

Reviewing Factors of Audience Engagement in Live Streaming

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Abstract. Live streaming has become one of the most prominent digital phenomena in recent years, changing the way individuals interact, consume content and shop online. This study aims to identify and analyze the factors that influence audience engagement in live streaming, including audience motivation, the role of social interaction, technological features, platform distribution, and popular genres. Through a systematic literature review approach, 27 articles from relevant ScienceDirect and DOAJ databases were selected for analysis. The study results show that audience engagement is mainly influenced by parasocial interaction (PSI), entertainment-based motivation (hedonic value), and practical benefits (utilitarian value). Technologies such as live chat, gifting, and data-driven recommendation systems strengthen viewing duration and audience loyalty. In addition, platforms such as Twitch dominate the gaming and esports genres, while TikTok Live thrives in the e-commerce space. New genres such as VTubers and travel offer opportunities to attract a wider audience with avatar-based interaction approaches and virtual experiences. The research also identified gaps in the literature, including a lack of studies on local platforms, new genres, and the impact of innovative technologies such as AR/VR. This study makes an academic contribution by summarizing key findings and providing strategic guidance for platform developers, streamers and businesses in creating more engaging and effective live streaming experiences.

Keywords: Live Streaming, Engagement, Audience Motivation, Social Interaction, Technological Features

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INTRODUCTION

Live streaming has emerged as a major digital phenomenon in recent years [1]. Live streaming has completely changed how people connect, communicate, and share their experiences all around the world, from social media apps like Instagram and TikTok to gaming-based websites like Twitch [1], [2]. According to recent data, live streaming is one of the content types in the digital ecosystem that is expanding the fastest, with over 60% of internet users worldwide having viewed it on multiple platforms [3]. The potential of live broadcasting to foster real-time interactions is one of the aspects that encourage this phenomenon. In addition to being passive consumers, viewers can take an active role by voting, leaving comments, and even giving streamers virtual presents [1], [4]. In contrast to on-demand video content, this engagement produces a more customized experience. For instance, platforms such as TikTok Live have made use of this functionality to boost user engagement, particularly among younger users [5].

Furthermore, new business models are being sparked by live broadcasting [4]. The idea of live shopping has gained popularity in the e-commerce sector since it provides a fun and educational purchasing experience. Customers can ask questions, watch live product demos, and get straight replies from the vendor [6]. This greatly raises purchasing intent in addition to fostering product trust. In other side, the gaming business employs live streaming to stage esports tournaments that draw millions of people each day, create communities, and exchange strategies [7]. The questions are what precisely keeps viewers interested in live streaming, why do certain streamers have a devoted following while others find it difficult to attract viewers, and what elements like platform trust, entertainment motive, and social connection have an identical impact in every situation. Given the fierce rivalry across platforms to draw and keep users, it is becoming more and more crucial to comprehend these topics. In a social and cultural setting, this phenomenon is equally pertinent. For instance, live broadcasting is now used not only for entertainment purposes but also to link buyers and sellers in internet marketplaces in nations like Indonesia [8]. Moreover, the popularity of the virtual youtubers who engage with viewers through digital avatars, demonstrates how quickly new live streaming formats can alter the nature of audience-content creator engagement.

In light of this occurrence, the purpose of this study is to investigate the variables that affect live streaming audience engagement. The findings may be one of considerations for the similar research field

and offer useful information to the platform developers, streamers, and the other practitioners by gaining an understanding of topics like audience motivation, the significance of social interaction, the impact of technological features, and the most popular genres and platforms. Further, the following sections of this article describe the methodological points of the study implementation, analysis results, its discussion, and the conclusion at the end of the paper.

METHODS

This literature review study carried out sequentially within six stages (Figure 1). Specifically, the researchers used the preferred reporting items for systematic reviews and meta-analyses (PRISMA) approach (Figure 2) [9], [10] to select the literature data from two reputable academic databases (i.e., the ScienceDirect and DOAJ) in the data collection stage. The three keywords used in the searching stage were live stream, livestreaming, and live stream interaction. The selection process was conducted with the following two main criteria, i.e., publication timeframe and its relevance. This study selected articles published within the 2019-2024 timeframe to ensure the newness of data and focused on studies that addresses audience interaction, motivations, platform features, technologies, and genres in the context of live streaming.

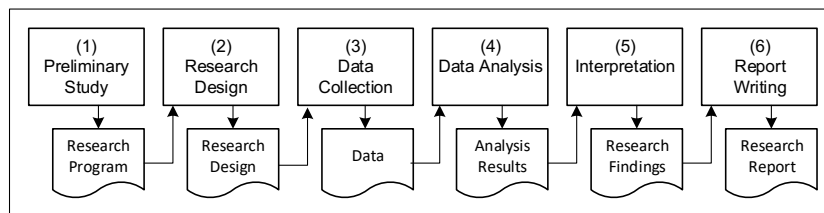


Figure 1. Research procedure

The authors identified about 280 articles from both databases in the initial selection stage and selected around 27 relevant articles as the input data of the analysis stage. In the data analysis stage, the authors identified five thematic categories as the common patterns among the selected studies, i.e., the engagement factor, audience motivation, platform technology, platform distribution, and genre discussion. The researchers then discussed the selected articles by comparing each other in the interpretation stage.

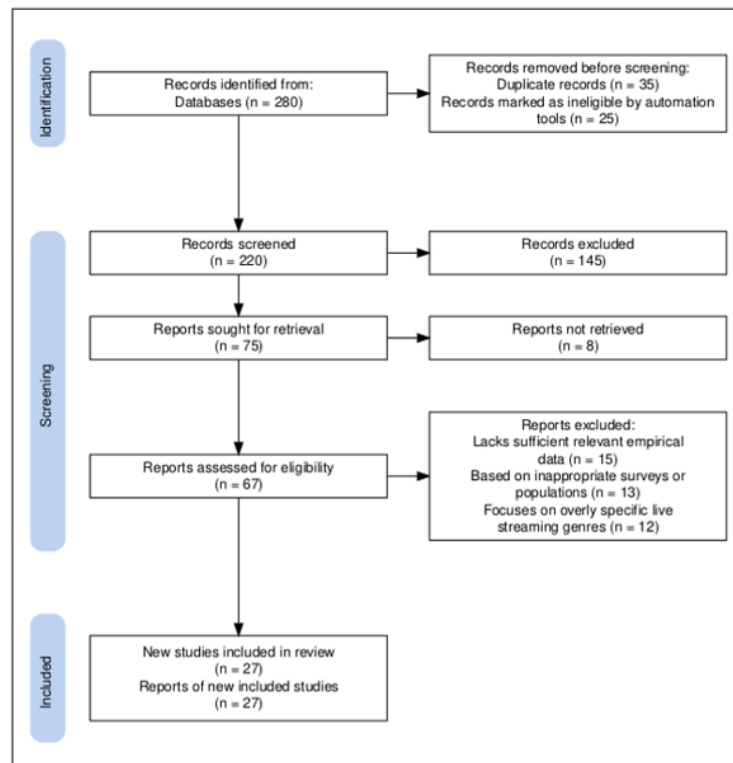


Figure 2. PRISMA diagram

RESULT AND DISCUSSION

There are five thematic points resulted in this study and its discussion, including the engagement factor, audience motivation, platform technology, platform distribution, and genre content.

First, Figure 3 demonstrates the results of the literature analysis. Audience engagement in live streaming is influenced by several interrelated factors. Social and psychological interactions play an important role through PSI which creates a one-way emotional connection between viewers and streamers [11], [12], as well as trans-parasocial relations which encourage reciprocal interactions, increase viewing duration and purchase intentions [12]. It is supported by Mai et al. research [13] which shows that good parasocial interactions can increase trust in streamers. Stock et al. [14] also highlighted the importance of cyber social interaction which creates a virtual human relationship-based experience. Viewer motivation consists of hedonic value (entertainment) and utilitarian value (practical benefits), where Zhang et al. [15] showed hedonic value is highly influential in the entertainment and gaming genres, while utilitarian value is more dominant in the context of e-commerce [16]. Tang et al. [17] found that gifting features enable social recognition from the community. Technological aspects such as live chat and gamification contribute significantly to engagement [18], supported by data-driven recommendation systems that customize audience preferences [19]. The eye-tracking study by Mancini et al. [20] showed that chat interactions attracted more attention than other elements. Interestingly, the study by Zhang et al. [21] found that state boredom is also a significant trigger of engagement, especially during the COVID-19 pandemic, where people seek entertainment and social interaction through live streaming. All these factors work synergistically to create a rich experience and drive audience engagement with streamers and their communities.

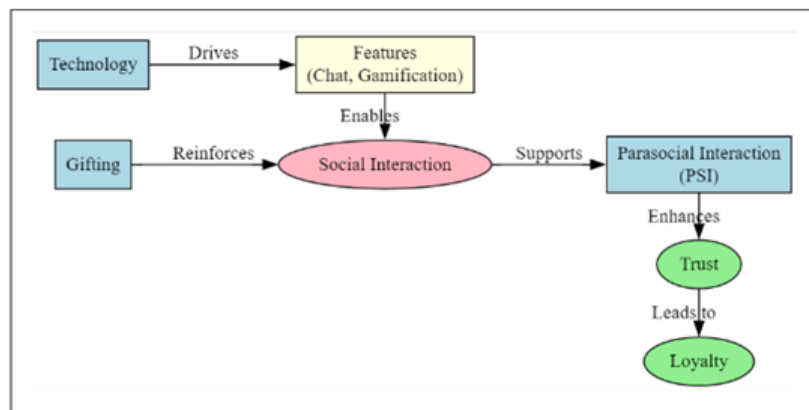


Figure 3. Audience engagement factors

Second, Figure 4 elucidates that the viewers' motivations to engage in live streaming are rooted in various psychological and emotional values that can be grouped into four main categories. Hedonic value is the dominant motivation in the entertainment context, with Zhang et al. [5], and Li [12] found that engaging and interactive content increases viewing intensity, in line with the Uses and Gratifications theory. In the context of e-commerce, Febriyanto et al. [16] showed that utilitarian value is an important motivation, where trust in the streamer's expertise increases the practical value and confidence of viewers to make purchases. Social status and recognition are also significant motivations, with Tang et al. [17] and Zhang [23] demonstrating that gifting not only improves the relationship with the streamer but also strengthens social status within the community, supported by the element of competition in gamification. Interestingly, Zhang et al. [21] identified boredom as a significant new driver, especially during the COVID-19 pandemic, with viewers using live streaming as a means of alleviating boredom and seeking emotional stimulation, facilitated by interactive features such as live chat. These motivations work synergistically to create deeper engagement between viewers and live streaming platforms, providing guidance for platforms and streamers to design more effective engagement strategies.

Third, Figure 5 describes that the technology and platform features play a key role in creating engaging, personalized and interactive viewing experiences through various innovative features. Wang et al. [18] point out that live chat as the most influential feature encourages social discussion and a sense of audience participation, while in the context of e-commerce, Mai et al. [13] found that these interactions increased trust. The gifting feature, according to Zhang [23], not only affects streamer income but also enhances the social relationship between viewers and streamers, although the strength of this relationship may vary by

platform and context. Chen et al. [24] stated that data-driven recommendation systems help extend viewing duration by suggesting relevant content that matches viewers' preferences. Qian et al. [25] showed that gamification elements such as leader boards and virtual rewards increase audience loyalty by adding a competitive dimension. Recent research using eye-tracking technology by Mancini et al. [20] revealed that interactive elements such as chat are more attention-grabbing than static elements such as streamer faces or in-game advertisements, providing new insights for platform developers to prioritize the features that appeal most to the audience. All of these technologies and features work together to increase engagement and create personalized and memorable experiences, helping platforms expand their user base and increase audience loyalty.

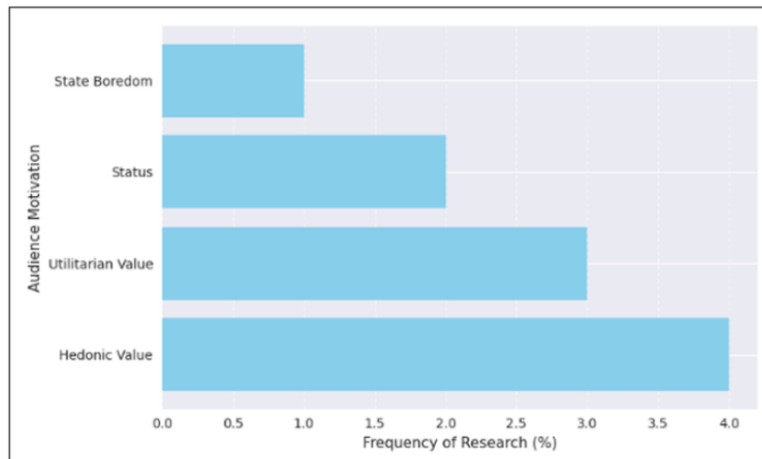


Figure 4. Viewer motivation distribution

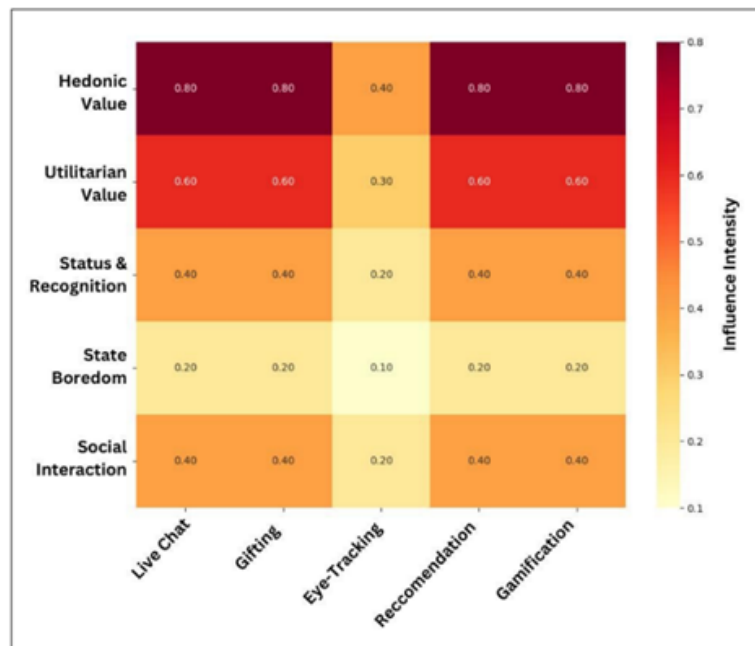


Figure 5. Technology and platform features

Fourth, Figure 6 shows that the platforms used in live streaming are diverse, each offering unique features and ecosystems that influence audience engagement. Li [22] and Jackson [26] point out that Twitch dominates the gaming and esports genres with features such as emoticons, live chat, and a solid community that creates emotional attachment, while Mancini et al. [20] highlighted those interactions on Twitch are not only centred on gaming but also social elements. In the context of e-commerce, Febriyantoro et al. [16] showed that TikTok Live became the main platform in Indonesia for product promotion by utilizing real-

time interactivity between sellers and buyers, supported by an effective recommendation system. China's Douyu platform, according to Zhang [23], focuses on the gaming and gifting genres that are the main source of streamer income and an important tool for enhancing social relationships. Amazon Live introduced a unique format for e-commerce, where Asante et al. [27] found that interview formats were more effective in increasing engagement than tutorial or behind-the-scenes formats. Li [22] also revealed that Twitch became the home of VTubers who use digital avatars, attracting different audiences by utilizing aesthetic elements and unique interactions, expanding the scope from gaming to pop culture-based content. This diversity of platforms shows variations in features, target audiences, and monetization strategies, requiring further research to understand how the combination of these features affects engagement specifically.

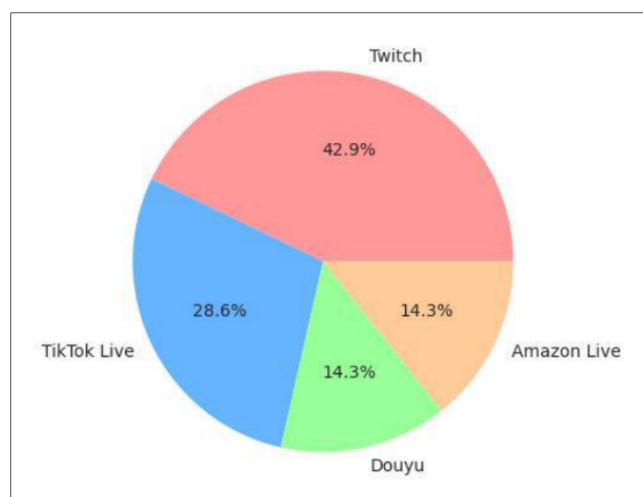


Figure 6. Platform Distribution

Fifth, Figure 7 presents that the genre of live streaming plays an important role in determining the engagement patterns and motivations of viewers with various unique characteristics. Malyuk [28] and Mancini et al. [20] show that gaming and esports remain the most popular genres, serving as both entertainment and social tools that allow communities of players to connect with each other, with the esports subgenre attracting audiences through competition and gamification. In the context of e-commerce, Febriyantoro et al. [16] and Zhang [15] note the growing popularity of platforms such as TikTok Live, Amazon Live, and Douyu, attracting audiences with real-time product information and interactivity through live chat features. Li [22] pointed out the new phenomenon of VTubers who use aesthetic elements and avatar-mediated interaction to create unique viewing experiences that attract audiences seeking immersion-based entertainment and pop culture. For sports and entertainment genres, Qian et al. [29] found that sports co-streaming on Twitch attracts viewers through shared creative experiences and community participation, supported by Mancini et al.'s [20] findings on the importance of interaction in sports and entertainment genres. [30] note the emergence of new genres such as travel that give audiences the opportunity to experience cultures and destinations virtually, creating strong emotional engagement. This diversity of genres reflects variations in audience needs and preferences, with gaming and e-commerce remaining dominant, while new genres such as VTubers and travel show potential for future growth.

This study revealed that audience involvement in live streaming is driven by a combination of social, psychological, and technological elements that work together to provide a rich viewing experience. Social contacts, such as parasocial interactions (PSI) and trans-parasocial ties, were found to be significant drivers of audience engagement. These relationships foster an emotional connection between viewers and streamers, which not only boosts loyalty but also enhances viewing time [12]. Further, entertainment-based motivations (hedonic value) and practical rewards (utilitarian value) are compelling reasons for viewers to stay engaged, particularly in the context of e-commerce and gaming genres. Technology and platform features play a significant influence in increasing engagement. Live chat allows for direct communication, and data-driven recommendation systems assist platforms personalize content to user preferences [24]. On the other hand, things like giving and gamification not only inspire viewers but also provide broadcasters with opportunity to monetize. Recent eye-tracking research shows that viewers' visual attention is drawn to interactive aspects like conversation rather than static items like commercials or streamer faces, emphasizing the relevance of dynamic features in engagement [20]. The studies also demonstrate considerable differences across platforms and genres. Twitch, for example, remains the dominant platform

for gaming and esports, while TikTok Live and Amazon Live are booming in the e-commerce space. New genres like as VTubers and travel have the potential to draw a larger audience, yet research into these genres is still restricted.

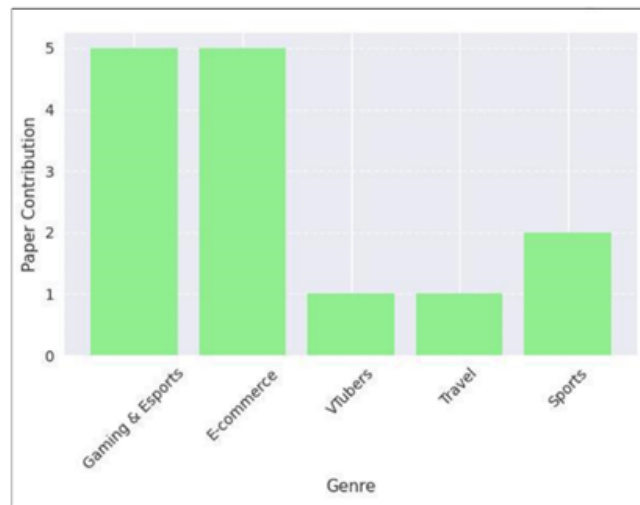


Figure 7. Genre distribution

While many important findings have been revealed, there are some gaps in the research that may create opportunities for future research. The majority of studies focus on global platforms such as Twitch and TikTok, with minimal research on local platforms such as Douyu in China and the use of live streaming in developing countries such as Indonesia, where differences in social and cultural contexts are important to examine especially in terms of beliefs and motivations. Genres such as VTubers and travel that are growing in popularity still have limited research, especially on the impact of avatar aesthetics and virtual experiences on engagement. Current research focuses more on short-term engagement metrics such as viewing duration and purchase intent, requiring more in-depth research on the impact of long-term engagement on user loyalty. While features such as live chat and gifting have been widely researched, new technological breakthroughs such as eye tracking or augmented reality (AR) in live streaming are still in the early research stages. Gifting and e-commerce business models have proven successful, but more research is needed on the effectiveness of other monetization formats and strategies such as interactive advertising and brand collaboration. In addition, there is little research on the emotional and psychological impact of live streaming, such as the risk of addiction or the influence of boredom on content consumption. Based on these gaps, some suggestions for future research include: the use of a cross-cultural approach to compare audience preferences and behaviors across different geographical regions, the development of a more comprehensive theoretical framework to explain engagement in new genres such as VTubers and travel, research into the impact of new technologies such as AR and VR on audience engagement, the conduct of longitudinal studies to understand patterns of audience loyalty and retention, and analysis of the psychological impact of live streaming on consumer mental health, particularly in the context of digital addiction.

CONCLUSION

This research identified five key elements that influence audience engagement in live streaming, i.e., social interaction, motivation, technological features, platform and genre distribution. The findings show that parasocial interaction (PSI) and reciprocal social relationships are important factors in building audience emotional engagement. In addition, entertainment-based motivations (hedonic value) and practical benefits (utilitarian value) drive engagement in genres such as gaming and e-commerce. Platform technology plays a significant role with features such as live chat and data-driven recommendation systems amplifying viewing duration. Platforms such as Twitch and TikTok Live show an advantage in certain genres, while new genres such as VTubers and travel open up opportunities to attract a wider audience. However, there are still some research gaps, such as the lack of exploration on local platforms, the long-term impact of engagement, and technological innovations such as AR/VR in live streaming. Future research is recommended to use cross-cultural and longitudinal approaches to provide deeper insights into the dynamics of audience engagement. The results of this study are expected to contribute to the academic

literature and provide strategic guidance for platform developers, streamers, and businesses in creating more effective and engaging live streaming experiences.

REFERENCES

- [1] T. D. P. Mai, A. T. To, T. H. M. Trinh, T. T. Nguyen, and T. T. T. Le, "Para-Social Interaction and Trust in Live-Streaming Sellers," *Emerging Science Journal*, vol. 7, no. 3, pp. 744–754, May 2023, doi: 10.28991/ESJ-2023-07-03-06.
- [2] O. Buckley, R. Ashman, and M. Haenlein, "Influencing Live: Leveraging Livestreaming to Enrich Influencer Marketing".
- [3] A. Thompson, "Digital 2024: 5 billion social media users - We Are Social Indonesia," 2024.
- [4] Y. Zhang, L. Hua, Y. Jiao, J. Zhang, and R. Saini, "More than watching: An empirical and experimental examination on the impacts of live streaming user-generated video consumption," *Information & Management*, vol. 60, no. 3, p. 103771, Apr. 2023, doi: 10.1016/J.IM.2023.103771.
- [5] S. G. Vitale et al., "Hysteroscopic metroplasty and its reproductive impact among the social networks: A cross-sectional analysis on video quality, reliability and creators' opinions on YouTube, TikTok and Instagram," *Int J Med Inform*, vol. 195, p. 105776, Mar. 2025, doi: 10.1016/J.IJMEDINF.2024.105776.
- [6] Y. Wang, Z. Lu, P. Cao, J. Chu, H. Wang, and R. Wattenhofer, "How live streaming changes shopping decisions in E-commerce: A study of live streaming commerce," *Computer Supported Cooperative Work (CSCW)*, vol. 31, no. 4, pp. 701–729, 2022.
- [7] X. Bian and A. Yang, "From spectatorship to loyalty: Unraveling the influence of game streaming watch and gaming-related social connectivity on MOBA gamers," *Comput Human Behav*, vol. 162, p. 108433, Jan. 2025, doi: 10.1016/J.CHB.2024.108433.
- [8] S. A. Rahman, S. Pane, and S. Hartinah, "Marketing Strategies to Increase Business Revenue Using Shopee Live Streaming Features," *International Journal of Community Care of Humanity (IJCCH)*, vol. 2, no. 5, pp. 631–645, 2024.
- [9] X. Gong, L. Sui, J. Morton, M. A. Brennan, and C. S. Brennan, "Investigation of nutritional and functional effects of rice bran protein hydrolysates by using Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines: A review," *Trends Food Sci Technol*, vol. 110, pp. 798–811, Apr. 2021, doi: 10.1016/J.TIFS.2021.01.089.
- [10] J. Helbach, F. Hoffmann, D. Pieper, and K. Allers, "Reporting according to the preferred reporting items for systematic reviews and meta-analyses for abstracts (PRISMA-A) depends on abstract length," *J Clin Epidemiol*, vol. 154, pp. 167–177, Feb. 2023, doi: 10.1016/J.JCLINEPI.2022.12.019.
- [11] C. Jiang, L. He, and S. Xu, "Relationships among para-social interaction, perceived benefits, community commitment, and customer citizenship behavior: Evidence from a social live-streaming platform," *Acta Psychol (Amst)*, vol. 250, p. 104534, 2024, doi: 10.1016/j.actpsy.2024.104534.
- [12] J. Kim, J. T. Liu, and S. R. Chang, "Trans-Parasocial Relation Between Influencers and Viewers on Live Streaming Platforms: How Does it Affect Viewer Stickiness and Purchase Intention?," *Asia Marketing Journal*, vol. 24, no. 2, pp. 39–50, 2022, doi: 10.53728/2765-6500.1587.
- [13] T. D. P. Mai, A. T. To, T. H. M. Trinh, T. T. Nguyen, and T. T. T. Le, "Para-Social Interaction and Trust in Live-Streaming Sellers," *Emerging Science Journal*, vol. 7, no. 3, pp. 744–754, May 2023, doi: 10.28991/ESJ-2023-07-03-06.
- [14] W. G. Stock, K. J. Fietkiewicz, K. Scheibe, and F. Zimmer, "Cyber Social Interactions: Information Behavior in Between Social and Parasocial Interactions," *Journal of Information Science Theory and Practice*, vol. 10, no. 3, pp. 15–23, 2022, doi: 10.1633/JISTaP.2022.10.3.2.
- [15] H. Zhang, S. Zheng, and P. Zhu, "Why are Indonesian consumers buying on live streaming platforms? Research on consumer perceived value theory," *Heliyon*, vol. 10, no. 13, p. e33518, 2024, doi: 10.1016/j.heliyon.2024.e33518.
- [16] M. T. Febriyantoro et al., "The role of perception of digital celebrities on live stream shopping intention through social interaction in Indonesia," *Cogent Business and Management*, vol. 11, no. 1, p. 2336637, Dec. 2024, doi: 10.1080/23311975.2024.2336637.
- [17] Z. Robin Tang, T. Eric Hu, and M. Warkentin, "Give to give: The gifting motivation and behavior in the social live streaming service," *J Bus Res*, vol. 185, p. 114918, 2024, doi: 10.1016/j.jbusres.2024.114918.
- [18] H. Wang, G. Li, X. Xie, and S. Wu, "An empirical analysis of the impacts of live chat social interactions in live streaming commerce: A topic modeling approach," *Electron Commer Res Appl*, vol. 65, p. 101397, 2024, doi: 10.1016/j.elerap.2024.101397.

- [19] C.-C. Chen and Y.-C. Lin, "What drives live-stream usage intention? The perspectives of flow, entertainment, social interaction, and endorsement," *Telematics and Informatics*, vol. 35, no. 1, pp. 293–303, 2018, doi: <https://doi.org/10.1016/j.tele.2017.12.003>.
- [20] M. Mancini et al., "Esports and Visual Attention: Evaluating In-Game Advertising through Eye-Tracking during the Game Viewing Experience," 2022. doi: 10.3390/brainsci12101345.
- [21] N. Zhang and J. Li, "Effect and Mechanisms of State Boredom on Consumers' Livestreaming Addiction," *Front Psychol*, vol. 13, 2022, doi: 10.3389/fpsyg.2022.826121.
- [22] Y. Li, "Why does Gen Z watch virtual streaming VTube anime videos with avatars on Twitch?," *Online Media and Global Communication*, vol. 2, no. 3, pp. 379–403, 2023, doi: 10.1515/omgc-2023-0030.
- [23] W. Zhang, "Understanding gift-giving in game live streaming on Douyu: An evaluation of PSR/social presence," *Front Psychol*, vol. 13, 2022, doi: 10.3389/fpsyg.2022.953484.
- [24] J. Chen and H. Liu, "Modeling interaction behavior and preference decline for live stream recommendation," *Decis Support Syst*, vol. 179, p. 114146, 2024, doi: 10.1016/j.dss.2023.114146.
- [25] T. Y. Qian, B. Yu, R. Matz, L. Luo, and C. Xu, "Gamification for consumer loyalty: An exploration of unobserved heterogeneity in gamified esports social live streaming," *Telematics and Informatics*, vol. 85, p. 102062, 2023, doi: 10.1016/j.tele.2023.102062.
- [26] N. J. Jackson, "Understanding Memetic Media and Collective Identity Through Streamer Persona on Twitch.tv," *Persona Studies*, vol. 6, no. 2, pp. 69–87, Mar. 2021, doi: 10.21153/psj2020vol6no2art966.
- [27] I. O. Asante, Y. Jiang, and X. Luo, "Does it matter how I stream? Comparative analysis of livestreaming marketing formats on Amazon Live," *Humanit Soc Sci Commun*, vol. 10, no. 1, p. 403, 2023, doi: 10.1057/s41599-023-01860-2.
- [28] Y. Malyuk, "Transformation of the Role of Spectator in the Video Game Live Streaming," *Culture and Arts in the Modern World*, vol. 0, no. 18, pp. 132–147, Jun. 2017, doi: 10.31866/2410-1915.18.2017.155691.
- [29] T. Y. Qian and C. Seifried, "Virtual interactions and sports viewing on social live streaming platforms: The role of co-creation experiences, platform involvement, and follow status," *J Bus Res*, vol. 162, p. 113884, 2023, doi: 10.1016/j.jbusres.2023.113884.
- [30] Z. Deng, P. Benckendorff, and J. Wang, "From interaction to relationship: Rethinking parasocial phenomena in travel live streaming," *Tour Manag*, vol. 93, p. 104583, 2022, doi: 10.1016/j.tourman.2022.104583.