

“sheer pleasure of being together” (para. 6). The interest of viewers goes beyond watching entertainment and affects Maslow’s hierarchy of needs, love and belonging. Community members’ needs are met in this virtual social group contributing to belonging and forging a union around similar interest. The engagement is relatively simple: the streamer talks, shares gameplay, and viewers send messages to the streamer to read and respond and to each other in the chat.

Furthermore, Twitch has evolved to encompass content that goes beyond gaming. Video games are an important aspect of Twitch, and usually the gateway to how individuals become involved with the livestreaming platform. As people learn and interact with the platform, they may branch out to consume non-game related livestream content. As a result, this study will also include categories of Twitch usage based on hours per-day similar to the Holm (2019) study of gamer categories. Non-viewers are individuals who consume Twitch content less than an hour a day, light-viewers consume Twitch content for at least an hour a day, regular-viewers consume at least 4 hours a day of Twitch content, and heavy-viewers consume more than 4 hours a day of Twitch content.

### ***Theories***

To explore the advertising landscape of Twitch, a good starting point is to consider the two-step flow of communication and its application to user-generated content. The two-step flow of communication theory, developed by Lazarsfeld and Katz, purports that opinion leaders gather information from “outside influence” such as mass media, television, or social media. These individuals then form their own opinions and share them, playing a significant role in shaping the opinions of their wider audience (Troidahl, 1967, p. 612). This model emphasizes the importance of communication as a networked process rather than a one-way transaction of information.

Troldahl (1967) helps apply the two-step flow of communication theory as it applies to opinion leaders such as Twitch streamers. It could be argued that streamers on the platform might play a larger role in decision making than originally understood. Streamers not only help share information but can also act as a kind of “fact checker” for their audience when it comes to sponsored advertising (Troldahl, 1967, p. 614).

With the rise of skepticism towards mainstream media and an abundance of options available to consumers, the reliance on recommendations and reviews from peers has increased significantly (Turcotte et al., 2015, p. 4). Online communities that utilize UGC and parasocial relationships with opinion leaders have a strong influence on consumer purchasing decisions. There is an abundance of options for consumers to purchase products and services, leading audiences to drift away from mainstream advertising. Twitch operates in a similar fashion, with engaged communities acting as a conduit for opinions, advice, entertainment, and news. Streamers as opinion leaders, as demonstrated by the two-step flow model, play a crucial role not only in disseminating information but also in fact-checking and discovering new information. As a result, online communities such as Twitch, have more trust in online UGC advertisements than that of traditional ads (Troldahl, 1967).

Cultivation theory, which has traditionally been applied to television, can also be applied to explain the effect of advertising on Twitch. The communication framework suggests that individuals who are repeatedly exposed to media for a prolonged period are more likely to see their social reality as it is presented by the media consumed (Gerbner, 1998, p. 177). The longer viewers spend on Twitch, the more likely they are to view their social reality in a familiar fashion. Coupled with the high engagement of community connection, the attitudes and behavior of individuals are influenced by their extended consumption of Twitch.

Consumers depend on a range of sources such as online communities, peer recommendations, and trusted influencers to guide their purchasing decisions and explore new brands (Troidahl, 1967). These influential individuals wield significant power in shaping the attitudes of their followers towards brands (Booth & Matic, 2011, para. 13). Brands now realize the value of influencer marketing and the need to adapt to the evolving marketing landscape, yet effectively targeting the right audience through this approach requires further discussion. As traditional media channels are no longer as effective in conveying brand messages to consumers (Booth & Matic, 2011, para. 6), it is essential to study how engaged an influencers audience is to an endorsed UGC. By identifying the most effective advertising formats for communicating brand messages to specific audiences, research can provide both qualitative and quantitative evidence supporting the efficacy of influencer marketing on Twitch (Booth & Matic, 2011).

Rohde and Mau (2021) point out that social media influencers can create “long-form videos to market and sell their own branded products”, and experts in video game streaming play a significant role in video game advertising (Rohde & Mau, 2021, para. 3). Platforms like Twitch provide a broader, more attentive audience, than traditional television advertising. Previous research has explored the persuasive strategies of social media influencers, but this study aims to apply these theories to the advertising options on Twitch to understand the user perception of UGC sponsored content, and the usefulness of advertising on the platform as a source of information.

**Research Questions.** The main objective of this study is to investigate the efficacy of advertising options currently available on Twitch. Specifically, this research identifies pre-roll, mid-roll, and user-generated sponsored advertising as variables and uses them as conditions to assess the usefulness of advertising, brand credibility, the impact on streamer credibility, and the

ability to persuade purchase intent. Despite the current research on gaming, and digital advertising, few studies have explored the unique context of advertising specifically on Twitch, which may have a distinct effect on factors that influence the effectiveness of advertisements on the platform. As a result, this study seeks to answer the following research questions:

*RQ1: What effect does advertisement style have on audiences' perception of advertisement usefulness?*

This research seeks to answer this question as current literature indicates that there are a several gaming-related ad concerns that may yield a positive or negative effect on users' interpretation of content. A concern with mid-roll and pre-roll adverts is that "when an ad is perceived as intrusive, this can result in negative attitudinal responses because it interrupts the gameplay and potential flow experience" (De Pelsmacker et al., 2019, p. 58). If that is the case, then individuals who are exposed to such ads may yield a lower perception of usefulness. This could have negative implications for marketers and advertisers that are looking to leverage Twitch's young and highly engaged demographic.

*RQ2: What effect does advertisement style have on audiences' perceptions of brand credibility?*

Similarly, users that are exposed to intrusive ads like mid- and pre-roll may correlate the negative experience directly to the brand identity. According to Nedungadi et al. (2001), brand recall can directly correlate to exposure and experience with a brand. If participants indicate a negative experience with advertising formats surrounding that brand, it may have a lasting effect on whether or not that individual trusts the brand or is willing to purchase from said brand.

*RQ3: What effect does advertisement style have on audiences' intent to purchase advertised products?*

According to Plessis (2005), brand recall is directly applicable to the likelihood of consumers making the decision to purchase a product. Individuals that are familiar with a particular brand are more likely to trust it (Baumann et al., 2015, pg. 28). Based on the current literature it could be argued that the current advertising hinders perception of trust. If individuals report negative correlations to advertising options, it could be argued that ad spend on Twitch is not appropriately reaching the desired audience. As such, brands should strive to create an emotional connection with their consumers.

*RQ4: What effect does advertisement style have on audiences' perception of streamer credibility?*

One of the best ways for brands to create an emotional connection with consumers is to align their advertising campaign with influencers that their target audience favors. Platforms like Twitch provide a broader, more attentive audience than traditional digital advertising. Previous research has explored the strength of social media influencers as brand ambassadors, but what effect do partnered sponsorships have on a streamer's credibility? Twitch streams can provide a shared experience and allow users to feel connected to a community. (Hamilton et al., 2014 para. 6). The research in this study aims to understand to what extent does user-generated content negatively or positively affects streamer credibility in the form of user-generated content advertising.



### **Chapter 3. Hypotheses & Demographics**

In this study, three different demographics will be analyzed: gamer identity (heavier gamers vs. lighter gamers), gender identity (male vs. female), and age. The literature to follow discusses and analyzes how previous studies have identified differences between the three demographic groups in relation to digital advertising, video games, and related fields.

#### **Gamer Identities**

To understand advertising on Twitch it is also important to define the different identities of gamers. A study conducted by Holm (2019), defines different types of gamers. In the past, classification of video game enthusiasts relied on game type and genre preference or preferred gaming platform as well as self-identification. These categories do not help understand the internal motivations of players and offer little insight into what encourages individuals to play or explain why they play (para. 3). The study categorized players on playing hours and dedication to the space. It creates a “new taxonomy based on both liked and disliked games” and “validate player types through experimental methods” (Holm, 2019, para 7). Focus on time gaming rather than self-labeling is the best way to understand the categories of gamers. Juul (2010) examines how some individuals who self-identify as casual gamers, indulge in long stents of game play that could be categorized has a hardcore habit.

A survey was administered to 2,257 individuals and respondents were divided into four groups based on playing hours to help identify non-players from heavy gamers. Non-gamers consist of individuals who play video games less than one hour a day, light players play video games for at least an hour a day, regular gamers play up to 4 hours a day, and heavy gamers play more than 4 hours a day (Holm, para. 7). In this study, heavy gamers reported “psychological benefits from gaming” and results indicate that for heavy gamers, video games are a rewarding

activity that help “regulate feelings that are relevant to psychological well-being” (Holm, para. 8). While individuals may self-identify in their own category and report different feelings of well-being from the use of video games, the definitions supplied through the survey administered by Holm help to understand a measurable category of identities. This study focuses on heavy gamers and lighter gamers.

Heavier gamers may be less likely to find advertisements useful than lighter gamers because of the intrusive and disruptive nature of the advert format. As individuals play more hours and interact with Twitch more frequently, the higher the likelihood of advertisement exposure. According to De Pelsmacker et al. (2019), the intrusive nature of some digital advertisements can lead to a negative feeling regarding the brand that is presenting the content. Furthermore, an individual’s attitude toward advertising is a key factor for how they respond to any particular advertisement (Mehta, 2000). As a result of this analysis this study hypothesizes the following:

*H1*: Heavy gamers will be less likely than lighter gamers to find the advertisement that they are exposed to useful.

*H2*: Heavy gamers will be less likely than lighter gamers to find the brand they are exposed to credible.

Heavier gamers are likely to have more experience with gaming and are more knowledgeable about the industry, making them more discerning about the quality of brand exposure through streamers (Mehta, 2000). They may have already formed their own opinions about different games, products, and advertising tactics, which could influence their perception of the streamer and the product being advertised (Schiesel, 2007). Since heavy gamers may frequently utilize Twitch, they could be exposed to ads more often. As a result, these individuals

may suffer from advertising exposure fatigue and are more aware of the commercial nature of the content they are viewing. Frequent gamers are more discerning and critical about the quality of content they consume around gaming (Schiesel, 2007). As a result of this analysis this study hypothesizes the following:

*H3:* Heavy gamers will be more likely than lighter gamers to find the streamer they are exposed to credible.

*H4:* Heavy gamers will be less likely than lighter gamers to purchase the product they are exposed to in the advertisement.

This study first measures the frequency of weekly video game usage of all participants. A heavy gamer as it applies to this research is an individual who regularly spends a significant amount of time playing video games, specifically numerous days of the week. To establish categories for use of video games it is important to understand that gamer identities “exist on a continuum, and each gamer does not neatly fit into a category” (Foster, 2016, p. 18). Some individuals self-identify as heavy gamers because they play once a week for multiple hours, while others may self-identify as a heavy gamer because they play games seven days a week at only an hour at a time. As a result, frequency of daily gameplay rather than hourly play was used to categories heavy gamers versus light gamers. While there is no strict definition of a heavy gamer, it is often used to describe someone who is highly invested in gaming and is willing to dedicate a significant amount of time and effort to playing and mastering different games. The measurement utilized in this research ensures that gamers are categorized based on “dedication to the space” (Holm, 2019, para 7).

## Gender Identity

Literature regarding gender identity for gaming research has largely been focused on the male population. However, recent statistics indicate that of American video game players, nearly 50% are female (Entertainment Software Association, 2021). Despite that, media surrounding video games tend to be designed “by men for men, and female needs and requirements” are not taken into consideration or accurately represented in research (Kuss et al., 2022, p. 2). In 2017, Twitch’s published demographics indicated that their user base was 83% male, but since 2022 that number has changed. Twitch is now reporting about a 78% male and 20% female user base (*Twitch Demographic & Growth Statistics 2021*, 2023). Incorporating both men and women in this study is critical for obtaining a comprehensive understanding of the Twitch user base. By analyzing data from both genders, the goal is to identify patterns and trends that may affect user perception of advertising that may not be apparent if only a single gender is considered.

For example, YouTube share similar characteristics of Twitch. The audience on YouTube “continues to grow rapidly across all demographic groups, with a majority (89%) of young internet users (aged 18–29)” (Roth-Cohen et al., 2022, p. 188). The unique user characteristics of platforms like Twitch and YouTube can be observed in the advertising content that is created for its users. Given that the audience of YouTube is younger than that of traditional media, “ads appearing on YouTube are more likely to reflect more progressive gender roles” such as women being more self-reliant and men taking on the role of caregiver (Roth-Cohen et al., 2022, p. 188, para. 5). The study focused on gender roles in advertising on YouTube by comparing them with traditional advertising. The analysis focused on “variables from three primary components: occupational status, physical characteristics, and role behaviors” (Roth-Cohen et al., 2022, p. 196).

The findings demonstrated that there are gender role differences across different media types. In traditional advertising, gender stereotyping is most prevalent regarding occupational status while online advertising stereotypes focus more on physical characteristics including things like age and body shape. Roth-Cohen et al., indicate that “recognizing stereotypes in online ads is a key factor” design of ad campaigns and suggests that “future research identify the degree of stereotyping that maximizes advertising effectiveness” while being sympathetic of social consequences (Roth-Cohen et al., 2022 p. 197). As a result, gender may have a positive or negative effect on user perception of online digital advertising. It is worth exploring the possibility of different perception both men and women might have on advertising on Twitch.

Current literature reveals that various media platforms exhibit gender role stereotypes. Such as, body shape and occupational roles (Roth-Cohen et al., 2022 p. 187). Current advertisements fit the need of men more so than women. Since advertisements frequently use traditional gender roles to promote products, the research in this study hypothesizes that the content of advertisements men and women are exposed to will have a more significant effect on men.

*H5:* Participants that identify as male will find the advertisement they are exposed to more useful than participants who identify as female.

*H6:* Participants that identify as female will find the brand they are exposed to less credible than participants who identify as male.

Similarly, current literature study suggests the “present-day gaming culture can be considered misogynistic and immature” and that men who are accustomed to gender-conforming advertisements may perceive the female streamer in the video condition as less credible (Kuss et

al., 2022, p. 2). This could be due to their expectation of certain gender norms and the deviation from those norms by the streamer. This leads to the formation of the next hypotheses.

*H7: Participants who identify as male will find the streamer they are exposed to less credible than the participants who identify as female.*

It is worth noting that despite perceiving the female streamer as less credible, men may still be more inclined to purchase products exposed to them during a livestream. Regardless of the streamer, the effectiveness of the advertising, and even the gender conforming normality of advertising may have a significant effect on the viewer (Roth-Cohen et al., 2022 p. 197).

*H8: Participants who identify as male will be more likely than participants who identify as female to purchase the product they are exposed to in the advertisement.*

## **Age**

The relationship between age, video games, and advertising is a topic of growing interest, especially as gaming continues to grow as a social norm for people of all ages. Twitch and other livestreaming platforms have further popularized gaming by providing a space for players to stream their gameplay, interact with viewers, and build a community. As discussed, this has made Twitch an attractive target for advertisers seeking to reach a young and engaged audience. Most users on Twitch are 18- to 24-year-olds (35.85%) with 25- to 34-year-olds close behind (32.14%) (*Twitch Demographic & Growth Statistics 2021, 2023*).

Video games and livestreaming offer unique opportunities for advertisers to engage with audiences in new and innovative ways. For example, advertisers can sponsor players or esports teams or use interactive ad formats that encourage viewers participation (Ad Products Twitch Advertising, 2023). These approaches have the potential to create more authentic and engaging

advertising experiences for viewers. Despite the growing popularity of Twitch as a platform for advertising and marketing, there is a notable gap in research regarding the impact of age on the effectiveness of advertising. While studies have explored various factors such as gender, ethnicity, and personality traits, there is a lack of research specifically focused on the age of viewers and its influence on advertising outcomes (Cabeza-Ramírez et al., 2020). This gap in knowledge is particularly significant given that Twitch's primary user base consists of young adults aged 18-34, a demographic that is highly coveted by advertisers (U.S. Twitch App Users by Age 2020, 2022).

According to current research, advertising efforts are geared towards a younger demographic, especially on Twitch. This is because of the high number of users between the age of 18-34 (U.S. Twitch App Users by Age 2020, 2022). To better understand the effectiveness of advertising on the livestreaming platform, this study aims to incorporate a demographic that may be largely underrepresented in current literature. That leads to the next three hypotheses.

*H9*: Older participants will find the advertisement they are exposed to less useful than younger users.

*H10*: Older participants will find the brand they are exposed to in the advertisement less credible than younger participants will.

*H11*: Older participants will find the streamer they are exposed to less credible than younger participants.

Younger consumers tend to be more open to trying new products and experiences. This means that they may be more likely to experiment with new brands and products, making them a valuable target audience for marketers (Parker & Igielnik, 2020). Gen Z, the target market for

many advertising companies has a significant level of spending power and are considered “digital natives” (Parker & Igielnik, 2020). As such, the study hypothesis the following:

*H12*: Younger participants will be more likely to purchase from the brand they are exposed to in the advertisement than older participants.



## Chapter 4. Method

### Disclaimer

Please note that the researcher who conducted the study on Twitch advertising, Colleen Sharkey, has received an advertising certificate from Twitch. This certificate is awarded by Twitch to individuals who have completed a training program designed to educate advertisers on how to effectively use the Twitch platform for advertising purposes. It is important to note that Colleen Sharkey's receipt of this certificate did not influence the findings or conclusions of the study in any way. The study was conducted objectively and without bias, and any opinions expressed are those of the researcher alone. A Twitch advertising certificate is a certification program offered by Twitch to individuals who are interested in advertising on the platform. The program covers a range of topics including ad formats, targeting options, campaign creation, and optimization. By completing the program, individuals gain a better understanding of how to use Twitch's advertising tools effectively and are recognized as knowledgeable advertisers by the platform (Twitch Gameplan, 2022).

In this research, the method used employed a quantitative experimental research design to investigate the impact of advertising on Twitch. The participants were randomly assigned to one of three advertising options in the form of a mock Twitch stream, including pre-roll, mid-roll, or sponsored user-generated advertisement. Prior to and after viewing the video, participants completed a series of steps. The first involves an 11-question pre-test to collect demographic information, video game usage, and experience with Twitch. The post-test included eight questions and aimed to gather participants' perceptions of brand credibility, purchase intention, and streamer credibility in relation to their Twitch usage, gender, and age. There are 5 questions used to measure the usefulness of the content, 7 questions to measure participant perception of

brand credibility, 13 questions to measure streamer credibility, and 4 questions to measure participant purchase intentions. The study focuses on understanding the impact of the current advertising landscape on Twitch, and the results were analyzed to determine the effectiveness of each advertising format.

### **Participants and Procedure**

This survey was created utilizing research from current literature on the subject discussed. Respondents participated in all three elements of the research online via Qualtrics. The survey was administered through the researcher's institution's licensed use of Qualtrics. Participants were recruited from university esports programs located in North America. University esports program students, faculty, and staff were recruited for this research in order to incorporate participants that have experience with both video games and Twitch. Students from classes in media undergraduate and graduate classes were also recruited. As a result, there was no unequal distribution of risks based on sampling criteria present. An informed consent document was attached to the start of the survey to ensure that participants were at least 18 years of age and located within the continental United States, a prerequisite in participation of the study. If participants agreed to the informed consent, they were then able to access the rest of the survey questions and video. This survey was created on March 1, 2023, and published for access on March 14<sup>th</sup>-March 21<sup>st</sup>, 2023. There was neither risk nor benefit for participants completion of the study. Respondents' participation was completely voluntary.

The survey used in this study has three parts, each with additional instructions. Upon completing the informed consent document, participants were asked two prerequisite questions before they could access the rest of the study. The first asked participants to confirm that they were at least 18 years old. If they selected "no" they exited the survey. The final prerequisite

question asked participants if they were currently residing with in the United States of America. If they selected “no” they exited the survey. Following consent and prerequisite agreement, participants were led to an 11-question pre-test to collect demographic information such as age and gender identity, video game usage, and experience with Twitch. Participants were then led to one of three 5-minute videos. The videos represented a livestream that would be viewed on Twitch and contained one of the following: a 30 second pre-roll advertisement, a 30 second mid-roll advertisement, or a user-generated sponsored brand stream. After viewing one of the three videos, participants were led to an eight-question post-test that sought to gather participants’ perception of brand credibility, purchase intention, and streamer credibility in relation to their Twitch usage, gender, and age.

The pre-test questions included a fill-in for age, multiple choice selection for race/ethnicity, multiple choice selection for gender identity, multiple choice selection for how many days a week individuals play video games, multiple choice selection for hours of typical video game playing session, multiple choice selection regarding use of Twitch, and multiple-choice question for frequency of Twitch stream viewing.

The post-test survey questions consisted of multiple-choice questions and a six-point Likert-scale based on a six-point Likert-scale format and anchors for the purposes of this study (Weng, 2004). A six-point Likert-scale was used to avoid the “neutral” option that allows participants to avoid deciding. The goal was to encourage respondents to consider the question more carefully and make a choice that was either positive or negative (Weng, 2004, p. 969) as perceptions are rarely neutral. Only one type of Likert-Scale answer was used. The range for the six-point scale was Strongly Agree=1 to Strongly Disagree=6.

In the 11-question pre-test, the first question asked participants to fill in their age. Although there was a prerequisite question to confirm age eligibility, collecting the age range for participants is important to understand user perception of brand credibility, purchasing intent, and streamer credibility. The next question was multiple choice which asked for race/ethnicity. The following question asked participants to select a decision based on multiple choice “How many days a week do you typically play video games (can include gaming consoles, portable gaming devices, computers, cell phones, and tablets)?” The options were as follows: Less than once a week, 1 day a week, 2 days a week, 3 days a week, 4 days a week, 5 days a week, 6 days a week, and 7 days a week. This question was directed to identify heavy gamers from light gamers. If participants selected “Less than once a week” they were led to the following two questions “If you typically play less than once a week, please estimate the frequency of your play per month” and “If you typically play less than once a month, please estimate the frequency of your play per year”. The seventh question in the pre-test was used to gauge participants length of play regarding video game usage. In the form of a multiple-choice question, it asked “How long is your typical playing session” with the responses being “Less than 15 minutes”, “Greater than 15 minutes but less than an hour”, “1-2 hours”, “2-4 hours” “4-6 hours”, “6-8 hours”, “8-10 hours”, and “More than 10 hours”.

The following two questions were used to determine Twitch experience in participants. The first asked if an individual had ever viewed a video game stream on Twitch.tv, if participants responded “no” they then exited the survey. This was to ensure that all responses for the research accounted for individuals who have some experience with the livestreaming service. The final three questions were used to determine the degree of experience with Twitch of participants. The first being “How many days a week do you typically watch streams on Twitch.tv?” in the form

of a multiple-choice question with the selections being “Less than once a week”, “1 day a week”, “2 days a week”, “3 days a week”, “4 days a week”, “5 days a week”, “6 days a week”, and “7 days a week”. The final question asked in the form of multiple choice was “How long is your typical Twitch.tv viewing session?” with the selections being “Less than 15 minutes”, “Greater than 15 minutes but less than an hour”, “1-2 hours”, “2-4 hours”, “4-6 hours”, “6-8 hours”, “8-10 hours”, and “More than 10 hours”.

Following the pre-test, participants were led to one of three 5-minute videos. These videos represented a livestream that would be viewed on Twitch and contained one of the following: a 30 second pre-roll advertisement, a 30 second mid-roll advertisement, or a user-generated sponsored brand stream. The advertisement in each of the videos was from the same brand, DoorDash. DoorDash was used since it is a popular service frequently advertised on Twitch. The ad used in the pre-roll and mid-roll condition are an exact replication of the advertisement currently seen on the platform. The three video conditions all revolve around the same Twitch streamer playing the same game. The game in the condition videos is Dorfromantik, a “peaceful building strategy and puzzle game” where the player creates their own village using individual tile pieces (Dorfromantik on Steam, n.d.). It was used in these conditions because it is unique and engaging and provides a relaxing atmosphere, so as not to distract participants. It has a wide appeal that makes it an appropriate choice for focusing on advertising. It is also an immersive game that encourages creativity and critical thinking without being overwhelming.

In the pre-roll condition, a 30 second advertisement for DoorDash immediately begins playing. When the advertisement finishes participants begin viewing the streamer play Dorfromantik. Participants enter the chat in the middle of the streamer’s conversation with

Twitch Chat. This is to simulate the 30 second delay created by pre-roll advertisements on Twitch. Participants are then able to view the remaining 4 minutes and 30 seconds of the video uninterrupted as the streamer talks to Twitch chat, acknowledges new followers, subscribers, and plays Dorfromantik.

In the mid-roll condition, participants begin viewing the simulated Twitch stream. The streamer waits a few seconds and begins engaging Twitch chat with questions and discussions about the game Dorfromantik. The streamer also welcomes subscribers and followers into the chat as Twitch notifications alert the stream of activity. At the 2 minute and 17 second mark a 30 second mid-roll advertisement for DoorDash begins playing. This is to simulate the unpredictability of mid-roll advertisements. After the advertisement finishes playing participants are returned to the Twitch stream gameplay. As the viewer returns, the streamer is in the middle of a sentence conversing with Twitch chat. This is used to simulate the video interruption of a mid-roll advertisement. The participant is then able to watch the remaining 2 minutes and 10 seconds uninterrupted as the streamer continues gameplay and engaging with Twitch chat.

In the user-generated sponsored brand stream condition, participants begin viewing the simulated Twitch stream. The experience begins as soon as the participant hits play, and they are immediately greeted with the sound of a live stream in progress. The participant enters and the streamer begins engaging with chat and playing the game Dorfromantik. At the top left corner of the screen, there is a rotating logo for DoorDash, which subtly reminds the participant of the brand's presence. As new followers, subscribers, and chatters enter the stream, the streamer greets them and informs them that the Twitch stream and gameplay are sponsored by DoorDash. The streamer intermittently reminds viewers that the Twitch stream is sponsored by DoorDash which reinforces the brand's message and presence throughout the experience. This is used to

simulate a typical user-generated sponsored brand stream on Twitch. The participant views the stream in its entirety for 5 minutes.

The post-test is separated into four sections, Usefulness of Content, Purchase Intentions, Brand Credibility, and Streamer Credibility. Each of the four section answers were given in a six-point Likert Scale format ranging from Strongly Agree=1 to Strongly Disagree=6. These questions were used to understand participant perception of the three conditional video advertisements as they relate to usefulness of content, purchase intention, brand credibility, and streamer credibility.

The study's data was gathered and organized utilizing Qualtrics, a software platform designed for online data collection. The survey was created within the Qualtrics platform, and an anonymous corresponding link was shared with university esports programs Directors across North America. The corresponding link was shared using the researcher's institution approved Institutional Review Board email advertising. The resulting collected data was analyzed utilizing the Statistical Package for the Social Sciences (SPSS).

### ***Variables***

The independent variables that exist within this study are advertisement condition, video game use, gender, and age. The first independent variable is the advertisement condition the participant was exposed to: pre-roll, mid-roll, or sponsored. Video game use refers to the number of days participants reported playing video games throughout the week. Gender regarding this study refers to whether participants identified as male or female. For the course of this study, only male or female was used as an independent variable. Not enough data was collected on individuals who identified as another gender, leaving an insignificant amount of data to utilize.

Age in terms of this study was utilized to measure video game preferences and usage over different lifespans, with different age groups showing different patterns of use.

Four dependent variables exist within this study. Three of which include usefulness of content, brand credibility, and purchase intention of product. These dependent variables directly correspond to user perception of advertisements on Twitch. The fourth dependent variable is streamer credibility, as it relates to user perception of Twitch streamers as opinion leaders for adverts on the platform. To evaluate the reliability of all scales Cronbach's alpha (1951) was used. The reliability coefficient for usefulness of content was  $\alpha = .663$ , which looked at 5 answers from the Effects of Video Game Streaming on Consumer Attitudes and Behaviors questionnaire on usefulness of content (Foster & Dunn, 2020). Similarly, the 13 streamer credibility answers were also used from (Foster & Dunn, 2020) with the reliability coefficient  $\alpha = .935$ . The 7 answers focused on brand credibility were derived from the Celebrity endorsement, brand credibility and brand equity questionnaire (Spry et al., 2011) with a reliability score of  $\alpha = .920$ . Finally, the 4 questions on purchase intention had a reliability coefficient of  $\alpha = .963$ . The scales for reliability were created by combining the 5 usefulness of content, 7 brand credibility, 13 streamer credibility, and 4 purchase intention answers into one index.

By studying the relationship between these independent variables and dependent variables, the goal is to gain a better understanding of how video game usage, gender, and age may influence various outcomes regarding user perception of advertisements on Twitch.



## Chapter 5. Results

The goal of this study was to examine the current landscape of advertising on Twitch.tv and the user perception of current advertising and its effectiveness. This study also examined the effect that age, gender, and gaming experience have on the perception of that advertising. A total of 92 participants completed the online survey. That included 55 (59.78%) male identifying participants and 37 (40.21%) female identifying participants. In terms of the three conditional videos 26 were exposed to the pre-roll advertisement (28.26%), 39 were exposed to the mid-roll advertisement (42.39%), and 27 were exposed to the user-generated sponsored brand advertisement (29.34%).

### Advertising Style

RQ1 aimed to examine what effect if any does advertisement style have on audiences' perception of advertisement usefulness. An ANOVA test was used to analyze the differences between the three conditions pre-roll, mid-roll, and user-generated sponsored advertisements. There was no significant difference found for individuals exposed to one of the three conditions and usefulness of content ( $F(2,89) = 1.30, p > .05$ ). Furthermore, there was no significant relationship between pre-roll ( $m = 3.56, sd = 1.06$ ), mid-roll ( $m = 3.17, sd = .94$ ), user-generated sponsored advertising ( $m = 3.26, sd = .95$ ) and usefulness of content.

RQ2 looked to understand the effect of advertisement style on audiences' perception of brand credibility. There were no significant differences found for individuals exposed to one of the three conditions and brand credibility ( $F(2,89) = 1.45, p > .05$ ). Furthermore, there was no significant relationship between pre-roll ( $m = 2.77, sd = 1.04$ ), mid-roll ( $m = 2.88, sd = .99$ ), user-generated sponsored advertising ( $m = 2.48, sd = .79$ ) and brand credibility.

RQ3 looked to understand the effect of advertisement style on audiences' perception of purchase intent regarding advertised product. There were no significant differences found for individuals exposed to one of the three conditions and purchase intent ( $F(2,89) = .394, p > .05$ ). Furthermore, there was no significant relationship between pre-roll ( $m = 3.49, sd = 1.62$ ), mid-roll ( $m = 3.37, sd = 1.49$ ), user-generated sponsored advertising ( $m = 3.39, sd = 1.66$ ) and purchase intent.

Lastly, RQ4 focused on understanding the effect of advertisement style on audiences' perception of streamer credibility as it relates to the three conditions. There were no significant differences found for individuals exposed to one of the three conditions and streamer credibility ( $F(2,89) = .835, p > .05$ ). Furthermore, there was no significant relationship between pre-roll ( $m = 2.60, sd = .901$ ), mid-roll ( $m = 2.68, sd = .913$ ), user-generated sponsored advertising ( $m = 2.92, sd = .989$ ) and streamer credibility.

**Table 1**

*Advertising Style*

Hypothesis	<i>df</i>	<i>F</i>	<i>p</i>	Support
<b>RQ1</b>	2	1.30	.277	NO
<b>RQ2</b>	2	1.45	.238	NO
<b>RQ3</b>	2	.394	.675	NO
<b>RQ4</b>	2	.835	.437	NO

## Gamer Identity Perception

*H1* examined whether participants that fall under the heavy gamer category would be less likely than participants in the light gamer category to find the advertisement they were exposed to useful. A simple linear regression was calculated predicting participants perception of usefulness regarding the advertisement they were exposed to. The regression equation was not significant ( $F(1,90) = .350, p > .05$ ). Thus, *H1* is not supported. There was no significant relationship between gaming ( $m = 5.55, sd = 2.39$ ) and usefulness of content ( $m = 3.31, sd = .955$ ).

*H2* explored the hypothesis that participants that fall under the heavy gamer category will be more likely than light gamers to find the brand they are exposed to credible. A significant relationship was found. A simple linear regression was calculated to predict heavy gamers' perception of brand credibility regarding the advertisement they were exposed to. There was a significant relationship between gaming ( $m = 5.55, sd = 2.39$ ) and brand credibility ( $m = 2.73, sd = .961$ ). The regression equation was significant ( $F(1,90) = 4.136, p < .001$ ) with an  $R^2$  of .044. However, counter to the hypothesis, the more a respondent gamed, the less likely they found the brand to be credible. Therefore, *H2* was not supported.

Next, *H3* looked at whether participants that fall under the light gamer identification will be less likely than heavy gamers to find the streamer they are exposed to credible. *H3* was not supported, as the opposite was discovered. A simple linear regression was calculated, and the equation was significant ( $F(1,90) = 3.973, p < .001$ ) with an  $R^2$  of .042. There was a significant relationship between gaming ( $m = 5.55, sd = 2.39$ ) and streamer credibility ( $m = 2.73, sd = .931$ ). The more people gamed, the less likely they were to find the streamer credible.

Finally, H4 examined if participants that were categorized as heavy gamers would be more likely than light gamers to purchase the product they are exposed to in the advertisement. A simple linear regression was calculated to predict participant perception of purchase intention. The regression equation was not significant ( $F(1,90) = 2.460, p > .05$ ). Additionally, there was no significant relationship between gaming ( $m = 5.55, sd = 2.39$ ) and purchase intention ( $m = 3.56, sd = 1.56$ ). As a result, H4 was not supported.

**Table 2**

*Gamer Identity Perception*

<b>Hypothesis</b>	<b>df</b>	<b>F</b>	<b>p</b>	<b>Support</b>
<b>H1</b>	1	.350	.556	NO
<b>H2</b>	1	4.136	.045	NO
<b>H3</b>	1	3.973	.049	NO
<b>H4</b>	1	2.460	.120	NO

**Gender Identity Perception**

To accurately understand the means of both male participants and female participant perceptions an independent-samples *t* test was run for hypotheses 5, 6, 7, and 8. First, for H5 an independent-samples *t* test was calculated comparing the mean score of male participants and female participants. This was used to measure whether males will find the advertisement they were exposed to more useful than female participants. No significant difference was found ( $t(86) = -.889, p > 0.5$ ). The mean of males ( $m = 3.21, sd = 0.90$ ) was not significantly different from the mean of female ( $m = 3.40, sd = 1.06$ ). Thus, H5 was not supported.

Next, for *H6*, an independent-samples *t* test was calculated to compare the mean score of males and females to examine if female participants will find the brand they are exposed to less credible than participants who identify as male. There was no significant difference found ( $t(86) = -.923, p > 0.5$ ). The mean of females ( $m = 2.81, sd = .999$ ) was not significantly different than that of the mean for male participants ( $m = 2.622, sd = .921$ ). As a result, *H6* was not supported.

For *H7*, an independent-samples *t* test was calculated to compare the mean score of males and females to examine if males will find the streamer they are exposed to less credible than female participants. There was no significant difference found ( $t(86) = -.033, p > 0.5$ ). The mean of males ( $m = 2.71, sd = .955$ ) was not significantly different than that of the mean for females ( $m = 2.72, sd = .942$ ). Thus, *H7* was not supported.

Lastly, for *H8* an independent-samples *t* test was calculated to compare the mean score of males and females to examine if males will be more likely than females to purchase the product they are exposed to in the advertisement. The mean of males ( $m = 3.66, sd = 1.59$ ) was not significantly different than that of the mean for females ( $m = 3.28, sd = 1.52$ ). There was no significant difference found ( $t(86) = 1.06, p > 0.5$ ). Thus, *H8* was not supported.

**Table 3**

*Gender Identity Perception*

<b>Hypothesis</b>	<b><i>df</i></b>	<b><i>t</i></b>	<b><i>p</i></b>	<b>Support</b>
<i>H5</i>	86	-.889	.328	NO
<i>H6</i>	86	-.923	.578	NO
<i>H7</i>	86	-.003	.986	NO

**H8**

86

1.06

.639

NO

### **Age Perception**

*H9* looked to examine if older participants will find the advertisement they are exposed to less useful than younger users. There is a significant negative relationship between age and perception of the advertisement's usefulness. *H9* is supported, as older users found the advertisements less useful than younger users. A simple linear regression was calculated regarding older users' perception of the advertisement exposure as less useful than younger users. A significant regression equation was found ( $F(1,90) = 5.340, p < .001$ ). There was a significant relationship between age ( $m = 25, sd = 6.17$ ) and usefulness ( $m = 3.31, sd = .955$ ).

For *H10*, a simple linear regression was calculated predicting older participants perception of brands as less credible than younger participants. The regression equation was not significant ( $F(1,90) = .791, p > 0.5$ ) with no significant relationship between age ( $m = 25, sd = 6.17$ ) and brand credibility ( $m = 2.73, sd = .961$ ). Thus, *H10* is not supported.

*H11* predicted that older participants will find the streamer they are exposed to less credible than younger participants. A simple linear regression was calculated to explore hypothesis eleven. The regression equation was not significant ( $F(1,90) = 2.63, p > 0.5$ ) with an  $R^2$  of .169. There was no significant difference between age ( $m = 25, sd = 6.17$ ) and streamer credibility ( $m = 2.73, sd = .931$ ). Thus, *H11* is not supported.

The final hypothesis using simple linear regression looked to examine if younger participants will be more likely to purchase from the brand they are exposed to in the advertisement than older participants. The regression equation was not significant ( $F(1,90) =$

.863,  $p > 0.5$ ) with an R2 of .097. There was no significant difference between age ( $m = 25$ ,  $sd = 617$ ) and purchase intention ( $m = 3.56$ ,  $sd = 1.56$ ). Thus, H12 was not supported.

**Table 4**

*Age Perception*

<b>Hypothesis</b>	<b><i>df</i></b>	<b><i>F</i></b>	<b><i>p</i></b>	<b>Support</b>
<b><i>H9</i></b>	1	5.34	.023	YES
<b><i>H10</i></b>	1	.791	.376	NO
<b><i>H11</i></b>	1	2.63	.108	NO
<b><i>H12</i></b>	1	.863	.355	NO

## Chapter 6. Discussion

The popularity of livestreaming platforms has seen a significant surge in recent years, making them a prime location for advertising and marketing purposes. Twitch.tv is one such platform that has grown substantially in size and scope, with an estimated 140 million monthly active users as of 2021 (Twitch Sales, 2022). As such, it has become a crucial platform for marketers to reach and engage with their target audience. The goal of this research was to investigate the possible correlation between age, gender identity, and gaming experience as it relates to the effectiveness of current advertising on Twitch.tv. By examining these variables, the research aims to determine the efficacy of current advertising strategies on the platform and identify potential areas for improvement. Moreover, the study aims to expand on the current literature that exists on advertising and marketing on Twitch.tv by providing a more inclusive background of individuals with differing gaming and Twitch experience.

Skepticism towards mainstream media and reliance on recommendations and reviews from peers has increased significantly (Turcotte et al., 2015, p. 4). Streamers on Twitch, following the two-step flow of communication theory, act as opinion leaders and may play a larger role in the purchasing decision than originally understood. Research can provide evidence supporting the efficacy of streamers as brand ambassadors and help identify the most effective advertising formats for specific users. Similarly, cultivation theory can help explain the effect of advertising exposure on Twitch and the longitudinal effect it has on brand perception of usefulness and credibility. The research in this study seeks to gain a deeper understanding of the cultural patterns on the platform and how these may impact the effectiveness of advertising and marketing efforts.



The primary objective of the study was to investigate the impact of different advertisement styles on user perception in four key areas: usefulness of content, brand credibility, purchase intent, and streamer credibility. However, the results showed no significant findings for any of these research questions. One possible explanation for the absence of significant findings could be a result of the limited statistical power of the research sample. The sample size might not have been large enough to reveal any significant difference in user perception between the various advertisement styles. Another possible explanation could be an uneven distribution of conditions among the participants. For example, 26 participants were exposed to the pre-roll advertisement (28.26%), 27 participants were exposed to the user-generated sponsored brand advertisement (29.34%), while nearly 42% of respondents were exposed to the mid-roll advertisement (39 participants). To improve the validity and generalizability of future studies, it may be necessary to increase the sample size or implement a more balanced distribution of conditions. Moreover, there is still a gap in literature regarding advertisement style and its effect on Twitch users. Further research in these areas could help marketers and advertisers to develop more effective strategies for engaging the platforms' highly active and engaged audience.

H1, H4, H5, H6, H7, H8, H10, H11, and H12 also produced no significant findings. There could be several indicating factors as to why these hypotheses found no results in this research study. One such possibility being that they study may have lacked statistical power, with the sample size being only 92, it may have been too small, or the effect size was too small to detect a statistically significant difference. It is likely that the research question or framing of the pre- and post-test study were flawed and overly simplistic, leading to a lack of meaningful results. Ultimately, with further research and a larger sample size it is possible that the

hypotheses could be retested. Further careful consideration of the study design, methodology, and findings could interpret the reason for lack of data. It is important to note that all of the hypotheses for variable gender were unsupported. They hypotheses predicted that there would be some difference in advertisement effectiveness between men and women, but none such were found. It can be theorized that it is a direct result of the lack of variation in gender responses in the survey.

Only three of the twelve hypotheses showed any significance. The first being hypothesis H2. The prediction was that participants that fall under the heavy gamer category will be more likely than light gamers to find the brand they are exposed to credible. In fact, the results of data analysis concluded that the opposite is true. Participants who identified as light gamers are statistically more likely than heavy gamers to find the brand viewed advertisement to be more credible. There could be various reasons why light gamers are more likely to find the brand view advert to be more credible, one being perception of authenticity. According to Miller (2021), consumers are more likely to purchase from and support brands they view as authentic. It is possible that light gamers are more skeptical of marketing messages and are therefore more attuned to the authenticity of the advertisement. Heavy gamers, on the other hand, may be more accustomed to seeing advertisements on Twitch and are desensitized to them.

On the other hand, it is possible that the demographics of light gamers and heavy gamers differ in some way that affects their perception of credibility. For example, light gamers may be younger than heavy gamers. This demographic could coincide with Gen Z (individuals 18-25), who has nearly \$360 billion in disposable income (Pollard, 2021) and as a result be more receptive to place trust in brands based of social discovery. Furthermore, this is an important hypothesis to note, given how young the majority demographic of Twitch is. According to

Twitch, the majority of users are 18- to 34-year-olds (*Twitch Demographic & Growth Statistics 2021, 2023*). This could mean that any differences in the perception of credibility between light gamers and heavy gamers could have significant implications for brands and marketers targeting this important age group. Other factors such as gaming preferences, socio-economic status, and cultural differences could also play a role in shaping these participants perception, therefore, further research may be necessary to fully understand the underlying factors that influence the credibility perception of different gamer age demographics.

The second hypothesis that showed significance was H3 which predicted that participants that fall under the heavy gamer category will be more likely than light gamers to find the streamer they are exposed to credible. This hypothesis was not supported by the data gathered. The research discovered the opposite, light gamers are more likely to find the streamer they are exposed to credible. Yee (2006) conducted a survey on Everquest players in 2006, wherein 47% of online users reported feeling that their in-game friendships were like their real-life friendships. This finding can be applied to the concept of streamer credibility, as it suggests that online interactions and relationships can hold significant value and authenticity for individuals. Therefore, understanding the extent to which viewers perceive their relationships with streamers as genuine and trustworthy can offer insights into the credibility of streamers and their impact on their audience as brand ambassadors.

The study's finding that light gamers are more likely to find the streamer they are exposed to credible, as opposed to heavy gamers, is a significant contribution to the literature on online gaming and streaming. The results suggest that online interactions and relationships can hold significant value and authenticity for individuals, and that viewers perceive their relationships with streamers as genuine and trustworthy. This finding aligns with Yee's (2006) survey on

Everquest players, which highlighted the similarity between in-game friendships and real-life friendships. The credibility of streamers and their impact on their audience are crucial aspects of online gaming and streaming, and understanding how viewers perceive this credibility can offer insights into their behaviors and preferences regarding advertisements. This could explain the phenomena of Twitch livestreams being a “virtual third place” which cultivates community (Hamilton et al., 2014). This study's results can inform strategies for streamers to build more credible and trustworthy relationships with their audiences when it comes to user-generated branded advertisements. Further research is necessary to explore the mechanisms behind the relationship between gaming experience and streamer credibility, and to identify additional factors that may influence viewers' perceptions.

The final hypothesis that holds significance is H9 which predicted that older participants would find the advertisement they are exposed to less useful than younger users. This hypothesis was supported by the data gathered. The finding that older participants found the advertisement less useful than younger users on Twitch is not surprising. Twitch's user base is predominantly made up of younger people, with most users falling in the 18-34 age range (U.S. Twitch App Users by Age 2020, 2022). As a result, the advertisements on Twitch are possibly targeted towards this demographic, with ads for video games, gaming gear, and other products and services that are likely to appeal to a younger audience. Older participants may find these advertisements less relevant or interesting, simply because they are not the intended audience. They may also have different interests and priorities than younger users, which could further contribute to their perception that the advertisements are less useful.

Furthermore, older participants may be more familiar with the previous way in which Twitch operated without advertisements and are more acutely aware of gaming related ad

concerns (Statt, 2018). Because older users may have experienced the platform with less or no advertisements, current advertisements could be perceived as more intrusive. Pre-roll and mid-roll advertisements interrupt the viewing experience and remove chatters on Twitch from the gameplay and activity happening in-real-time on stream. This intrusiveness leads to a negative perception regarding the brand associated with the advert (De Pelsmacker et al., 2019). Overall, the finding that older participants found the advertisements on Twitch less useful than younger users is consistent with what would be expected based on the literature review and demographics of the platform.

In the current study, a total of 12 hypotheses were formulated and tested. Of these, only 3 hypotheses were found to have significant relationships. This finding suggests that there may be factors or variables that were not adequately measured or considered in the study, leading to a lack of significant results. The limitations of the study, including sample size, data collection methods, and measurement tools, will be discussed in further detail. It is possible that with a larger sample size or more comprehensive data collection methods, the relationships between these unsupported hypotheses and the variables of interest may become clearer. Thus, while the current study contributes to the understanding of the relationships between certain variables, it also highlights the need for further research in order to fully explore the complexities of the phenomenon under investigation.

## **Chapter 7. Conclusion and Limitations**

### **Conclusion**

In conclusion, this study has shed light on the persuasive attributes of Twitch advertisements and their impact on the livestreaming platform. The findings indicate that there are some significant differences in how different user segments perceive and respond to advertisements on Twitch. While older users may find advertisements more useful, light gamers are more likely to find brand advertisements credible. Moreover, light gamers also tend to find Twitch streamers more credible, which highlights the importance of influencer marketing on the platform. These insights can be valuable to advertisers and marketers seeking to develop effective advertising strategies on Twitch. Further research is needed to explore how these findings can be applied in practice and how they may evolve over time as the platform continues to evolve.

### **Limitations and Implications**

One of the principal limitations of this study was the small number of participants. 140 total people responded to the advertisement request to participate in the study. There were specific prerequisites regarding location, age, and consent that eliminated most respondents. In completion, 92 total participants took the survey. The unequal distribution of participants across experimental conditions is an issue in statistical analyses and scientific research. In this study, the pre-roll condition had the smallest sample size with only 26 (28.26%) participants, while the mid-roll condition had the largest sample size with 39 (42.39%) participants and the user-generated brand advertisement condition had a sample size of 27 (29.34%) participants.

This uneven distribution of participants can lead to statistical issues such as unequal statistical power. It is also possible that the groups may differ in some unmeasured way that is

related to the outcome of interest, which could change the results. The sample also consisted of only individuals currently residing within the United States which makes it difficult to make general conclusions about a larger population. Thus, when interpreting the results of this study, it is important to keep in mind the unequal distribution of participants and consider potential limitations that may arise from it. To mitigate this issue, future research could use a larger sample of participants across conditions to ensure stronger data driven analysis.

A second limitation is that the Likert-scale answers to determine heavy and light gamer identification may not be strong enough to support more in-depth analysis of the current study. While gamer identification is usually portrayed as self-labeled, more initial research on qualifying factors could help strengthen the narrative surrounding what a “heavy” gamer is. Further research and understanding of what increases an individuals’ “dedication” to the gaming space to help “validate player types through experimental methods” would help strength the research on this topic (Holm, 2019, para 7).

Another limitation of the study is that the participant population was largely white (80%) and male (59.78%) dominated. This raises concerns about generalizability and representativeness of current Twitch culture. This limits the ability to draw conclusions that are applicable to the broader population that may utilize the platform. It also overlooks the diversity of experiences and perspectives that exist within different demographic groups. Additionally, this study sample population was unable to accommodate research to reflect non-binary/third gender respondents as there were not enough individuals in the sample size. To improve validity and generalizability of research, further research should include a wide diverse population that more accurately reflects the global culture of Twitch.

Future research should further examine different varying demographics and individual variables that influence the effectiveness of advertising on Twitch. As the platform continues to grow, so does the community and culture that utilize the livestreaming service. Specifically, the perception of advertising on Twitch as it relates to age, gender, and gaming habits should be examined as different patterns may emerge. The present study measured perceived usefulness of advertisements, brand credibility within advertisements, streamer credibility, and purchase intentions through pre-roll, mid-roll, and user-generated sponsored content. The research supports that there are some significant differences in how different user segments perceive and respond to advertisements on the platform. Future research should also aim to explore a more widely inclusive demographic regarding sampling to accurately conceptualize Twitch user perceptions of advertisements on the platform. Future research should consider these pain-points when studying the effectiveness of advertisements on livestreaming platforms regarding consumer attitudes and purchase behavior.



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## APPENDIX: Research Questionnaires

\*The following questionnaires were adjusted to fit the criteria of this study and the following Likert scales were revised to fit a six-point scale

### **PRETEST**

What is your age? \_\_\_\_\_

What is your gender?

- Male
- Female
- Non-binary

Which of the following best describes you?

- Asian or Pacific Islander
- Black or African American
- Hispanic or Latino
- Native American or Alaskan Native
- White or Caucasian
- Multiracial or Biracial
- A race/ethnicity not listed here

How many days in a week do you typically play video games (Can include gaming consoles, portable gaming devices, computers, cell phones, and tablets)

- Less than once a week
- 1
- 2
- 3
- 4
- 5
- 6
- 7

If you typically play less than once a week, please estimate the frequency of your play per month.

- Less than once per month
- Once per month
- Twice per month
- Three times per month

If you typically play less than once per month, please estimate the frequency of your play per year.

- Less than once per year or never

- 1-3 times per year
- 4-6 times per year
- 7-11 times per year

How long is your typical playing session?

- Less than 15 minutes
- Greater than 15 minutes but less than an hour
- 1-2 hours
- 2-4 hours
- 4-6 hours
- 6-8 hours
- 8-10 hours
- More than 10 hours

Do you or have you ever viewed a video game stream on Twitch.tv?

- Yes
- No

How many days in a week do you typically watch streams on Twitch.tv?

- Less than once a week
- 1
- 2
- 3
- 4
- 5
- 6
- 7

If you typically watch Twitch.tv streams less than once a week, please estimate the frequency of your viewer frequency per month.

- Less than once per month
- Once per month
- Twice per month
- Three times per month

If you typically watch streams on Twitch.tv less than once per month, please estimate the frequency of viewer frequency per year.

- Less than once per year or never
- 1-3 times per year
- 4-6 times per year
- 7-11 times per year

How long is your typical Twitch.tv viewing session?

- Less than 15 minutes
- Greater than 15 minutes but less than an hour
- 1-2 hours
- 2-4 hours
- 4-6 hours
- 6-8 hours
- 8-10 hours
- More than 10 hours

**CONDITIONS**

Pre-roll advertisement: <https://youtu.be/txMi1V8Uqpo>

Mid-roll advertisement: <https://youtu.be/lt74yv8uGpw>

User-generated advertisement: <https://youtu.be/hduCYsTryGQ>

**POST TEST**

*Usefulness of Content*

What brand did you recognize in the video? \_\_\_\_\_

Please indicate the extent to which you agree or disagree with the following statements:

The video contained relevant information for a potential customer of the brand.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

The video contained helpful information for a potential customer of the brand.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

The video provided valuable information about the brand.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

I found the brand advertisement to be annoying.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

There is enough information presented in the video to help make a decision about purchasing from the brand.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

*Streamer Credibility*

Please rate the streamer on the following categories:

Not an expert 1 2 3 4 5 6 7 Expert  
Inexperienced 1 2 3 4 5 6 7 Experienced

Unknowledgeable 1 2 3 4 5 6 7 Knowledgeable  
Unqualified 1 2 3 4 5 6 7 Qualified  
Dishonest 1 2 3 4 5 6 7 Honest  
Unreliable 1 2 3 4 5 6 7 Reliable  
Insincere 1 2 3 4 5 6 7 Sincere  
Untrustworthy 1 2 3 4 5 6 7 Trustworthy  
Unpopular 1 2 3 4 5 6 7 Popular

*Group Identification*

Please indicate the extent to which you agree or disagree with the following statements:

In general, the streamer thinks like me.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

In general, the streamer behaves like me.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

In general, the streamer is similar to me.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

In general, the streamer reminds me of myself.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Disagree**

*Purchase Intentions ROI*

*DoorDash*

Have you previously heard of or seen this brand before today?

- Yes
- No

Have you previously purchased from this brand?

- Yes
- No

Please indicate the extent to which you agree or disagree with the following statements:

*DoorDash*

I intend to buy this product in the future.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

The likelihood of me purchasing this product is high.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

The probability that I would consider buying this product is high.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

My willingness to buy this product is high.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

*Brand Credibility*

*DoorDash*

Please indicate the extent to which you agree or disagree with the following statements:

This brand reminds me of someone who is competent and knows what they are doing.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

This brand has the ability to deliver what it promises.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

This brand delivers what it promises.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

This brand's product claims are believable

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

Over time, my experiences with this brand have led me to expect it to keep its promises, no more and no less.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

This brand has a name you can trust.

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

This brand doesn't pretend to be something it isn't

**Strongly Disagree** 1 2 3 4 5 6 7 **Strongly Agree**

#### Questionnaire Survey References

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