

Implementation Methods and Effects of Sephora AI Marketing

Qiaoyu Zhu

*The High School Affiliated to Southern University of Science and Technology, Shenzhen, China
zhuqiaoyu14@gmail.com*

Abstract. Nowadays, using AI technology to improve efficiency is one of the most important research subjects. Researchers found that Sephora use AI and AR technology to improve the efficiency of shopping. However, the reason behind efficiency improvements and their broader implication is not been unified. Therefore, this study collects data, including sales growth and so on, and compare it with initial data to examine how the adoption of these technologies enhancing Sephora's operational efficiency. According to the survey, AI technology has as well as enhanced sales efficiency and the experience of consumers transformed the structure of rights and the relationship between AI and consumers. These positive impacts demonstrate that Sephora must continue to use these technologies and refine them further. Besides, these advanced technologies may lead to data privacy leakage and declining consumer trust issues as well. Therefore, solving these issues has also become part of Sephora's efforts to refine these technologies.

Keywords: Augmented Reality, Artificial intelligence, Sephora

1. Introduction

With the development of technology, how new technology can be used to improve the shopping experience has become an important issue.

Sephora, a leader in cosmetic retail, gives a good example. More importantly, these technologies help to change the structure of consumer rights. However, the new technology used in Sephora also has a negative impact, such as the possibility of consumer privacy being leaked.

Sephora invented an AI chatbot that can solve more than 90% problems, increasing 12% cross-selling rates and 20% repeat purchases rate [1]. In offline settings, the colour IQ and the sensory technology called Instascent enhance the efficiency of shopping, decreasing the cost of trial and error [2, 3]. The data collected by Instascent and colour IQ help Sephora to fill the void in cosmetic shades as well. Nevertheless, how can these technologies ensure consumer privacy? How to ensure a great consumer experience while using AI technology. Exploring these issues is highly significant for Sephora's business development.

This study analyzes the impact of new technologies used by Sephora and its consumers, aiming to evaluate the efficiency of these technologies through objective data analysis. This study extends from the enhanced consumer experience brought by AI to the profound relationship between AI and

consumers and explains how AI transforms the structure of consumer rights and analyzes its impact on Sephora's supply chain.

2. Introduction to core concepts

Sephora is a leader in cosmetic retail. It was established in 1969, they owned 35 markets and more than 3000 stores now. It's more than just a beauty brand, it's also a comprehensive retail platform that integrates various functions, including beauty services digital tools and helping consumer make a decision. In the platform, it sales nearly 500 internationally renowned brands [Sephora Official Website]. In 2024, the company achieved online sales through its website estimated at 3. 336 billion USD [4]. In addition, consumers can enjoy many free treatments provided by Sephora, such as make-up classes. They have opportunity to test 14000 products from 200 brands [3]. These services enhance brand loyalty as the perceived risk to consumers has decreased through trying unfamiliar cosmetics creating a more interactive and novel shopping experienced. Since its establishment, Sephora has maintained an innovative spirit [5]. Sephora's innovative spirit is evident in its product portfolio and store design, as well as in its approach of leveraging technology to enhance—rather than replace—human interaction. The company has always regarded technology as an empowering tool for emotional connection, using AI and AR to reduce purchasing uncertainty and improve customer satisfaction. Sephora's approach demonstrates that successful digital transformation requires not merely the use of cutting-edge tools, but a deep insight into consumer psychology and a commitment to achieving seamless omnichannel integration [1]. This basic advantage of both scale and agility makes Sephora a model case for studying the influence and impact of AI marketing in the beauty industry.

3. Implementation methods and effects of Sephora AI marketing in online settings

According to the article, Sephora has effectively integrated AR technology into its online marketing strategy, for example virtual artists utilize AR technology to interact with consumers. "Sephora Virtual Artist is a really good example of where there was a real customer need," Laughton said. "It can be overwhelming coming into our stores or shopping online, but this makes it easy to help you find your favorite shade and save you time." [3]. Virtual Artist had 1. 6 million visits in the first eight weeks in 2016 [5].

In order to enhance the efficiency of sales, Sephora uses virtual artist and AI-powered chat to help consumers find a suitable product by virtual testing and providing suggestions by integrating customer profiles with usage scenarios. AR experiential marketing is not merely a showcase of technology, also a presentation of creative content [6]. So, in order to keep a novel experience, after the technology developed by Sephora and ModiFace, they add more features every four months since 2016 [3]. It analyzes scene keywords and skin tone to generate multiple virtual color trials, with natural language explanations for recommendations. Now more than 20000 kinds of products can be virtually used by consumers [7]. Additionally, " . It also lets users go through beauty tutorials on their own face digitally to learn how to achieve certain looks [3]. " The core of this technology is it can track facial features accurately. Aarabi, the founder and CEO of Modiface and the core supplier of AR makeup trail, explained that they trained a program that can detect the position of lips and eyes, so they can know where the lipstick or eye shadow should go [3]. Besides, influencers use AR technology to enhance the content to promote products more organically, allowing followers to visualize the same result in real time [8]. Therefore, AR helps Sephora enhance its fame in social media.

Beyond virtual try-on capabilities, the recommended goods or the goods consumers can see is personalized based on their facial data, past purchase history and individual preferences. This strategy has brought a commercial achievement.

"The cross-selling rates increased 12% and repeat purchases increased 20%. Besides, according to Grewal et al., AI chatbots can resolve more than 90% of common questions without human intervention [1]. In the first quarter of 2017, the selective retailing revenue of Sephora's parent company rose 11% [3]. According to these results, the integration of Sephora with AR technology, personalized recommendation systems, AI-powered chatbots are able to enhance the experience of online shopping and improve the efficiency of sales and the customer loyalty.

Furthermore, Sephora's AI can create personalized 'virtual skincare routines' by adapting seasonal changes and lifestyle. This encourage consumer to buy products tailored to their needs rather than accumulating unnecessary items. More importantly, these 'virtual skincare routines' can only get through consultation at the premium store before, but Sephora makes beauty expertise universally accessible.

Sephora's online AI marketing has not merely boosted efficiency and generated commercial profits, but more importantly, has catalyzed a shift in consumer power.

In traditional beauty retail, the information gap, such as colour theory, skin tone and base colour compatibility and product formulation compatibility, and the barriers of trying new product constituted an 'export barrier' dominated by brands, where consumers relied on the professionals judgement of Beauty Advisors, and trying out products required visiting physical counters, often accompanied by social pressure. Fortunately, the Chabot helps consumers schedule appointments with a Sephora beauty professional and assists consumers making their own suggestions [9]. Sephora's AR+AI solution leverages ModiFace's facial tracking technology to transform 'professional color matching' into an autonomous digital behavior for users. Consumers are no longer passive recipients of brand recommendations, but proactive decision-makers armed with real-time visual evidence. This design respond the actual consumer needs, its essence is to encapsulate professional abilities into universal tools, allowing every user to master the "trial and error right" in a zero cost, zero pressure manner.

More innovatively, AI systems generates personalized recommendations by analyzing scene-specific keywords, skin tones, and historical purchase data. It is not merely providing generic "What will you like" suggestions, but creating a conversational decision-making environment. Consumers can understanding the logic of recommendations and try different products helping by natural language. Therefore, the 12% increase in cross-selling and a 20% rise in repeat purchases are not merely efficiency metrics; they reflect a profound psychological shift. This breaks the traditional state where users were often unaware of the rationale behind product recommendations and let AI transforms from 'controller' to 'collaborator'.

In conclusion, Sephora radically transform the beauty retail experience by integrating AI into online settings. The brands use Virtual artist, chat box and interactive tutorial to reduce the shopping anxiety and save time. This technology let consumer have a sense of control and autonomy and make Sephora achieve higher consumer loyalty and repurchase rates which means AI can be the connection between business objective and the actual needs of consumers. Therefore, Sephora has owned 20 million loyalty program members, who shop on a daily and weekly basis [10].

4. Implementation methods and effects of Sephora AI marketing in offline settings

Sephora created colour IQ to help consumers to select the foundation that best suits their skin tone. In order to prevent make-up results from varying because of the differences of the lighting and to

ensure a better shopping experience of consumers, Sephora collaborated with Pantone to develop a hardware device that can filter external light to see consumers' real skin tones, then select the most suitable foundation from store. This technology not merely solves the long-standing colour selection problem for consumers but improves purchase conversion rate and satisfaction. Sephora collaborated with brands to create more diverse shades of foundation by using the data collecting from Color IQ. Since then, company has expanded its foundation product line by 2900 new varieties [2]. It demonstrates AI not merely focuses on enhancing the consumer experience for front-end consumers but can convert consumer data into information for product development, product demand and investment capital planning, forming a data-driven business closed loop.

In some stores in North America, they allow consumers to experience the fragrance products through the touch-screen and scented air by using a sensory technology called Instascent. Consumer only needs to complete an online scent profile, then Instascent can provide 18 different perfumes for consumers to test using a dry air delivery system, so consumer can smell them without trying them on [3]. As the result of this new technology, it reduces discommodity of repeated testing different perfumes and enhances the efficiency of shopping. Furthermore, this technology can attract more consumers to have a novel experience, so that the consumer base will be expanded.

AI that is used in offline retail in Sephora means the complete verification of 'consumer-centric AI' from theoretical proposition to practical implementation. The core idea is to extend individuation from "online exclusive" to "omnichannel integration".

More importantly, with the use of AI in offline shopping, it reveals "consumer-centric AI" should not be narrowed to "online chat bot". AI can solve more than 90% consumer's question online. However, AI using in offline assuming the 'sensory verification' function that cannot be replicated by digital channels, such as Colour IQ [3]. These two elements complement each other and jointly build an integrated and comprehensive artificial intelligence ecosystem that focuses on meeting consumers' real needs, rather than just serving as a digital substitute for physical services. This integration marks the maturity of AI-driven retail transformation.

The underlying logic of artificial intelligence reshaping the retail industry lies in the full chain connection of data and accurate prediction of user behaviour. Take the case of Sephora for an example, from Color IQ's visual recognition and Instascent's olfactory simulation, to the data-driven expansion of its product lines, AI has not only boosted the operational efficiency of brick-and-mortar stores, but also driven a digital transformation of organizational workflows.

According to the practice of Sephora, the core value of AI in offline retail is not the digital retail experience substitution, but it embeds into the consumer journey, continuously creating personalized and quantifiable commercial outcomes.

Beyond the benefit from operational and user experience aspects, using AI in offline settings also marks a strategic transformation, from passive, responsive services to proactive, insight-driven generation. Take Colour AI for an example, it helps consumer to find a suitable foundation as well as collect a large amount of data which can help to predict the sales in the future and create a new product. For example, Colour IQ has collected more than 100,000 data, which help Sephora find an insufficiency in the range of foundations in medium-to-dark shades. Six months later, the quantity of Pro Filt'r foundation products extended from 40 to 50. Furthermore, according to the data collected by Instascent, it shows that consumers who try more than five perfumes in a single session are 34% more likely to abandon their purchase. This result makes Sephora to redesign the store interface, reducing the initial recommendations to 3. This change increases the perfume conversation rate at pilot stores by 18%. These cases illustrate offline AI is not merely a marketing gimmick, but a

sophisticated tool for enabling precise decision-making—each data point can be translated into actionable operational adjustments that directly impact revenue growth and cost efficiency.

In conclusion, the key lies in how these offline touchpoints complement online data flows, creating a comprehensive 360-degree view of consumers. So it can provide the supply chain with information. They consider physical stores as data-rich laboratories, not mere transaction venues.

5. Discussion and suggestion

In offline store, when customers are browsing stores, Sephora can activate Bluetooth to send location-based notifications to mobile users, such as promotional offers, new product updates, and discount deals.

However, using this strategy requires greater efforts to strengthen privacy protection measures. In order to improve privacy protection, Sephora has to consider the transparency and user control power. Consumers have to have the power to consent to or decline notifications and real-time location tracking.

Overloading users with notifications will destroy the enjoyment of shopping in the store. So there is a problem that how to balance the use of AI and the original service experience. Sephora should restrict the notifications that are sent by AI. Besides AI should learn individual preferences. For example, if someone is interested in discount instead of new product, then AI should push the discount notifications more. More significantly, artificial service has to play the most important role in the offline store.

As compared to AI, they can know a deeper understanding of your needs and emotions. In addition, AI is an excellent assistant when there are large crowds or when consumers prefer not to socialize.

To improve the efficiency online, Sephora can allow consumers to describe their needs in natural language as well, as Sephora's online search still relies on brands and keywords for now. The consumer turnover rate can be very high if they have to browse through a large number of products. Thus, AI needs to screens and matches products in a short time after consumers describe their needs. So the time consumer has to spend will reduce and the match degree will increase.

Although there is a AR technology, it is limited to makeup colour dimension. So there is a problem that consumers cannot know the core experience of skincare or foundation products such as texture, feel and longevity. In order to solve this problem, Sephora had better to a new technology that can stimulate the effect of the product on skin, including the long-lasting makeup look under different lights and flat makeup look or glowing skin look.

6. Conclusion

In conclusion, this essay examines the impact of different new technologies on Sephora's online and offline operations. The author found that these technology enhance the efficiency of sales and the shopping experience of consumers. More importantly, it helped refine the cosmetic colour palette and improve the supply chain. It help to change the structure of rights and the role of AI in shopping as well.

However, there are also many shortages and problems such as receiving an excessive number of notifications. So in order to solve these problems, Sephora only need to send a few notifications that may interest consumers through Bluetooth in offline stores. More importantly, human service should still remain the dominant feature of offline stores as they can understand consumers' demand better. In online stores, Sephora should add natural language description feature to reduce the searching

time. Besides, AR technology requires the ability to simulate the looks of makeup products under different conditions.

Overall, the new technologies using on Sephora make positive impacts and Sephora still needs to refine the technology to bring a better experience.

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