

**Online Gaming and AI Marketing in ‘League of Legends’**

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Course

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There are two trends in the technology and video game industry right now, and they intersect and create interesting dynamics. Increasing machine learning capabilities are helping to drive marketing strategies through their complex learning processes. It is therefore worth exploring how video game developers can use these capabilities to better target online players and their spending behavior. In addition, the impact of COVID-19 can be seen in the increased use of online games by consumers. However, understanding the importance of consumer insight into machine learning marketing strategies is universally important for a wide range of industries.

Some consumers argue that algorithm-based marketing techniques are an invasion of privacy because of the way machine learning technology collects and stores data on user behavior. Other consumers may see these technologies as personalized and don't mind using their data. This study aims to specifically examine online game consumers' preferences on this issue, their thoughts on existing marketing efforts, and the overall effectiveness of machine learning marketing strategies in persuading them to play games or make purchase decisions. Based on this, there are two different areas of focus in the research, one of which is on consumer preferences. Whether consumers accept AI as a form of marketing in online games. Machine learning is closely linked to AI technology. "Intelligent" computers use AI to think like humans and perform tasks on their own. Machine learning is how computer systems develop their intelligence. Another point is to explore how consumers' buying behavior is influenced by machine learning-guided marketing strategies by combining consumer behavior theory.

### **Research Object**

This study will focus on League of Legends, an online game released by Riot Games, to better understand the impact of AI on consumer preferences and the relationship between consumer behavior and machine learning by taking League of Legends as a physical example. The online game League of Legends is free to play, but it makes money through microtransactions in the game. Understanding players' priorities when making purchase decisions, and how they perceive AI recommendation systems, is a key way for companies to maximize revenue, especially if the game is offered to players for free. League of Legends' current AI marketing approach gives players personalized advice, encourages them to buy in-game skins, and promotes them through its "Your Shop" feature. The store offers recommendations based on player behavior and offers time-limited discounts on in-store merchandise. This study will examine AI marketing in League of Legends with the aim of better understanding the preferences of online players for such AI recommendations and studying their attitudes towards these marketing techniques and in-game microtransactions. Not only that, but an analysis of league of Legends physical examples can also help research identify how consumer behavior is affected by these technologies. The results will give video game companies like Riot Games a better understanding of their target audience and a more effective marketing strategy to target them.

### **Research Problem**

Consumer behavior is a social and economic phenomenon arising from the development of commodity economy. Under the conditions of modern market economy with consumer orientation, the study of consumer behavior has become the basis for enterprises to formulate marketing strategies and carry out marketing activities. Therefore, this study aims to conduct an in-depth study on online game consumers' consumption behaviors caused by the marketing

strategy guided by machine learning. The research problem skillfully combines marketing and consumer analysis. Firstly, the relationship between marketing strategy guided by machine learning and consumers' purchasing behavior is studied. Analyze how buying behavior is affected by artificial intelligence technology. In addition, the research will explore the motivation factors that stimulate people's consumption desire, and what become the fuse of consumers' purchasing behavior?

Research questions can help video game companies better understand machine learning capabilities and the consumer impact of AI technology. By using League of Legends as a physical example, the results could also help the video game industry identify consumer preferences and attitudes toward AI technology. Not only that, but the results could inform video game industry participants whether they should add machine learning to their marketing efforts, adjust the current level of this type of marketing, or reduce the use of consumer data to make recommendations to players. The importance of this research question centers on its ability to try to understand the evolving needs of a consumer who is increasingly exposed to a variety of digital marketing strategies. In addition, technology and algorithmic marketing strategies are becoming a common way in which organizations can effectively reach their target audiences. The spread of these technologies has brought with it the potential to create an impersonal relationship between companies and consumers (machine and human). Therefore, it is important that organizations can optimize how they leverage machine learning marketing and ensure that target consumers are appropriately engaged and responsive to these efforts.

### **Literature Review**

The current research relates to studies on a range of topics including consumer behavior theory, models of consumer behavior in an online context, AI dehumanization, and Canada's

online gaming industry. This literature review examines some of the most recent scholarship in all four areas and highlights gaps in the research.

### **Marketing Strategies**

Organizational marketing strategies evolve with online gaming (Abbasi et al., 2021; Willet, 2018). High conversion rates from advertising increase through using incentives, credibility, or irritation (Abbasi et al., 2021; Jeffrey, 2020). Research indicates that advertising revenue generates additional income for game investors, advertisers, and marketers, leading to an AI's demographic information to target consumers (Abbasi et al., 2021; Luo et al., 2011; Wagner, 2020). As the social and economic phenomenon increases access to online gaming, specific demographic information is collected and distributed to advertisers, creating a personalized advertising experience for each player (Liao et al., 2011; Luo et al., 2011; Suh & Alhaery, 2016).

Abbasi et al. (2021) study the significance of pop-up advertising to determine if there is an increase in value to the users. While Abbasi does determine the credibility from similar advertising strategies, the level of trust increases towards the advertisement. This increase in credibility and trust is found in various studies and concludes that users will trust the ad based on their belief in the game creators (Jeffrey & Xinzhi, 2020; Wagner, 2020). With increased trust and credibility, advertisers see a rise in revenue from clicks on such ads (Abbasi et al., 2021; Jeffrey & Xinzhi, 2020; Luo et al., 2011).

Luo et al. (2011) add to the credibility argument by exploring that not only are the advertising events credible, but they are also specifically designed and memorable for the target demographics. Wagner's text (2020) concludes that if users deem an advertisement personalized and memorable, they will follow the ad the next time it appears. The intention of targeted

marketing strategies then leads to continued loyalty and retention of the consumers (Abbasi et al., 2021; Luo et al., 2011; Willet, 2018).

As advertisers increase their knowledge of specific demographics using AI, game makers provide essential and immediate exposure to targeted demographics (Jeffrey & Xinzhi, 2020). Using such interfaces and demographic information should continue being explored to determine continued advantages for advertisers and users, creating a line of communication between the product and the consumer (Wagner, 2020).

### **Consumer Behavior Theory**

In an earlier study, Liao et al. (2011) investigated users' perceptions and beliefs about online privacy, trust, and risk prior to making online transactions. While the authors established that the majority Internet users value their privacy online, their research model found that higher levels of Internet literacy offset the fear of engaging in online activities. Evidently, users believe they have more control over their personal information when they are more familiar with the way websites and Internet tools work. By association, users who are more comfortable online are more likely to make online purchases. On the opposite end, the authors recommend that marketers invest in building trust with target consumers to encourage them to shop online.

Willet (2018), taking a sociocultural analytical approach to understand 8-9-year-olds' perceptions of the gaming industry, affirms that trust has the power to convert consumers. The author conducted interviews with American children and their parents, finding that children are also consumers whose beliefs are influenced by those around them. In this context, parents, educators, and researchers likewise have the potential to alter children's consumer preferences, particularly as they grow up.

### **Models of Consumer Behavior Online**

As a general observation, researchers have noticed that organizations' marketing strategies evolve with online gaming trends. In turn, these strategies influence consumer behavior online. Abbasi et al. (2021) investigated the impact of pop-up ads on gamers' 'inspiration states,' or how effectively targeted ads can convert viewers into buyers. The survey of 321 online gamers used the Ducoffe advertising value model to find that several variables (credibility, entertainment, incentives, irritation, and personalization) are associated with inspiring gamers to make purchases. Essentially, this study proved that targeted ads are highly effective at increasing gamer turnout and raising revenues. Establishing credibility is especially important for marketers, since online users tend to trust gaming ads based on their trust in the creators of the game.

Suh and Alhaery (2016), in a study of online casino gambler turnover or 'churn,' found that customer retention is just as important for gaming companies as customer recruitment. The authors use an algorithm called Exhaustive CHAID (E-CHAID) to predict the likelihood that players will stay or leave an online casino. This phenomenon is termed 'customer churn prediction' and also applies to other monetized online gaming environments, like League of Legends. According to the study, there are 16 variables that predict customer churn, with the top three being the number of days between a player's first and last gaming days, receiving extra bonuses, and a higher frequency of plays. While this study was designed to measure online casino activities, its findings can be applied to understand patterns among other online gamers.

### **AI Dehumanization**

On the subject of artificial intelligence (AI), Sadovykh and Sundaram (2020) evaluate the 'potential dehumanization' that is carried out by AI and machine learning tools in their conference paper. By dehumanization, the authors refer to AI's ability to violate individuals'

privacy, risk their safety, and make controversial decisions that impact society because of its innate programming. Dehumanization is only one effect of growing AI use, yet its consequences extend to online gaming marketing and consumer decisions as well.

Relatedly, Wagner's (2020) study was the first to highlight unintended economic patterns that result from the use of artificial intelligence (AI). Since AI machines are now also involved in the division of labor, data and machine-based labor can be considered factors of production for the companies that developed them. To illustrate this point, the author found that users are more likely to click on ads the second time they see them if they see them as personalized. Yet, like Sadovykh and Sundaram (2020) warn, the use of AI comes with real social and economic consequences, such as market dominance, that can be understood as forms of dehumanization. Nonetheless, Wagner advocates continued exploration of AI interfaces and uses for demographic information to identify more ways that AI can benefit both advertisers and users, thereby creating a stronger line of communication between a company and its consumers.

Jeffrey (2020) likewise affirms that AI is a powerful tool for tracking consumer preferences and manipulating consumers. In this study, consumer behavior theory is described in terms of hyper-contextualization, or a level of marketing personalization that accurately predicts the who, what, where, and when to identify likely consumers. Generation Z college students ('Gen Zers') were surveyed on their perceptions of AI in marketing, demonstrating that this consumer group is most concerned with the use of machine learning to produce psychological profiles but are relatively unconcerned with general AI marketing applications. Gen Zers are, however, considered 'high risk targets' as they are the most susceptible of all demographic groups to social media advertising. Translating these findings to the gaming world, Gen Z gamers can be thought of as the most vulnerable consumer group for marketers to target.



Luo et al.'s (2019) study of AI chatbots adds to the credibility argument raised by Abbasi et al. (2021) by establishing that advertisements can be designed to be perceived as not only credible but also personal and memorable by targeted consumers. Data collected from over 6,200 customers who interacted with chatbots shows that most users did not even suspect that they were interacting with AI technology until it was explicitly disclosed. Moreover, such disclosure stopped potential sales nearly 80% of the time, demonstrating how persuasive AI marketing and chatbot technology can be. In addition, like Liao et al. (2011) the authors of this study found that higher online literacy reduces the likelihood of responding to chatbots and buying their products.

Zhang and Ho (2020) investigated 'co-retweeted networks' on Twitter and demonstrated how AI automatically redirects users according to a set of pre-written code. Essentially, AI-driven communities like Twitter have the power to allow advertisers and game producers alike to gain immediate exposure to targeted demographics with only basic information about who they are seeking. This is meaningful for both marketers and users, who could both benefit from understanding how AI algorithms work and make more informed decisions as a result.

### **Canada's Online Gaming Industry**

Palma-Ruiz et al. (2022) produced one of the latest, and one of the only, studies that provides insights into Canada's gaming industry. The esports study compared North American online gamer transaction trends to those in Europe and Asia between 2017-2019 using predictive analytics and Google trends data. The authors found that European and North American countries show a stronger correlation between game-related spending and GDP per capita, while the opposite is true for Asian countries. Evidently, Canada's online gaming industry follows the same macroeconomic patterns as those of the United States and Europe. Growth is predicted across all the sampled regions, indicating that the Canadian industry will expand as well.

**Research Gaps**

As mentioned, virtually no recent studies have examined the online gaming industry in Canada. Palma-Ruiz et al. (2022) address the Canadian population as one case in their study, yet not many insights were provided. Since Canada and the U.S. tend to be grouped together in such studies, it may be necessary to look at American industry trends as an alternative.

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