



THE INFLUENCE OF XIAOHONGSHU'S ALGORITHMIC RECOMMENDATIONS ON
BEAUTY CONSUMPTION DECISIONS: A STUDY OF MALAYSIAN FEMALE
STUDENTS AT UTAR

OH CHEAU XIN

A RESEARCH PROJECT
SUBMITTED IN
PARTIAL FULFILLMENT FOR THE AWARD OF
BACHELOR OF COMMUNICATION (HONS) JOURNALISM
FACULTY OF ARTS AND SOCIAL SCIENCE
UNIVERSITI TUNKU ABDUL RAHMAN

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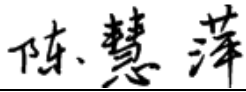
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APPROVAL SHEET

This research paper attached hereto, entitled “The Influence of Xiaohongshu’s Algorithmic Recommendations on Beauty Consumption Decisions: A Study of Malaysian Female Students at UTAR” prepared and submitted by Oh Cheau Xin in partial fulfillment of the requirements for the Bachelor of Social Science (Hons) Psychology is hereby accepted.



Supervisor

Supervisor’s name: Dr. Tan Huey Pyng

Date: 10 May 2026

ABSTRACT

This study explores how Xiaohongshu's algorithmic recommendation system influences the beauty consumption behaviour of Malaysian female students at Universiti Tunku Abdul Rahman (UTAR). As Xiaohongshu continues to expand beyond China, its popularity among young Malaysian women has increased significantly. While previous studies mainly focused on user-generated content (UGC) and Chinese users, limited research has examined the role of algorithmic recommendations in shaping beauty-related purchasing decisions within the Malaysian context. Guided by Algorithmic Media Theory and Social Cognitive Theory, this study adopts a qualitative research approach under the interpretivist paradigm. Data were collected through three online focus group discussions involving 12 female UTAR students aged 18 to 25 who actively consume beauty-related content on Xiaohongshu. The findings reveal that participants engage in habitual and passive browsing behaviour, relying heavily on Xiaohongshu for beauty information, product reviews, and trend updates. The algorithmic recommendation system reinforces repeated exposure to similar content, shapes product awareness and brand perceptions, and contributes to unplanned purchasing behaviour through personalised and repetitive recommendations. The study highlights the significant influence of algorithms in reconstructing users' beauty consumption cognition and emphasises the importance of digital literacy and consumer awareness in the algorithm-driven social media environment.

Keywords: Algorithmic Recommendations, Xiaohongshu (REDNote), beauty consumption decisions, Malaysian university students, algorithmic media theory

Subject Area: HM1041–1101 Social perception. Social cognition)

DECLARATION

I declare that the material contained in this paper is the end result of my own work and that due acknowledgement has been given in the bibliography and references to ALL sources be they printed, electronic or personal.

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Date : 10 May 2026

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CHAPTER 1 INTRODUCTION

1.1 Background of Study

Since the early 21st century, the rapid development of social media has been largely driven by major technological advancements such as widespread adoption of smartphones and digital transformation (Dandekar et al, 2018). These technological changes have made a wide variety of content more accessible online than ever before. Among girls and young women, with ages between 18 and 24, the most popular social media content category is beauty-related content (Seekis & Barker, 2022 ; Seekis & Kennedy, 2023). Social media is an effective tool for reshaping user's cognition, because continuous exposure to online content can influence, shape, or even reconstruct their cognition (Xu et al., 2024; Stella, 2022). User's cognition refers to how individuals perceive and evaluate information when interacting with media, products, or online content. It influences users' understanding of brands, information, and even themselves. While user cognition has been widely discussed as the process by which individuals interpret and evaluate media content that influences their decisions (Fu & Li, 2022), this study understands user cognition as the process by which young women interpret their repeated exposure to social media content, translate these interpretations into consumption-related attitudes and behaviours.

Over the past decade, the expansion of China social media in the global market has been particularly significant, driven by the rapid development of platforms between 2013 and 2014 (Pick et al., 2025). The number of Chinese social media users living outside China has grown significantly, and these platforms have also gained increasing attention from users in other countries (Hu et al., 2020). Xiaohongshu (REDnote) is an online shopping and social media platform in China, founded in 2013. It is a social media platform that merges lifestyle sharing and e-commerce. It allows users to share lifestyle content such as beauty, fashion, travel,

and food through “notes”, and also allows users to directly discover and purchase products within the platform. Xiaohongshu’s ease of use stems primarily from its visual design, which is ideal for uploading photos and short videos, along with text descriptions and hashtag (Tan, 2024). According to Tian et al. (2022), Xiaohongshu transformed from a sharing community into an e-commerce platform between 2013 and 2014. The platform is divided into two sections: a social sharing community and an online shopping mall. Users are able to access beauty tips, fashion tutorials, travel sharing, and even learn from experiences in the social sharing community and consume online in the shopping mall.

According to Yin et al. (2024), Xiaohongshu entered Malaysia around 2018. The number of Chinese using Xiaohongshu increasingly significantly, especially during and after the period of Covid-19 pandemic. According to industry reports, there are approximately 2.5 million to 3.5 million Xiaohongshu users in Malaysia, the majority of whom are women aged 18 to 35, with a particular concentration in the 25 to 30 age group (Ngu, 2025). Xiaohongshu also plays an increasingly important role in shaping shopping trends and cultural exchange among Chinese users living outside China (Jie et al., 2021). These platforms have become key tools for daily interaction, encompassing multiple functions such as entertainment, shopping, and information dissemination.

A key feature that drives Xiaohongshu’s popularity is its heavy reliance on user-generated content (UGC), a highly regarded marketing tool. It refers to any content not created by brands or companies, but users themselves, such as comments, photos, or videos. Its value lies in the fact that people tend to trust the experiences of genuine users more than official advertisements. In other words, consumers connect with brands, engage in interactive activities, express themselves, and contribute to content creation (Huotari et al., 2015). UGC is highly trusted on social media platforms today compared to other content because it can be seamlessly integrated into the editorial content of social media platforms (Mayrhofer et al., 2020).

According to Tseng et al. (2022), Generation Z has less trust in traditional advertising. They rely more on UGC in making purchasing decisions. In Southeast Asia, this behaviour is particularly obvious among young people in Malaysia. They not only use social media for interaction but also use social media as an important cognitive tool for building lifestyles and evaluating information (Xu et al., 2024). The research of Xu et al. (2024) points out that continuous exposure of Malaysian students to social media content significantly change their perceptions of lifestyle choices and self-presentation. Xiaohongshu's strategy of combining high-quality lifestyle sharing with e-commerce functionality has successfully solidified its leading position in the Malaysian markets (Yin et al., 2024). As of 2023, approximately 70% to 80% of Xiaohongshu users were female, and over 72% were born after 1990. A CBN study further indicates that 46.39% of users are between 18 and 24 years old, and 36.08% are between 25 and 34 years old (iClick Interactive, 2025). These figures suggest that Xiaohongshu's user base is primarily composed of young, urban, and tech-savvy women.

Given that Xiaohongshu's user base is mainly composed of young women, discussions about beauty-related content on the platform unavoidably revolves, which plays a vital role in their consumption decision. Beauty content generated by the real users become a core feature of Xiaohongshu since its inception, encompassing product reviews, skincare tips, makeup tutorials, and beauty trend recommendations. The content presented in various formats, including text and images, short videos, and comments. Users provide relevant information to other users by showcasing product effects or sharing their personal experiences (Mei, 2024).

UGC is widely considered a key factor in shaping social media user perception. However, on platforms like Xiaohongshu, UGC is not presented in an unfiltered or random manner but rather sorted and prioritized by the platform's "algorithmic recommendation system". The algorithmic recommendation plays a powerful yet invisible gatekeeper role, essentially determining which content enters and shapes users' cognitive reality. Therefore,

Xiaohongshu users' cognitive environment is not only a product of community sharing but also a product constructed by algorithmic recommendation. However, the operational logic of this gatekeeper algorithmic recommendation and its profound impact have not yet been fully studied.

Similar to other social media platforms, Xiaohongshu relies heavily on personalized algorithmic recommendations to determine which posts to show users and the frequency of specific content categories. For instance, the TikTok's "For You Page". Likes, favourites, time viewing, keywords, searching and followed accounts are all factors the platform's mechanism uses to infer a user's personal preferences (Röchert et al., 2020). Subsequently, the Xiaohongshu algorithm recommends content that matches these predicted interests, creating a highly personalized information stream that encourages continued user engagement.

Previous studies suggest that algorithmic recommendation systems may create reinforcement loops (Yuhelna et al., 2025), which could influence how users perceive product information. However, how this process operates among Malaysian female university students on Xiaohongshu remains underexplored. According to Yu (2023), personalized algorithmic recommendations can effectively reduce information overload for users; however, because all "not interested" information is filtered out, users are more likely to only encounter content they are already interested in. Over-reliance on personalized algorithmic recommendations on social media creates a narrow information environment, confining users to a limited range of information, forming an information cocoon.

Information cocoon can lead to a monoculture. According to Kleinberg and Raghavan (2021), algorithmic recommendations lead to a circumstance where, despite the seemingly increasing number of content choices with the rise of social media, more and more of people are appreciating the same songs, movies, and TV shows. As algorithms are trained on collective

social feedback, our choices are constantly decreasing and converging. On lifestyle and beauty platforms like Xiaohongshu, monoculture manifests not only in the homogenization of content but also in the standardization of aesthetic norms and consumer behaviour. When users are constantly being recommended similar aesthetic ideals, popular skincare routines, or trending cosmetics, this content collectively shapes people's perceptions of what is normal, valuable, or necessary. Over time, this algorithm-reinforced model fosters the formation of a mainstream beauty culture that transcends individual differences, encouraging users to adopt shared preferences, habits, and even purchasing behaviour.

According to Ng et al. (2024), the user base of Xiaohongshu is primarily young people. Malaysian Generation Z is highly information-savvy, and they value social influence in their purchasing decisions. Since the majority of Malaysian female university students fall within the Generation Z age group, these Gen Z behavioural patterns are directly relevant to understanding this demographic. They are highly engaged with the platform, especially with beauty-related content. As young women in the early stages of their lives, they are actively paying close attention to beauty tips and product reviews circulating on Xiaohongshu.

An increasing number of individuals are inclined to communicate and obtain information through social media, and consumers are beginning to rely on social media platforms to discover and purchase products. In this context, the interaction between Malaysian female university students and UGC related to beauty makes them more susceptible to algorithmic recommendations, which continuously filter and reinforce their exposure to specific products and beauty concepts. Therefore, Malaysian female university students are an important subject for studying how Xiaohongshu's algorithmic recommendation shapes beauty consumption behaviour.

Although Xiaohongshu has become one of the most influential social media platforms among young users in China, existing academic research on the platform primarily focuses on users in China. Most studies emphasize content creation practices, influencer culture, and consumer behaviour within the Chinese domestic market, while research on Xiaohongshu usage in Malaysia remains very limited. Furthermore, while a growing body of literature explores the impact of beauty consumption and social media, few studies incorporate algorithmic recommendation mechanisms into the analysis of beauty-related decisions. Existing research typically considers UGC as the primary source of influence, neglecting the crucial role of algorithmic recommendations in shaping and constructing the content ultimately received by users.

Although female university students are active users on social media and beauty consumers, heavily utilize social media platforms to browse beauty related content, there is a lack of research specifically targeting them, with most studies categorizing them as Generation Z. To date, limited empirical research has systematically examined how Xiaohongshu's algorithmic recommendation system influences the beauty consumption decisions of Malaysian female students at UTAR. Thus, this gap highlights the need for further research within this demographic and socio-cultural context.

1.2 Problem Statement

While Malaysian female university students frequently use Xiaohongshu to obtain beauty-related content and information, the specific role of Xiaohongshu's algorithmic recommendations in shaping their beauty consumption behaviour remains unclear. Existing research primarily focuses on Chinese users and considers user-generated content (UGC) as the main driver of beauty decisions. However, these studies often overlook the fact that UGC

on Xiaohongshu is not spontaneously generated but rather the result of algorithmic filtering. This suggests that users' understanding of beauty products and their beauty consumption process may be influenced not only by community sharing but also by algorithm-driven reinforcement loops. However, existing literature rarely incorporates algorithmic mechanisms into beauty consumption research.

Research about Xiaohongshu in Malaysia is still in early stages, particularly among Malaysia growing female university student user base. At the platform level, research primarily focuses on business model and cultural impact in China. Next, at the regional level, Yin et al. (2024) explored the strategic expansion in Malaysia and Singapore; Xu et al. (2024) discussed the cognitive impact on Malaysian students. As the platform's influence is a relatively new social phenomenon in Malaysia, scholars have yet to have the opportunity to study it in depth. Existing research (Ng et al, 2025 ; Tseng et al., 2022) often categorizes these young women broadly as the Generation Z (Gen Z) without delving into their unique consumption behaviours, media usage habits, or decision-making processes. Similarly, the role of Xiaohongshu's algorithmic recommendations in constructing user experience has not been systematically studied. This research gap indicates that this is an area worthy for further exploration. This study investigates how platform's algorithmic recommendation system relates to the beauty consumption habits of UTAR female university students. Such investigation will contribute to a more nuanced understanding of the impact of digital media. At the same time, this study serves to support the development of informed digital literacy and consumer awareness strategies.

Therefore, the core question remains: how and to what extent does Xiaohongshu's algorithmic recommendation shape and influence the beauty consumption of Malaysian female students at UTAR? Without clarifying this algorithmic mechanism, the understanding of how social media influences consumer behaviour remains incomplete, potentially leading us to

over-attribute it to community sharing while ignoring the powerful, invisible hand within the platform's code. This study aims to identify this ambiguity by explicitly exploring the role of the algorithm, thereby filling a crucial gap in the discussion surrounding social media and Malaysian female university student consumption.

This study focuses on Malaysian female students aged 18 to 25 at Universiti Tunku Abdul Rahman (UTAR) who actively use Xiaohongshu and frequently browse beauty-related content. This study examines ordinary users, not content creators, influencers, or commercial sellers. The study explores three main aspects: (1) the students' behavioural patterns when browsing the beauty-related content on Xiaohongshu; (2) the impact of algorithmic recommendations on their product awareness and purchase intentions; and (3) the relationship between Xiaohongshu's algorithmic recommendations and the unplanned beauty-product purchasing behaviour. This study focuses only on beauty-related content (makeup and skincare) and does not cover other categories such as fashion, travel, lifestyle, or entertainment. The research platform is limited to Xiaohongshu, and a qualitative research method is used, collecting data through in-depth interviews with participants. The results will reflect the experiences and perspectives of a specific group of Malaysian female students at UTAR and are not intended to be generalized to all Malaysian social media users or all Generation Z consumers.

1.3 Research Objectives

1. To identify the fundamental behavioural patterns of UTAR female university students consuming beauty-related content on Xiaohongshu.
2. To examine the impact of Xiaohongshu's algorithmic recommendations on students' awareness of beauty products, brand attitudes, and purchase intentions.

3. To explore the relationship between Xiaohongshu's algorithmic recommendations and the unplanned beauty-product purchasing behaviour of UTAR female university students.

1.4 Research Question

1. What are the fundamental behavioural patterns of UTAR female university students when consuming beauty-related content on Xiaohongshu?
2. How do Xiaohongshu's algorithmic recommendations shape UTAR female university students' cognition of beauty products, brand attitudes, and purchase intentions?
3. What is the relationship between Xiaohongshu's algorithmic recommendations and the unplanned beauty-product purchasing behaviour of UTAR female university students?

1.5 Significance of Study

This study has significant academic and practical value, especially given Xiaohongshu's growing influence beyond China and its increasing impact on the consumption patterns of young Malaysian users. Although Xiaohongshu's influence is growing daily, research specifically focused on the Malaysian context remains scarce. Therefore, this study contributes to several areas of knowledge.

First, this study bridges the research gap in existing literature by examining the role of algorithmic recommendation systems in beauty product consumption within the Malaysia context. Previous research has emphasized the impact of UGC on purchasing decisions, but it has overlooked the fact that content presentation is algorithmically filtered rather than user-selected. By investigating how algorithmic recommendations influence users' consumption

behaviour, this study deepens the theoretical understanding of digital consumer behaviour and the media effects of social media platforms.

On the other hand, this study focuses on Malaysian female students at UTAR, a group often categorized as part of the broader Generation Z. By analyzing their algorithm-driven consumption responses, this study provides a deeper perspective and understanding of this under-researched yet highly influential consumer group. This study expands research on Xiaohongshu to other countries, moving beyond its Chinese roots and enriching the academic discussion in a multicultural context.

Next, this study has significant implications for digital literacy, consumer awareness, and media education. It reveals how algorithmic reinforcement loops shape users' perceptions of beauty products and may lead to unplanned purchases. These findings can help organizations design more effective educational campaigns to assist young consumers in better understanding and responding to the influence of algorithms on social media platforms. Educators, policymakers, and consumer advocacy organizations can leverage these insights to promote more informed and responsible media consumption among young people.

Furthermore, the study has practical value for businesses, marketers, and beauty brands operating on Xiaohongshu. Although the primary operational goal of business and brands is profit, understanding how algorithmic recommendations influence user engagement and purchase intent helps them design content strategies that strike a balance between commercial, transparency, and ethical considerations. This includes developing marketing strategies that acknowledge the powerful influence of platform's algorithmic recommendation and also respecting consumer autonomy.

Overall, this study contributes to a more comprehensive understanding of how social media algorithmic recommendation systems are reconstructing beauty consumption in the

digital age on Xiaohongshu. By focusing on Malaysian female students at UTAR, this study aims to provides a valuable insights that not only enrich academic research but also offer references for related practices in fields such as media literacy, consumer behaviour, and digital marketing.

CHAPTER 2 LITERATURE REVIEW

2.1 The Role of Social Media in Shaping User Cognition

With the rapid development of technology, social media has become a necessary part of young people's daily lives, and its role in shaping users' cognition is increasingly attracting scholarly attention. Continuous exposure to online content can influence, shape, and even reconstruct users' cognition (Xu et al., 2024; Stella, 2022). User cognition refers to how individuals perceive, interpret, and evaluate online information, which affects their understanding of brands, products, and even themselves, ultimately influencing decision-making processes (Fu & Li, 2022). Understanding how user cognition is formed on social media platforms like Xiaohongshu, which combine social media sharing with e-commerce, is important for analyzing consumer behaviour, especially among young female university students.

Empirical studies have revealed both positive and challenging effects of social media on social media users' cognition. Naik et al. (2025) reviewed the effects of social media on users' cognitive development, finding that moderate use of social media can enhance users' memory and language abilities, while excessive use may impair users' attention and executive function. Jain (2025) similarly reported a moderate to strong positive correlation between social media use and cognitive abilities such as attention and memory, suggesting that purposeful engagement contributes to the cognitive development of young users. However, Montag and Markett (2023) highlighted potential cognitive deficits, pointing out that excessive fear of missing out (FoMO) can lead to excessive social media use, resulting in everyday cognitive errors such as inattention and decreased task focus. These findings underscore the moderating role of individual engagement patterns and psychological characteristics in the cognitive effects of social media.

Beyond the general effect of personal perception, social media significantly influences users' brand and product perceptions and consumption decisions. Liu (2023) emphasizes that users gain brand information and product reviews through social media platforms, thereby forming new cognition and influencing their consumption behaviour. Through behaviours such as commenting, liking, sharing, and interacting with content, users' brand cognition is reinforced, demonstrating how social media constructs and influences cognition. Furthermore, Lang (2024) points to cognitive load, a key factor shows that processing large amounts of information and engaging in social interactions on social media can lead to inattention, potentially affecting users' decision-making. This concept is particularly crucial for Xiaohongshu users, as they are constantly exposed to beauty-related content through algorithmic recommendations. The algorithm filters and prioritizes content, subtly shaping users' attention and cognition.

The interaction between social media content exposure, platform algorithmic recommendations, and cognition process reveals how social media actively shapes users' cognitive. Xiaohongshu's personalized recommendation system reinforces users' interest, strengthens aesthetic norms, and guides purchasing behaviour by continuously showing beauty-related content (Yuhelna et al., 2025). This aligns with the attention economy framework, which posits that platforms maximize user engagement by managing users' attention, potentially limiting users' exposure to different or previously unseen viewpoints (Xu et al., 2024; Stella, 2022). Therefore, social media not only serves as an information platform but also acts as a powerful cognitive reconstructing mechanism, influencing Malaysian female university students' perceptions, evaluations, and purchasing decisions regarding beauty products.

In summary, existing literature demonstrates that social media shapes user cognition through continuous exposure, psychological engagement, content interaction, and algorithmic

filtering. Moderate and purposeful use of social media can enhance cognitive abilities, while excessive or psychologically driven use may increase cognitive load and attention deficit. These dynamic changes are crucial for understanding how Xiaohongshu's algorithmic recommendations influence the beauty consumption behaviour of Malaysian female university students. However, these literature still has several limitations. First and foremost, most studies analyze young adult users as a whole, lacking research specific to particular countries or cultural backgrounds. Second, many studies emphasize the overall cognitive effects of social media, but have a gap of exploration of the cognitive impact on specific content categories, such as beauty product information. Therefore, this study will focus on Malaysian female university students, exploring how Xiaohongshu's beauty-related content influences their consumption behaviour through cognitive shaping, thereby supplementing the deficiencies in existing literature.

2.2 User-Generated Content (UGC) and Beauty Consumption

User-generated content (UGC) refers to content created by consumers, not brands or companies, including comments, tutorials, photos, and videos shared on social media platforms (Huotari et al., 2015). The core value of UGC lies in its perceived authenticity and credibility, which often surpasses traditional advertising in influencing consumer perception (Mayrhofer et al., 2020). Unlike official and brand-promoted content, UGC is integrated into the natural flow of social media interaction, making it more trustworthy and easier for social media users to resonate with. In the beauty and cosmetics sector, UGC typically includes product reviews, makeup tutorials, skincare demonstrations, and before-and-after comparisons, providing practical information and firsthand experience (Mei, 2024). These characteristics enhance users

perceived reliability of the content because they can see tangible results from real peers, reducing scepticism and increasing trust and engagement with the platform.

Empirical research shows that the credibility of UGC can significantly predict consumer attitudes and purchase intentions. Tan and Noor (2025) found that credibility is the most critical factor influencing Malaysian consumers' purchasing decisions, especially because UGC maintains authenticity even under scrutiny, unlike influencer-generated content, whose influence can be affected by scepticism, with consumers potentially suspecting influencers of recommending products for marketing purpose or profit. Nosita and Lesari (2019) also found that consumers' attitudes towards UGC and their perceived credibility directly influence their willingness to purchase beauty products, while simple interactive behaviours such as liking, sharing, or commenting have less predictive power on actual purchase behaviour. These behaviours are merely social interactions and do not necessarily mean that consumers will actually buy the product. Muda (2019) emphasizes that three dimensions of information source credibility, which are credibility, professionalism, and attractiveness, jointly influence consumers' purchase intention, with professionalism having a particularly significant impact on products with high engagement. In conclusion, these findings highlight the crucial role that the authenticity and verifiable knowledge of UGC play in shaping consumer perception and decision-making.

Beyond credibility, UGC can enhance product awareness by repeatedly showcasing new products and brands to users in a contextualized and highly interactive manner. Through visual demonstrations, detailed reviews, and peer narratives, UGC enables consumers to form initial perceptions and attitudes towards brands and products (Ramadhan et al., 2025). In the beauty consumer sector, UGC allows users to evaluate a product's efficacy, ease of use, and social relevance before purchasing, leading to more informed decisions (Mei, 2024). The consumer value framework further explains how UGC exerts its influence through multi-

dimensional benefits. Functional value enables consumers to evaluate product performance; social value reflects peer influence and recognition; and emotional value evokes satisfaction or pleasure through interaction with aesthetically pleasing content. These dimensions collectively shape consumers' attitudes toward UGC, their adoption behaviour, and ultimately influence their purchase intentions (Chung, 2025).

UGC can directly increase consumers' purchase intention because it reduces the perceived risk they feel when facing new or unfamiliar brands and products. Watching real demonstrations or experiential reviews can enhance consumers' confidence in product quality and expected results (Chung, 2025). When consumers are repeatedly exposed to beauty-related UGC, they develop a stronger sense of familiarity with the products, enhanced cognitive engagement, and greater mental involvement. This builds an understanding and preference for the product and brand in their minds, which further influences their purchasing behaviour (Tan & Noor, 2025; Nosita & Lestari, 2019). For example, skincare research based on TikTok shows that UGC is an important source of information, these content enabling users to understand how to use products and their efficacy before purchasing (Ramadhan et al., 2025). Therefore, UGC plays a role in both information delivery and persuasion, enhancing consumer awareness, shaping attitudes, and increasing purchase intention.

Furthermore, the visual appeal, practicality, and experiential quality of UGC on social media give it a particularly significant influence in beauty consumption. Users typically rely on peer reviews to get cues about aesthetics, product performance, and social acceptance, incorporating this information into their cognitive assessments and subsequent purchasing decisions (Mei, 2024). The influence of UGC is further enlarged by platforms like Xiaohongshu's heavy reliance on algorithmic recommendation systems to expand content exposure, guiding users to repeatedly engage with specific beauty products and trends. Therefore, UGC not only helps users make informed decisions but also plays an important role

in shaping young consumers' perceptions, brand awareness, and unplanned purchasing behaviour.

In conclusion, UGC is a highly influential component of beauty consumption. The authenticity and credibility of UGC is crucial in building trust, while its functional, social, and emotional value can enhance product awareness, shape consumer attitudes, and increase purchase intention. By combining peer-driven content with algorithmic amplification on social media platforms like Xiaohongshu, UGC can guide cognitive evaluation, reduce perceived risk, and strengthen user engagement, ultimately prompting users and consumers to make rational and intentional purchasing decisions. These findings highlight the importance of integrating UGC into digital marketing strategies, consumer education, and social media research, especially in the beauty industry.

Despite the increasing body of research on UGC and beauty consumption, several significant limitations remain. First, existing studies primarily focuses on platforms like TikTok and YouTube, lacking a deep understanding of UGC on Xiaohongshu, a platform with a unique influence in the beauty consumption field. Secondly, existing studies has not explored the role of algorithmic recommendations, yet algorithms have a significant impact on users' content exposure and purchase paths. Thirdly, most studies have not specifically focused on Malaysian female university students, a group that active on Xiaohongshu, has received relatively less attention. Finally, while previous research has focused on the credibility and perceived value of UGC, it has overlooked how UGC and algorithmic amplification effects trigger unplanned beauty product purchases, which is precisely the core focus of this study.

2.3 Algorithmic Recommendation System in Social Media

2.3.1 Mechanism of Personalized Algorithmic Recommendations

Personalized algorithmic recommendation systems have become central to social media platforms, influencing the types of content users encounter and how they make consumption decisions. Li and Cao (2025) highlighted that artificial intelligence, big data, and cloud computing enable social media platforms like TikTok, Weibo, Facebook, and Twitter to deliver highly personalized content. These algorithms infer users' personal interests and preferences by collecting and analyzing user-generated data such as likes, shares, viewing time, keyword searches, and interaction patterns (Röchert et al., 2020). Huang and Liu (2025) further point out that users' perception of these algorithms affects their perceived usefulness, trust, and behavioural intentions. In short, users' understanding of the algorithms influences their attitudes and behaviours towards algorithmic recommended content, suggesting that algorithmic transparency can modulate the impact of recommendations on user engagement. In practice, algorithmic recommendation can create a reinforcement loop: repeated interaction with certain types of content (such as beauty tutorials or product reviews) increases the probability of similar content appearing, thus subtly guiding users' preferences and consumption patterns (Yuhelna et al., 2025).

Metzler and Garcia (2024) emphasized that algorithms are not neutral content delivery agents. Algorithms reinforce existing preferences or behavioural patterns of users, forming a feedback loop. The more a user interacts with a certain type of content (e.g. beauty-related content), the more frequently the algorithm recommends similar content, enlarging certain preferences while other content may be ignored or marginalized. This research argument refutes the hypothesis that algorithms are neutral, impartial "content delivery tools" or purely technical mechanisms. Liu (2025) argues that algorithmic recommendation, through content distribution, psychological manipulation, and user-platform interaction, influence the immediate consumption behaviour while simultaneously shaping long-term consumption culture, especially in fields like beauty, where algorithmic exposure reinforces trends, social

identity, and instant gratification. The combination of repeated exposure, perceived popularity, and psychologically persuasive content creates a consumer environment more conducive to unplanned purchases.

In short, existing studies outline the full picture of personalized algorithmic recommendation in social media. Li and Cao (2025) provide the technical and functional foundations explaining how algorithms achieve content personalization; Metzler and Garcia (2024) offer a critical perspective on how algorithms shape user preferences and limit content diversity. Huang and Liu (2025) and Liu (2025) connect these mechanisms to user perceptions and behaviours, emphasizing their psychological and cultural impact. On social media platforms that heavily rely on algorithmic recommendations, this means that algorithms not only optimize content delivery but may also shape users' cultural identities and consumption behaviours.

However, the reinforcement loops of algorithmic recommendations raise concerns about information diversity and user autonomy. Users may apparently perceive algorithmic recommendations as personalized guidance, but in reality, they are often guided to content that aligns with the algorithm's priorities, which typically favour commercial or highly interactive content. This phenomenon reinforces the “gatekeeping effect”, challenging traditional assumptions about the spontaneity and autonomy of user-generated content (UGC) (Huang & Liu, 2025; Metzler & Garcia, 2024). Therefore, understanding personalized algorithmic recommendation systems requires not only analyzing their technical mechanisms and user interaction patterns but also critically examining their socio-cultural influences and the potential risks of shaping consumer behaviour through homogenized content.

2.3.2 Algorithmic Recommendation Effects: Information Cocoon and Monoculture

Algorithmic recommendation systems have become central to content delivery on social media platforms, shaping users' engagement and consumption patterns. While these systems enhance user engagement and personalized experiences, they often create information cocoons, leading to repeated exposure to homogenized content, reduced opportunities to encounter diverse perspectives, and fostering a singular cultural bias (Yang, 2025; Zhang et al., 2025). This mechanism is particularly pronounced on social media platforms like Xiaohongshu, where algorithmic recommendation prioritize content based on users' previous platforms interactions (such as likes, comments, and shares), creating a feedback loop that reinforces existing user preferences (Sun, 2024). This phenomenon not only limits exposure to diverse perspectives but also reinforces cognitive biases and consumption patterns.

Sun (2024) studied young China users on Xiaohongshu and found that they are highly susceptible to the influence of information cocoons. This is mainly attributed to several factors, including content homogenization, limited diversity of information channels, frequent interaction with fixed social groups, and low algorithmic literacy. These characteristics indicate that users of Xiaohongshu are highly susceptible to algorithmic recommendations, which are very limited in scope. Users often repeatedly absorb information and lack critical thinking about other perspectives.

Similarly, Yang et al. (2024) explored the psychological effects of prolonged exposure to algorithmic recommendation content and discovered algorithm fatigue, a phenomenon where prolonged interaction with algorithmic systems leads to mental and emotional exhaustion. Notably, factors such as algorithmic literacy, the opacity of the recommendation process, and repeated exposure to the same content can all contribute to this fatigue, potentially triggering user resistance to algorithmic recommendation. This resistance may manifest as selectively focusing on or avoiding certain brand and product recommendations, thus influencing purchasing decisions. Zhang et al. (2025) conducted simulation studies on multiple

recommender systems, demonstrating that the prevalence of information cocoons depends on the algorithm type. They emphasized that while diversity-oriented reordering frameworks such as ICMF can partially alleviate content homogenization, their effectiveness is limited by the underlying algorithmic model. This highlights the crucial role of algorithmic design (not just content diversity) in the formation of a homogenized culture.

It is noteworthy that the impact of algorithmic recommendation varies across social media platforms and user groups. Sun et al. (2024) analyzed the usage of multiple social media platforms by China university students, including TikTok, WeChat, and Sina Weibo, and found significant differences in their information-sharing behaviour and related internalized and externalized problem behaviours. Compared to students exposed to algorithmic recommendation on low-frequency sharing platforms like WeChat, students exposed to high-frequency algorithmic recommendations on platforms like TikTok and Weibo showed higher engagement and were more prone to problem behaviours. Yang (2025) further analyzed the safety and social impacts of social media information cocoons, highlighting risks such as the spread of misinformation, polarization, and algorithmic discrimination. These studies collectively demonstrate that while algorithmic recommendations enhance personalization, they also foster a culture of content homogeneity, limit diverse perspectives, and subtly but significantly shape user behaviour.

In summary, these findings suggest that the impact of algorithmic recommendations depends on both the platform and the users. On Xiaohongshu, younger users have lower algorithmic literacy and are highly addicted to repetitive content, which exacerbates the formation of information cocoons; while on general social media platforms, the impact may vary depending on sharing frequency, platform guidelines, and content diversity. For social media platforms like Xiaohongshu, understanding the interplay between algorithm design, information cocoons, platform-specific features, and user demographics is crucial for assessing

their impact on the beauty consumption decisions of Malaysian female university students. Understanding these differences is essential for researchers, platform developers, and policymakers, as they need to design algorithms that balance personalized experiences with access to diverse perspectives.

2.3.3 Algorithmic Influence on Unplanned Purchasing Behaviour

Algorithmic recommendation systems not only construct the cognitive environment for users' consumption but also directly contribute to unplanned or impulsive purchasing behaviour. Unplanned purchasing refers to purchase decisions made impulsively without prior planning or careful consideration (Nyrhinen et al., 2024). On social media platforms like Xiaohongshu, algorithms play a multifaceted and powerful role in triggering such behaviour, through mechanisms including environment creation, psychological persuasion, and behavioural reinforcement.

The fundamental influence of algorithms lies in its ability to shape the stimuli users encounter. Research on Xiaohongshu verifies that content marketing and community factors on the platform are key stimuli for enhancing users perceived value and purchase intention (Lin & Shen, 2023). The algorithm system acts like an invisible architect, meticulously planning and amplifying these stimuli. It continuously pushes highly engaging grassroots content (content marketing) and creates a sense of community by prioritizing content with high engagement metrics (community factors). This creates a consumer-oriented environment where persuasive stimuli are personalized and ubiquitous, shortening the psychological distance between users seeing a product and wanting to buy.

Crucially, the effectiveness of this algorithm-driven environment in facilitating unplanned purchases depends on the user's own perception and trust. Rezaei et al. (2025)

emphasize that the impact of algorithmic personalization on purchase probabilities largely depends on the credibility, transparency, and trust users perceive in content from platforms. Xiaohongshu's "authentic sharing" community philosophy fostered a high level of trust in user-generated content (UGC) from its inception. The algorithm reinforces this trust by continuously recommending content that aligns with users' historical preferences and has received social validation such as likes and saves. This creates a highly trustworthy and relevant information stream, reducing perceived risk and making impulsive purchases more likely. Furthermore, integrating influencer content into this information stream has a powerful amplifying effect. As Rezaei et al. (2025) point out, influencer marketing leverages quasi-social interaction to enhance users' perceived authenticity, thereby amplifying the persuasiveness of algorithmic recommendations.

The ultimate mechanism by which algorithms transform this environment into unplanned purchases is through reinforced loops and repeated exposure. A large-scale study found that 72% of consumer purchase choices are significantly influenced by social media algorithms (Joans & Sheila, 2024). On Xiaohongshu, once a user interacts with beauty-related content, the algorithm interprets this as a stable interest and increases the frequency of similar recommendations. This repeated exposure makes specific products appear more popular, effective, and necessary, a phenomenon consistent with the simple exposure effect. Over time, this narrows the user's perceived range of choices (Rezaei et al., 2025), thereby increasing the likelihood of unplanned purchases from an algorithmically defined "set of options". This process bypasses deliberate decision-making, directly catering to people's impulse for instant gratification.

Finally, individual psychological traits interact with this algorithmic environment. Nyrhinen et al. (2024) found that low self-control leads individuals to develop positive attitudes towards goal-oriented online stimuli (such as personalized algorithmic recommendations) and

increases their sensitivity to the influence of social networks, resulting in unplanned impulsive purchases. For a frequent social media user, moments of low self-control, coupled with a carefully designed, highly trusted, repetitive, and persuasive stream of stimuli, can directly trigger an unplanned purchase with almost no effort, and in-app shopping features often play a facilitating role.

In summary, Xiaohongshu's algorithmic recommendation system influences unplanned purchasing behaviour through a gradual process. First, it constructs a personalized, highly trusting stimulus environment; second, it leverages psychological mediating factors such as credibility and low self-control; and finally, it uses reinforcement loops to make products stand out more, making the purchase process smoother. This makes the algorithm not only a content filter but also an active architect of micro-consumption decisions, a key force in analyzing beauty consumption on the platform, and it must be considered central.

2.4 Research Gap and Limitation

This chapter provides a systematic and critical review of existing academic literature on social media, user cognition, user-generated content (UGC), and algorithmic recommendation systems. This literature successfully establishes the fundamental role of social media in reshaping user perception and consumer behaviour. Specifically, the literature emphasizes the strong correlation between perceived credibility of UGC and purchase intention, and elaborates on how personalized algorithmic mechanisms influence user experience and purchasing decisions through effects such as reinforcement loops, information cocoons, and cultural homogenization.

Despite the abundance of existing research, four significant limitations remain unresolved. First, a crucial lack of balance exists between the influence of algorithms and the

importance placed on user-generated content (UGC). Most studies on social media consumption (e.g., Nosita & Lesari, 2019; Tan & Noor, 2025) focus excessively on the intrinsic qualities of UGC itself (authenticity, credibility, functional value). They often overlook the key mechanisms by which UGC is filtered, ranked, and pushed: algorithmic recommendation systems. As discussed in this chapter, algorithmic recommendation act as invisible “gatekeepers” and content architects, reinforcing specific content through feedback loops (Yuhelna et al., 2025) and non-neutral prioritization (Metzler & Garcia, 2024). Currently, there is a significant lack of systematic research that considers algorithmic mechanisms as a core determinant in the beauty consumption decision-making process, rather than solely relying on the spontaneity of UGC. However, a critical analysis of these studies reveals several important knowledge gaps, which this study aims to fill.

Secondly, existing literature is limited by geographical constraints, especially regarding Xiaohongshu’s reach. Current research on Xiaohongshu largely focuses on users in China (Sun, 2024). This leads to a lack of understanding of the platform’s influence in non-China markets, particularly in unique socio-cultural environments like the Malaysian community. Further research is needed to investigate how the platform’s mechanisms (including its algorithms) interact with the specific media usage habits and consumption preferences of local populations. This study, using Malaysia as a case study, provides an important perspective on the platform’s growing influence outside its place of origin.

Third, the broad categorization of the target group is an issue. Most existing studies about consumer behaviour broadly categorize young users as Generation Z or young adults, lacking sufficient detail. This study focuses on a specific and social media highly engaged consumer group: Malaysian female university students. These young women are at a crucial stage in their lives, establishing self-identity and consumption habits; they are active users of beauty content on Xiaohongshu. Due to the lack of specific research targeting this particular

group, it is difficult to gain in-depth insights into how algorithms influence their specific consumption patterns.

Finally, existing research on the impact of algorithms suffers from methodological deficiencies and requires qualitative exploration. Studies on algorithmic recommendation effects (such as information cocoons and homogenization) typically employ quantitative or simulation methods (Zhang et al., 2025), focusing on macro-level trends. However, current research lacks in-depth qualitative data to explore users' subjective experiences, cognitive processes, and emotional responses to algorithmic recommendation at the individual level. For example, how do users perceive and interpret algorithmic recommendation system? Are they aware that they are in an "information cocoon" (Sun, 2024)? How do they experience algorithm fatigue during their daily browsing (Yang et al., 2024)? This study employs a qualitative approach (in-depth interviews) to provide a detailed, rich, and contextual understanding of the user perspective, thereby supplementing current research findings, which are primarily based on quantitative results.

In summary, while the impact and algorithmic recommendation mechanisms of user-generated content (UGC) are well-known, there remains a pressing need for systematic research into the role of algorithmic recommendation in shaping cognition and stimulating unplanned purchasing behaviour among a specific and under-researched consumer group (Malaysian female university students) on a particular China platform that is exerting a huge influence in non-China markets (Xiaohongshu). The research questions and objectives presented in Chapter 1 aim to fill these four identified research gaps and provide a comprehensive and detailed analytical framework to deepen our understanding of algorithm-driven beauty consumption behaviour.

2.5 Theoretical Framework

2.5.1 Algorithmic Media Theory

This study adopts Algorithmic Media Theory as a theoretical framework to investigate how Xiaohongshu's algorithmic recommendation affects Malaysian female UTAR students' consumption decisions. According to Metzler and Garcia (2024), algorithmic media theory is a critical theoretical framework that considers algorithms as influential, powerful, and non-neutral cultural agents, rather than merely neutral technological tools, actively participating in the production, dissemination, and validation of content and meaning within the digital media landscape. This framework claims that the design and function of these systems are inherently connected to power structures, particularly those that emphasize short-term profits over personal well-being and independent decision-making. The core argument of algorithmic media theory is that the algorithmic environment significantly affects user experience, which in turn deeply influences users' cognition and subsequent behaviour.

A key dimension of algorithmic media theory is the unclear functioning of algorithms, commonly described as a "black box". This lack of transparency is not a harmless technological limitation, but a direct consequence of corporate privatization (Miyazaki, 2019). By concealing the rules of computation, platform owners maintain exclusive rights and sole authority over content distribution and capitalize on user interaction data. Miyazaki (2019) argues that this makes the consequences of algorithms "unbearable" for users; that is, they lack the necessary understanding or mechanisms to truly question the logic governing their media experience. The consequences of these unclear systems are frequently negative: According to Gagrčin et al. (2024) particularly highlight the necessity to examine the harmful effects of algorithms on individuals, an effect directly linked to the profit-oriented opacity highlighted by algorithmic media theory.

This algorithmic control directly leads to the formation of reinforcement mechanisms and feedback loops. Algorithmic media theory emphasizes that the primary function of algorithms is to amplify users' existing interests and social drivers (Metzler & Garcia, 2024). The algorithm captures user's interests and systematically reinforces these interests and preferences by continuously pushing repetitive content. This reinforcement establishes a self-perpetuating cycle, limiting user's information exposure and ultimately leading to homogenization of aesthetics and consumption. This mechanism is central to this study as enhanced content influences user perception by controlling specific aesthetic norms and product necessities.

To navigate this complex and progressively advanced algorithmic landscape, users need to have algorithmic literacy. Frau-Meigs (2024) defines algorithmic literacy as a key subset of media and information literacy. Algorithmic literacy, as a part of media and information literacy, encompasses the abilities needed to critically evaluate and effectively interact with algorithms; it refers to whether people understand how algorithms work and can critically view the content they are told. Similarly, Gagrčin et al. (2024) place algorithmic literacy research within the framework of a systematic literature review. There are many definitions of algorithmic literacy, therefore, it is necessary to establish a unified framework to allow scholars and researchers to better understand how users perceive algorithms and how algorithms affect them. An individual's level of algorithmic literacy is a key factor determining their sensitivity to algorithmic systems.

Empirical research indicates a significant cognitive gap in this field, particularly among younger users, who are the target demographic for this study. Blakston et al. (2025) found that only 40% of young people in their study were familiar with the "algorithm" term in the context of digital media, suggesting a general lack of algorithmic awareness within this group. Within the theoretical framework of algorithmic media theory, this low algorithmic awareness

significantly reduces users' autonomy and ability to effectively navigate the system. The lower the algorithmic awareness, the less likely users are to take initiative and understand how platforms influence them. Users with higher algorithmic awareness are more likely to recognize how algorithms affect their experience, thus they are more likely to take action to influence that experience (Blakston et al., 2025). These users will proactively adjust their usage patterns to reduce the impact of algorithmic control.

On the other hand, low algorithmic literacy increases users' vulnerability to adverse effects deliberately designed by the system, for instance, algorithmic fatigue. A continuous and repetitive stream of content can exceed a user's cognitive abilities, leading to a passive and negative mindset. Consequently, a system created to take advantage of users' limited understanding of algorithms, along with an environment aimed at reducing user thought, ultimately encourages unintentional consumption. This study adopts algorithmic media theory to perceive beauty product purchasing behaviour not merely as random actions but also as predictable behavioural outcome resulting from the platform's non-neutral, profit-oriented algorithmic framework.

2.5.2 Social Cognitive Theory

Social cognitive theory, a theory proposed by Albert Bandura, provides a comprehensive psychological framework for understanding how individuals learn and maintain behaviour through the interaction of personal, environmental, and behavioural factors. According to Schunk and DiBenedetto (2020), this interaction which known as triadic reciprocal determinism suggests that human functioning is modulated by the interaction of self-generated and external influencing sources. It emphasizes human behaviour is not determined by a single factor, but rather by the continuous and cyclical influence of the individual, the

behaviour itself, and the external environment. In this study, “environment” refers to the Xiaohongshu and its algorithmic recommendations, while “behaviour” involves the beauty consumption and unplanned purchasing patterns of Malaysian female students at UTAR.

The core of this theory is the concept of human agency and self-regulation. Bandura (1991) argues that the motivation and regulation of human behaviour stem from persistent self-influence, which is realized through three main sub-functions: self-monitoring of behaviour, judgment processes based on personal standards, and emotional self-reaction. On Xiaohongshu, users monitor their own appearance while observing the UGC creators. If the algorithm consistently presents a specific aesthetic standard, it will influence users’ personal aesthetic standards, leading to a judgment gap. This often triggers a self-reaction in users, prompting them to purchase products to bridge the gap between their current state and the idealized image presented by the algorithm.

Furthermore, the effectiveness of these cognitive processes largely depends on self-efficacy and outcome expectation. As Kazi et al. (2023) pointed out, self-efficacy (the belief in one's ability to accomplish a task) is a core concept determining whether a behaviour will be initiated. When Malaysian students viewed peer-generated content on Xiaohongshu related to their own experiences, their self-efficacy regarding specific makeup or skincare routines was enhanced. Positive outcome expectation further reinforced this enhancement, students expected that using the same products as the models in their “information cocoon” would produce desired beauty results (Schunk & DiBenedetto, 2020). By applying social cognitive theory, this study can explain how algorithmic environment of Xiaohongshu psychologically influences university students’ internal cognition and consumption decisions.

2.5.3 Theories Mind Map

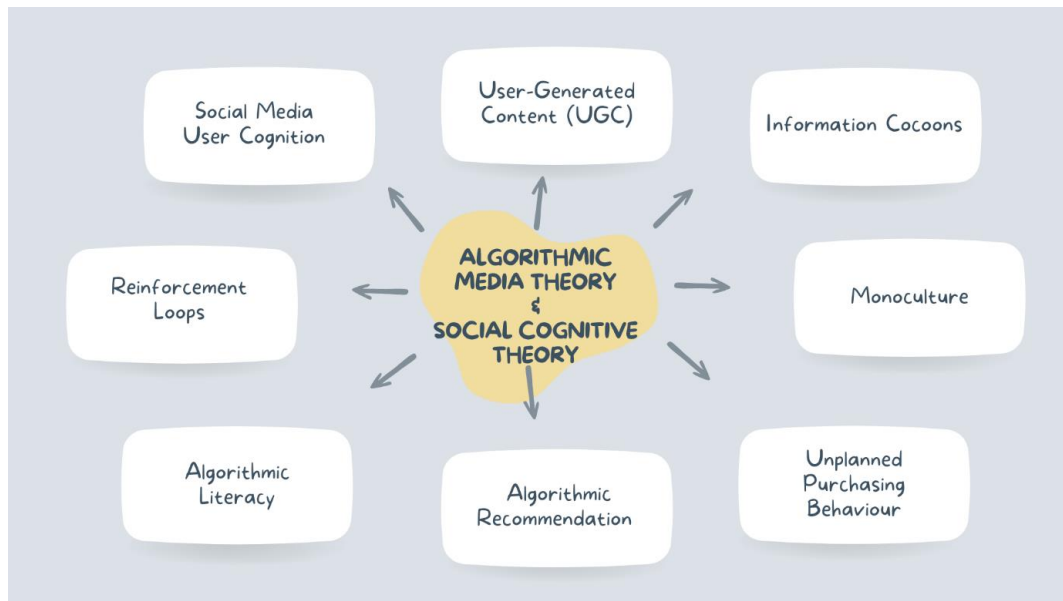


Figure 1 Integrated Theoretical Framework of Algorithmic Media Theory and Social Cognitive Theory

CHAPTER 3 METHODOLOGY

3.1 Research Approach

3.1.1 Research Paradigm and Approach

A qualitative research methodology was adopted to comprehensively explore the complex phenomenon of how Xiaohongshu's algorithmic recommendation system influenced the beauty consumption decisions of UTAR female university students. The philosophical foundation of this study was rooted in the interpretivist paradigm, which aimed to understand and interpret the social world through individual subjective meanings and experiences. Interpretivism emphasizes that social reality is constructed through individual subjective meanings and experiences; therefore, researchers need to understand how participants interpret specific social phenomena from their perspective (Pervin & Mokhtar, 2022). The primary objective of this inquiry was to explore how UTAR female university students understood and perceived the influence of Xiaohongshu's algorithmic recommendations on their beauty consumption decisions. Therefore, interpretivism provided a suitable epistemological foundation for this study. The qualitative research approach was chosen because its core purpose was to gain human-centred insights by analyzing a complex, context-dependent, and difficult-to-quantify social phenomenon (Lim, 2025). This approach focused on participants' feelings, thoughts, and experiences, aiming to fundamentally answer the question of why the impact of algorithms was revealed by collecting rich non-numerical data (often presented in narrative form) (Ugwu & Eze, 2023).

3.1.2 Rationale for Qualitative Approach

The selection of a qualitative approach was essential, as it was directly related to the exploratory aspect of this study and its specific research questions. This study aimed to explore

the thoughts and feelings of students, questions that could only be answered through in-depth conversations and an understanding of their experiences. First, exploring new perspectives on the mediating role of algorithms in consumer decision-making was a task best suited to qualitative research because it allowed for in-depth and interpretive analysis of complex social processes (Ugwu & Eze, 2023). Second, a deep dive into the participants' subjective experiences and cognitive processes was required, including their emotional responses, purchasing impulses, and perceptions of subtle phenomena such as algorithm fatigue and information cocoons. These complex and situation-dependent factors were challenging to separate and assess using structured quantitative methods. Third, and most importantly, a qualitative approach allowed researchers to gain an "insider's perspective" (Bazen et al., 2021). This study used female university students as "insiders" and effectively captured their behaviours, motivations, and expectations, thereby providing a comprehensive understanding of how external algorithmic recommendation variables were internalized and consequently shaped their personal beauty consumption narratives and decision-making processes. Therefore, this qualitative research approach ensured the collection of detailed and contextualized data, thereby gaining a deeper understanding of participants' life experiences and successfully achieving the explanatory and exploratory goals of the research.

3.2 Research Method

3.2.1 Focus Group Discussions

Focus group discussions served as the primary method for data collection in this study. Focus group discussions are widely recognized as an effective and engaging qualitative research tool for observing and recording participants' responses, beliefs, perceptions, and attitudes in a natural discussion environment (Sachdeva et al., 2024). This qualitative approach

was chosen because it captured social interactions and dialogues among participants, generating rich and contextualized data crucial for exploring the shared experiences and meaning constructions behind algorithmic influence phenomena (Nyumba et al., 2018). A deeper understanding was sought of how the target group (UTAR female university students) collectively understood, negotiated, and responded to Xiaohongshu's content recommendation mechanisms within a social context.

3.2.2 Rationale for Focus Group Discussions

Focus group discussions were selected as the research method because they allowed participants to exchange opinions and generate more ideas through group conversations. During the discussions, respondents responded to, supplemented, and even challenged each other's viewpoints, resulting in richer and more multifaceted data than individual interviews. This made the method especially suitable for studying socially and community-driven topics such as Xiaohongshu.

First, focus group discussions were considered an effective research method for gathering perspectives and popular theories on a research topic (Lauri, 2019). In group conversations, participants shared their experiences, responded to others' opinions, and collectively developed an understanding of a phenomenon, enabling researchers to obtain more comprehensive and multi-layered data. Peer discussions in focus groups encouraged participants to express their thoughts, feelings, and perspectives more fully based on mutual feedback, resulting in richer and more comprehensive data than individual interviews (Lauri, 2019). This structural advantage allowed researchers to more effectively explore complex issues such as collective aesthetic cognition and the shared experience of information cocoons. Since these phenomena were inherently socially interactive and often more apparent in group

dialogues, focus group discussions were able to capture relevant information more comprehensively and deeply than one-on-one interviews. Secondly, the use of focus group discussions directly aligned with the nature of the research context, as Xiaohongshu is essentially a social media platform driven by peer influence and community sharing. By involving respondents in conversations, researchers were able to observe how they expressed and adjusted their perspectives, thereby gaining a more realistic understanding of the social impact of beauty consumption decisions (Nyumba et al., 2018).

In conclusion, although focus group discussions presented unique ethical challenges regarding confidentiality and informed consent due to the unpredictability of group interactions (Sim & Waterfield, 2019), this approach remained a suitable and ideal research method. By emphasizing social interaction, it ensured the collection of reliable and in-depth data, thereby comprehensively exploring the reasons and mechanisms through which algorithmic recommendations influenced beauty consumption decisions in social settings.

3.3 Research Sampling

3.3.1 Sampling Method: Purposive and Snowball Sampling

This study adopted a combined strategy of purposive sampling and snowball sampling, which belonged to multi-stage non-probability sampling (Palinkas et al., 2015). Purposive sampling was the primary method, aiming to select cases that were informative, strictly met the research criteria, and possessed the shared experiences necessary to answer the research questions (Campbell et al., 2020; Shaheen & Pradhan, 2019). This approach ensured that participants were selected based on their specific understanding and usage of Xiaohongshu, thereby maximizing the relevance of the collected data. Subsequently, snowball sampling served as an important supplementary method. Since the target population, namely active

consumers of Xiaohongshu beauty-related content among female students at UTAR, was a specific group that was difficult to reach through open random methods (Naderifar et al., 2017), leveraging the social relationships of initial participants helped facilitate efficient recruitment. This systematic approach improved the feasibility of reaching qualified individuals within the target social network (Leighton et al., 2021).

3.3.2 Inclusion and Exclusion Criteria

To ensure the selection of respondents with valuable information directly relevant to the study's context, the specified criteria below were strictly applied:

	Inclusion Criteria	Exclusion Criteria
Demographics	Malaysian female UTAR students aged between 18 and 25 years old.	Non-Malaysian female UTAR students.
Platform Usage	Active Xiaohongshu users who browse the platform for at least 2 hours daily.	Rarely use or do not use Xiaohongshu at all.
Content Relevance	Students who frequently browse beauty-related content (skincare & makeup) on Xiaohongshu.	Use Xiaohongshu as a professional content creator, brand promoter, or business salesperson.

Table 1 Inclusion and Exclusion Criteria

3.3.3 Sample Size and Data Saturation

The sample size for this qualitative study depended on the number of focus group discussions required to reach data saturation rather than the total number of participants. Data saturation, particularly topic saturation, referred to the critical point at which further discussions no longer generated new topics, perspectives, or conceptual insights relevant to the research (Saunders et al., 2018).

While empirical studies suggested that typically seven focus group discussions were needed to reach saturation, this study, based on its highly specific context and methodological considerations, employed a targeted approach (Nyumba et al., 2018):

- Number of focus group discussions: 3 groups
- Number of participants per group: 4 participants

This design resulted in a total of 12 participants. Data collection was completed after the planned focus group discussions were conducted. Data saturation was achieved, as no substantial new topics emerged in the later discussions, indicating that sufficient data had been collected to support the analysis.

3.4 Data Collection

The primary data collection tool was a semi-structured interview outline. This outline was structured around the research questions, ensuring that all core themes, including Xiaohongshu usage patterns, algorithmic recommendation experiences, and changes in beauty consumption, were systematically discussed. Formal data collection included three focus group discussions, each with four participants, conducted online via Microsoft Teams. This online format was chosen to facilitate interactive discussion among university students in a familiar digital environment. Each focus group discussion lasted 90 to 120 minutes to ensure in-depth

exploration of the topic (Nyumba et al., 2018). To optimize online interaction, the interviewer employed adapted facilitation techniques, such as establishing clear rules for speaking turns, which is considered best practice for small online group discussions (Bolin et al., 2023).

All three focus group interviews were video recorded using Microsoft Teams' recording function, with all respondents notified in advance and given explicit informed consent. The files were then transcribed verbatim, converting the spoken data into text format, which formed the basis for analysis (Lauri, 2019). During transcription, all identifying information (names, specific locations, etc.) was anonymized using pseudonyms (e.g., P1, P2) to ensure the privacy and anonymity of the participants in the final dataset. In accordance with the ethical guidelines and data management policies of this study, the original audio files were destroyed after the final report was successfully completed.

3.5 Data Analysis

This study adopted Thematic Analysis to analyze a large amount of textual data generated from focus group discussions. Thematic analysis is a fundamental qualitative research method that provided a structured and flexible framework for identifying, analyzing, and interpreting meaningful patterns (themes) within datasets (Sirwan et al., 2025; Lauri, 2019). This method was particularly suitable for focus group discussion data because it helped systematically identify shared perceptions, collective beliefs, and consensus among research participants regarding the influence of algorithms and beauty consumption. Furthermore, thematic analysis allowed the research to move beyond a descriptive level to a more theoretical conceptualization, thereby establishing an analytical framework to explain the relationships between themes (Naeem et al., 2023).

This analysis strictly adhered to the widely accepted six-stage framework proposed by Braun and Clarke (Sirwan et al., 2025; Peel, 2020).

1. **Familiarization With Data:** After transcription, the researcher repeatedly read the transcripts and listened to the recordings. This immersive process was crucial for gaining a deeper and broader understanding of the data, helping to record initial ideas and reflections (Sirwan et al., 2025).
2. **Generating Initial Codes:** The researcher assigned short, descriptive labels (codes) to features in the data that were relevant to or interesting to the research question. The coding process was conducted meticulously, ensuring that every important data point was labelled to maintain transparency (Naeem et al., 2023).
3. **Searching For Themes:** The researcher collected and organized various initial codes, categorizing them into potential overarching themes and sub-themes. Broader patterns of meaning were progressively developed from fragmented codes. Concept maps and diagrams were used to visualize the relationships between codes (Sirwan et al., 2025).
4. **Reviewing Themes:** The researcher refined the potential themes identified in the previous phase and examined them on two levels: first, ensuring that there were sufficient data extracts to support each theme; and second, checking whether each theme accurately reflected the entire dataset. Themes that lacked sufficient supporting data or were too broad were merged, split, or discarded (Peel, 2020).
5. **Defining And Naming Themes:** The researcher clearly defined the refined themes and assigned them vivid names that reflected their essence. This stage involved writing detailed descriptions for each theme, explaining its meaning, the aspects of data it covered, and its relevance to the research question (Naeem et al., 2023).
6. **Writing The Report:** The final stage involved selecting vivid data excerpts (citations) from interview transcripts to illustrate the identified themes. The researcher combined

these themes with the research question and existing literature to ultimately construct a narrative of the research findings and discussion.

This methodical strategy for analyzing data and maintaining quality control ensured that the insights drawn from focus group conversations were reliable and insightful, providing significant contributions to the understanding of how algorithmic recommendations influenced Malaysian female UTAR students' beauty consumption decisions.

CHAPTER 4 FINDING AND ANALYSIS

This chapter presents the findings of three focus group interviews conducted at Universiti Tunku Abdul Rahman (UTAR) with female Malaysian students. A total of 12 participants, divided into groups of four, came from three different faculties: the Faculty of Arts (FAS), the Faculty of Business and Finance (FBF), and the Faculty of Information and Communication Technology (FICT). Data analysis employed a thematic approach, following Braun and Clarke's six-step framework (2006). The analysis revealed several key themes reflecting participants' behavioural patterns, perceptions of algorithmic recommendations, and the impact of algorithmic recommendations on their beauty consumption decisions. These themes were organized according to the research objectives and questions of this study.

Group	Participant	Year	Experience	Daily Usage	Content Type	Main Purpose	Purchase Behaviour
FBF	P1	Year 2	4 years	2 hours	Beauty & Skincare Products Sharing	Entertainment, Stay on Trend	Always
	P2	Year 3	4 years	4 hours	Products Sharing	Entertainment	Sometimes
	P3	Year 2	3 years	3 hours	Make-up Tutorial	Entertainment, Search Engine	Often
	P4	Year 2	5 years	3 hours	Products Sharing & Review	Entertainment, Get Information	Often
FAS	P5	Year 3	3 years	5 hours	Make-up Tutorial	Entertainment, Get Beauty Information	Often

	P6	Year 3	4 years	2 hours	Make-up Tutorial	Entertainment	Always
	P7	Year 3	3 years	3 hours	Skincare Tips	Entertainment, Search Engine	Often
	P8	Year 2	4 years	1 hour	Products Sharing	Entertainment, Get Skincare Information	Often
FICT	P9	Year 4	7 years	2 hours	Products Sharing & Review	Entertainment, Get Information	Sometimes
	P10	Year 3	4 years	3 hours	Skincare Tips, Products Review	Entertainment, Search Engine	Often
	P11	Year 3	4 years	1 hour	Make-up Tutorial, Products Sharing & Review	Entertainment	Always
	P12	Year 3	4 years	3 hours	Make-up Tutorial	Entertainment, Stay on Trend, Shopping Guide	Often

Table 2 Participant Demographics and Xiaohongshu Usage

Table 2 presents the demographic profile and Xiaohongshu usage patterns of the 12 participants involved in this study. In terms of academic level, the majority of participants were Year 2 and Year 3 students, with only one Year 4 student. This indicates that the sample largely consists of mid-level undergraduate students who are actively engaged in university life and digital media consumption.

When examining the main purpose of usage, most participants identified entertainment as their primary motivation. However, this was often accompanied by secondary purposes such

as obtaining beauty information, staying on trends, using the platform as a search engine, or as a shopping guide. This suggests that Xiaohongshu serves a dual function: as both an entertainment platform and an informational resource.

In relation to purchasing behaviour, the findings indicate different levels of influence from Xiaohongshu beauty content. In this study, “always” refers to participants who consistently make purchases following exposure to Xiaohongshu content, “often” indicates frequent but not consistent purchasing behaviour, while “sometimes” reflects occasional or situational purchases. This suggests that although the degree of influence different, Xiaohongshu remains a significant factor in shaping beauty-related purchasing behaviour among participants.

Following this overview, this chapter will proceed to present the findings based on the research objectives. Section 4.2 will first address Research Objective 1 (RO1), which focuses on identifying the fundamental behavioural patterns of Xiaohongshu usage among participants. This will be followed by Section 4.3, which examines Research Objective 2 (RO2), exploring the impact of algorithmic recommendations on product awareness, brand attitudes, and purchase intentions. Finally, Section 4.4 will address Research Objective 3 (RO3), investigating the relationship between algorithmic recommendations and unplanned purchasing behaviour.

4.1 Fundamental Behavioural Patterns of Beauty Content Consumption on Xiaohongshu

4.1.1 Habitual and Passive Browsing Behaviour

Findings from the focus group discussions indicate that Xiaohongshu usage among participants is highly habitual and embedded in their daily routines. Most participants reported spending between one to five hours on the platform daily, with some indicating prolonged and

unconscious usage. For instance, P3 mentioned that her time spent on Xiaohongshu is not exactly fixed: *“Roughly speaking, I spend at least three hours a day scrolling through Xiaohongshu, but in reality, it’s probably more. Basically, once I start scrolling, I lose track of time for a long while.”* Furthermore, P5 also expressed how quickly time flies while scrolling through Xiaohongshu: *“I didn’t expect to spend so much time on the app; I honestly thought only a little bit of time had passed.”* These responses suggest that Xiaohongshu usage is not always intentional or goal-oriented, but rather occurs in an automatic and unconscious manner, where users engage with the platform without actively monitoring their time spent. This highlights the platform’s ability to foster habitual engagement, as users continue scrolling beyond their initial intention, often without awareness.

P12 highlighted this variability: *“My usage time isn’t very stable. When I’m busy, I might only spend about an hour on it. However, when I’m free, I start scrolling and it easily jumps to over three hours without me realizing it.”* This may suggest a shift from relatively more goal-oriented or time-constrained usage to more immersive consumption, where the platform’s ability to retain user attention intensifies during periods of leisure.

In terms of browsing patterns, participants largely described a passive consumption style, where they open the application and scroll through recommended content without a specific goal. This “scroll and see what appears” behaviour reflects a reliance on the platform’s recommendation system rather than active searching. This indicates that Xiaohongshu functions as a habit-forming platform, where users engage in continuous and automatic content consumption.

This habitual and passive browsing behaviour is further reinforced by specific underlying motivations among participants. For most participants, Xiaohongshu serves as a primary tool for “killing time” during gaps in their daily schedules. For example, P6 shared

the behaviour of using Xiaohongshu: *“Sometimes when I’m waiting for someone or for food to arrive and I don’t know what else to do, I’ll just open Xiaohongshu and scroll for a bit.”* It illustrates how Xiaohongshu functions as a digital filler for fragmented time and highlights the user’s habitual reliance on the platform in their daily routine through instant, easily consumable content.

On the other hand, Xiaohongshu often functions as a platform used specifically to stay in the loop with current aesthetic trends. P1 believes that the content on Xiaohongshu represents current trends, and using Xiaohongshu allows one to stay informed about popular trends: *“I keep up with the latest trends through posts and videos from influencers and other users on Xiaohongshu, such as the latest popular make-up looks and make-up elements, so that I can make sure I keep up with the trends.”* This highlights that Xiaohongshu is not only used for entertainment and time-passing but also serves as a platform for users to remain socially and aesthetically informed. These motivations shape the types of content users are more likely to engage with on the platform in turn.

4.1.2 Beauty Content Preferences and Engagement Behaviour

Building on these usage patterns, participants also revealed clear preferences in the types of content they consume. Approximately half of the participants expressed similar views to P1, indicating a shared tendency to rely on Xiaohongshu for beauty product-related information: *“When my make-up or skincare products run out and I need recommendations (especially affordable and suitable products), I will use Xiaohongshu to search for products reviews posts and videos.”* Participants’ responses consistently revealed that Xiaohongshu is not only a platform for content consumption but also serves as a practical tool for decision-making in beauty-related purchases.

In addition to product-related searches, participants also shared using Xiaohongshu as a learning platform for make-up techniques. Many participants mentioned that due to their limited make-up skills, they often turn to tutorial posts and videos posted by content creators or make-up experts on Xiaohongshu to follow and practice step by step. P11 shared her experience in this regard: *“Due to my limited make-up skills as a beginner, I would search for make-up tutorials, refer to how experts apply make-up, and learn the techniques they teach. I’ve found that following their tutorials step by step has indeed helped me improve my make-up skills significantly.”* This reflects a form of active learning engagement, where users not only consume content but also imitate and apply the techniques demonstrated by content creators.

Overall, these findings suggest that participants do not merely consume beauty-related content passively but actively engage with it for both practical decision-making and self-directed learning purposes.

4.2 Influence of Algorithmic Recommendations on Beauty Content Consumption

4.2.1 Algorithmic Personalisation and Repetitive Exposure

A recurring theme across the focus group discussions is participants’ perception that Xiaohongshu’s algorithm has become increasingly “understanding” of their personal preferences, particularly in relation to beauty content. Several participants expressed a sense that the platform is able to anticipate their interests, often describing it in human-like terms. For instance, P12 noted that even without actively searching for specific content, she would still encounter frequent recommendations related to her preferred skincare brand: *“I am a loyal user of Torriden. Since I am already very familiar with their lineup and know what works for me, I haven’t actively searched for the brand in a long time. Yet Xiaohongshu still pushes*

Torriden-related content to me occasionally. Remarkably, every single time the brand launches a new product, it inevitably appears on my feed. It feels as though Xiaohongshu really understands me.”

Similarly, P4 described this phenomenon as “feeling like big data,” where even minimal interaction such as liking or clicking on a post would result in a continuous stream of similar content being recommended over the following days. In a more intensified perception, P10 further highlighted a sense of algorithmic intrusion, suggesting that content recommendations sometimes appear even before any active search is made, particularly after conversations with friends about certain products: *“I sometimes feel like my phone is actually eavesdropping on me. There are times when I’m just chatting with a friend about something that I have never searched for before, and before I’ve even taken any action to search for it on my phone, Xiaohongshu has already pushed it to my feed.”*

This reflects how participants tend to attribute human-like awareness to algorithmic systems, interpreting repetitive and predictive recommendations as evidence that the platform knows their interests. Overall, these responses demonstrate an emotional interpretation of algorithmic personalisation, where repeated exposure to similar beauty-related content reinforces the perception that Xiaohongshu is highly attuned to individual preferences.

Building on participants perceived sense that the platform “understands” their preferences, the findings further reveal a clear pattern of repetitive exposure following user interaction with content. Many participants reported that even minimal engagement, such as searching for a product, clicking on a video, or liking a post, would quickly trigger a continuous stream of similar beauty-related content. For instance, P1 explained that after searching for a skincare brand, her Xiaohongshu feed became dominated by related content, including various product recommendations such as toners, cleansers, and foundations. Similarly, P4 described

the “big data effect”: *“I only searched for or liked one or two posts about moisturizers, but for the next few days, similar content kept being pushed to me constantly. This really gives me that 'big data' feeling.”*

This pattern was further reinforced by P5 and P7, who both noted that once they clicked on a makeup tutorial or viewed several product-related videos, their homepage would subsequently be filled with similar content without the need for further active searching. P7 in particular highlighted that content now “automatically appears” on her feed, reducing the need for intentional search behaviour: *“I just wanted to find out if a product was worth using, so I watched a few similar videos. Then, the moment I returned to the homepage and refreshed it, similar videos started appearing on my “for you page” automatically. I didn’t even need to search for them actively anymore.”* Collectively, these responses illustrate a reinforcement loop within Xiaohongshu’s algorithmic system, where user interaction directly shapes subsequent content exposure, leading to intensified repetition of similar beauty-related content.

Beyond in-platform recommendations, some participants also expressed a perception that algorithmic systems may extend across different digital platforms, contributing to a sense of cross-platform tracking. P6 in particular shared a notable experience: *“One thing I’ve actually experienced is searching for Judydoll on a different platform, like Shopee, and then suddenly, Judydoll content starts appearing on my Xiaohongshu feed as well. I hadn’t even searched for it within the Xiaohongshu app itself.”* She further described this as a feeling that “different apps seem to be interconnected,” suggesting a perceived integration of user data across platforms. However, this reflects participants’ subjective interpretations, which may also be influenced by shared login credentials or linked accounts across platforms.

This perception reflects how users interpret algorithmic personalisation not only as platform-specific behaviour but also as a broader digital ecosystem that continuously tracks

their online activities. Although such experiences may not necessarily confirm actual data sharing between platforms, they highlight users' heightened sensitivity to personalised content and recommendation systems.

4.2.2 Algorithmic Repetition and Users' Brand Perceptions

When participants were asked about their immediate reactions to repeatedly encountering similar beauty-related content or the same products on their recommendation feed, the findings revealed a range of behavioural responses rather than a single dominant pattern. A significant number of participants demonstrated active engagement behaviour, where repeated exposure to beauty content encouraged deeper information seeking rather than avoidance. For instance, P1 explained that she would continuously click into similar content and review other users' opinions, as she relied on comment sections and different perspectives to support her purchase decisions: *"I would refer to similar posts and the comments below to gather different opinions before making a final decision on whether to purchase a product. I will continue to explore until I am satisfied that the information collected is sufficient for me to make a buying decision; only then will I stop looking for similar content."* This continuous cycle of checking and comparison contributes to prolonged engagement with content, where users often spend more time than initially intended without being fully aware of it.

Similarly, P5 and P12 indicated that repeated exposure often triggered intentional "research behaviour," particularly when they were already considering purchasing a product. In such cases, they would actively engage with multiple videos and posts to evaluate product suitability and gather user experiences. P10 also highlighted a similar tendency, noting that she would typically click into content when she perceived a product to be widely recommended, using the available information as part of her evaluation process: *"I feel that if a product is*

being recommended by many people, it must be quite effective, so I'll click on it to find out more." These responses suggest that rather than simply ignoring or avoiding repeated content, many participants adopt an information-seeking approach, where algorithmic repetition serves as a trigger for deeper cognitive engagement and decision-making.

In contrast, other participants demonstrated algorithm-controlling behaviours when faced with repeated exposure to similar content. While initial encounters with beauty-related posts were often perceived positively, continued repetition over time led to feelings of fatigue or irritation, prompting users to reduce further engagement. For instance, P2 described that although she initially found such content interesting, prolonged exposure eventually made her feel annoyed and overwhelmed, as she preferred to receive more diverse and less repetitive content. This resulted in her consciously avoiding similar posts to prevent further reinforcement of the same content in her feed.

Furthermore, P2 and P11 noted that when a product no longer required further information or had already been purchased, repeated recommendations became unnecessary and even irritating, leading them to actively disengage by using the "not interested" function to adjust future recommendations. P7 and P8 also highlighted deliberate algorithm-shaping behaviours, where they would selectively stop clicking on certain types of content in order to reduce its recurrence on their homepage. These responses indicate that participants are not passive recipients of algorithmic recommendations; instead, they actively manage and negotiate their content environment in response to perceived overexposure, demonstrating a form of user agency in controlling algorithmic repetition.

Findings also reveal a significant shift in the source of trust formation among participants. Rather than relying solely on algorithmic repetition, participants consistently emphasised the importance of peer-generated content, particularly comment sections and user

reviews, in shaping their perceptions of beauty products and brands. For instance, P2 noted that she would look at the comment section first before deciding: *“Peers comments are the most direct factor influencing my perception of a product or brand. If the feedback of the product in the comment section is predominantly positive, I will trust the brand; conversely, if the comments are negative, I won’t.”* This highlights how trust is not automatically generated through repeated exposure but instead mediated through the evaluation of collective user opinions.

P12 explicitly stated that repeated exposure alone does not influence her perception of a brand or product. Instead, she emphasised that: *“What really changes my view is other people’s experiences and reviews.”* This noting that even frequent recommendations would not lead to trust unless supported by positive user feedback. Conversely, negative reviews would prevent her from developing favourable perceptions regardless of how often the product appeared on her feed.

Thus, these findings indicate that while algorithmic repetition increases visibility, it does not directly determine brand trust. Instead, participants actively filter recommended content through peer evaluations, positioning comment sections and user-generated reviews as the primary basis for trust formation. This suggests a shift from algorithm-driven exposure to socially validated decision-making, where the credibility of beauty-related content is ultimately grounded in shared user experiences rather than algorithmic frequency.

4.2.3 Algorithmic Recommendations and Purchase Decision-Making

The findings indicate that algorithmic repetition has a conditional and context-dependent influence on participants’ purchase intentions, rather than producing a consistent effect across all individuals. A number of participants acknowledged that repeated exposure to

beauty-related content, particularly through influencers recommendations, could stimulate a desire to purchase. For instance, P1 noted that seeing numerous content creators promoting a product made her increased her willingness to try it: *“Seeing influencers and content creators describe a product as being so effective makes me want to buy it and try it for myself. I feel that if so many people are recommending it, there must be a good reason behind it.”*

Besides that, P11 described herself as being easily influenced by such content, explaining that personalised recommendations on Xiaohongshu often present products that are highly appealing to her, leading her to give in to the desire and make a purchase: *“I’m not sure if it’s just my illusion, but I feel that the products Xiaohongshu recommends are consistently appealing to me, which creates a strong urge to purchase. Since I also want to try them out, I end up paying for my desires.”* P4 also shared a similar experience, admitting that she had previously purchased a trending product despite being unsure of its suitability, simply due to its popularity on the platform. These responses suggest that algorithmic repetition can create a persuasive effect, where continuous exposure and perceived popularity contribute to the formation of purchase intentions.

Interestingly, P4 and P11 also indicated that such purchases are not always driven by actual need or long-term usefulness. Some participants further reflected that the products they bought under the influence of algorithmic recommendations were occasionally underused or left idle after initial trial. This implies that while algorithmic repetition may effectively stimulate purchase intention through continuous exposure and perceived popularity, it does not necessarily translate into sustained product usage or genuine need.

However, this influence is not universal, as many participants emphasised the importance of personal relevance and individual needs in moderating their decision-making. Participants such as P2, P6, and P7 highlighted that they would only consider purchasing

products if they aligned with their specific needs, regardless of how frequently they appeared on their feed. P3 and P5 further reinforced this point by stressing the importance of conducting personal research and evaluating product suitability based on factors such as skin type, rather than relying solely on popularity or recommendations. In addition, some participants demonstrated a more restrained form of influence, where repeated exposure increased awareness and interest without immediately translating into purchase behaviour. For example, P8 and P12 noted that while frequently recommended products might appear more attractive or trustworthy, they would only consider them in the future when a relevant need arises, rather than making immediate purchases.

Overall, while algorithmic recommendations on Xiaohongshu can enhance product visibility and generate initial interest, purchase intentions are largely mediated by users' personal needs, perceived relevance, and evaluative judgement. This suggests that algorithmic influence operates more as a catalyst for consideration rather than a direct determinant of purchasing decisions.

4.3 Unplanned Beauty Product Purchasing Behaviour

4.3.1 Algorithmic Triggering of Unplanned Purchases

Findings from the focus group discussions reveal a mixed pattern regarding whether Xiaohongshu's algorithmic recommendations trigger unplanned beauty product purchases among participants. While some participants demonstrated clear instances of impulse buying influenced by repeated exposure, others emphasised a more cautious and research-oriented decision-making process. These differences also appear to be shaped by variations in product type, academic background, and decision-making styles.

On one hand, several participants reported that algorithmic repetition and personalised recommendations could lead them to spontaneous purchasing behaviour, particularly when the products are perceived as closely aligned with their personal interests and daily needs. In this context, participants also described being “seeded” by Xiaohongshu content, referring to a process whereby repeated exposure to product-related posts gradually plants the idea of purchase in users’ minds, especially when the content aligns with their existing needs or interests.

Notably, this tendency was more frequently reported among participants from FICT (P9–P12), who appeared more receptive to visual and trend-driven content. For instance, P11 openly described herself as highly susceptible to being “seeded” by Xiaohongshu content: *“I am very easily influenced by Xiaohogshu’s beauty content, so naturally, I have many experiences with impulsive buying. I have purchased products such as magnetic adhesive-free false eyelashes, a foundation brush, liquid blush and so on. Xiaohongshu pushes a product in front of me, I get hooked, and I buy it immediately, only to regret the purchase right after.”* Additionally, P10 acknowledged experiencing partial impulsive buying behaviour, noting that continuous exposure to a product, combined with perceived discounts or promotions, often creates a sense of urgency and makes the purchase appear worthwhile. She further explained that the degree of purchase intention depends on how deeply she has been “seeded” by the beauty content, referring to the extent to which repeated exposure builds familiarity, trust, and perceived necessity toward a product over time. This suggests that stronger algorithmic exposure increases the likelihood of immediate purchase decisions.

On the other hand, participants from FBF (P1-P4) and one FICT participants demonstrated a more restrained approach towards algorithmically driven recommendations, often engaging in deliberate evaluation before making purchase decisions. This suggests that

participants with stronger information-seeking behaviour are more likely to resist impulsive purchasing, even when exposed to persuasive algorithmic content.

P3 and P4 both stated that they would only consider purchasing products when there is an actual need, emphasising that they would not engage in spontaneous buying regardless of how frequently the product appears on their feed. P4 further clarified that she would always conduct prior research before making any purchase decisions, indicating a preference for deliberate evaluation rather than impulse consumption. Similarly, P12 provided a detailed example of how algorithmic persuasion can be resisted through independent information seeking: *“I was once attracted with a makeup brush set and really wanted it because the promotion claimed it was a ‘must-have for beginners.’ After watching the video, I felt I truly needed the entire 16-piece set. However, a second before purchasing, I decided to check public reviews. I discovered that many users felt beginners didn't actually need that many brushes and that an 8-piece set was sufficient. In the end, I abandoned the idea of buying that particular set.”*

Although Xiaohongshu's algorithm-driven recommendations can trigger unplanned purchases for some users, especially with repeated exposure and a sense of urgency, this influence is not universal and is moderated by user background and decision-making style. Instead, purchase decisions are mediated by individual differences in self-control, information-seeking behaviour, and perceived product necessity, indicating that algorithmic influence operates alongside, rather than overrides, users' evaluative judgement.

4.3.2 Post-Purchase Evaluation and Expectation Gap

Among the participants, some had discovered products through Xiaohongshu and proceeded to purchase them. Nevertheless, they generally reported mixed experiences with the

beauty products they bought via the platform, expressing both satisfaction and disappointment. This highlights a clear expectation gap between platform promotion and actual product performance. However, the extent of this gap varies depending on individuals' purchasing behaviours and product suitability.

Several participants reported positive post-purchase experiences where the actual product performance aligned with expectations formed on Xiaohongshu. For instance, P5 described her experience with a non-transfer lipstick as highly satisfactory: *"I recently purchased a transfer-proof lipstick. After using it, the experience was excellent; it truly didn't transfer onto the cup, just as advertised. The performance was completely consistent with the promotion on the platform and fully met my expectations."* Similar to P7 and P10, they also reported positive outcomes, with products such as makeup primers and moisturizers performing well and improving their makeup application experience, reinforcing the perception that Xiaohongshu reviews can accurately reflect product quality when sufficient user feedback is available.

On the other hand, several participants also reported cases where products failed to meet expectations, particularly in relation to skin compatibility and individual suitability. P1 shared an experience of purchasing a foundation that resulted in acne breakouts, while P6 reported a more severe case where a lipstick product not only failed to match her skin tone but also caused lip irritation: *"This experience was absolutely terrible. The post claimed the lipstick was suitable for 'Fair-Warm' skin tones, but after purchasing it, I found it didn't suit me at all. To make matters worse, I developed cheilitis (lip inflammation) after using it. I felt like I had been scammed and was extremely furious."* In terms of information verification, it was noted that posts labelled as sponsored content often had limited or no comment sections, reducing opportunities for users to assess product credibility through peer feedback. This suggests that

the absence or presence of comment-based information may influence users' ability to evaluate product suitability prior to purchase.

At the same time, P4 similarly experienced skin sensitivity issues after using a recommended cushion foundation, despite the product receiving overwhelmingly positive reviews on Xiaohongshu: *"I purchased a cushion foundation after seeing numerous positive reviews and comments claiming it was excellent. However, after using it, I experienced breakouts and my skin became sensitized. Despite the extensive research I did before the purchase, the actual experience was far from satisfactory and did not live up to the hype."* These experiences suggest that while Xiaohongshu provides abundant product information, actual product effectiveness remains highly dependent on individual differences such as skin type and usage context.

Ultimately, the findings suggest that post-purchase disappointment is not solely caused by poor product quality or individual misjudgement. Rather, it is often linked to the inflated expectations constructed through Xiaohongshu's recommendation environment, where repeated positive exposure, persuasive creator narratives, and overwhelmingly favourable reviews may present products as universally effective or highly transformative. Once products are used in real-life contexts, users confront personal factors such as skin type, tone compatibility, and sensitivity, which algorithmic recommendations cannot fully account for. As a result, participants' experiences reveal a tension between digitally amplified desirability and the personalised reality of product performance.

4.3.3 Trust Re-evaluation and Platform Credibility

Participants generally maintained trust in Xiaohongshu despite experiencing mixed post-purchase outcomes. Rather than evaluating the platform based solely on whether

individual products met expectations, participants appeared to judge credibility in a more functional way, valuing Xiaohongshu as a useful source of searchable information, peer reviews, and product discovery. In this sense, trust in the platform was not dependent on recommendation accuracy, but on its continued usefulness within participants' consumption decision-making process.

When asked whether negative product experiences would lead to a loss of trust in the Xiaohongshu platform itself, many participants stand disagree. Several participants emphasised that negative product experiences do not necessarily lead to a loss of trust in the platform itself, but rather a reassessment of product suitability. For example, P1 clearly distinguished between product failure and platform credibility, explaining that although she had experienced skincare-related issues, she did not lose trust in Xiaohongshu and continued to use it as a reliable source for product information: *"I won't distrust Xiaohongshu although there is a negative experience; I think it's still very useful."*

P7 also expressed that Xiaohongshu remains a useful research tool, even when certain products do not meet expectations: *"I think it might be due to differences in individual skin types; some people find it useful while others find it difficult to use, so it's not entirely a problem with the product."* These responses suggest that participants distinguish between product performance and platform value. Negative outcomes were often attributed to personal skin type, compatibility, or product-specific issues, rather than interpreted as evidence that the platform itself was unreliable. This also indicates that credibility in digital recommendation platforms may be sustained not through perfect recommendation outcomes, but through continued practical usefulness to users.

However, some participants reported a more cautious or critical stance towards platform credibility following negative experiences. P4 stated that encountering products that caused

adverse skin reactions led her to increase scrutiny of future recommendations, suggesting a heightened awareness when evaluating content credibility: *“It inevitably affects my trust in Xiaohongshu to some extent. Now, I find myself analyzing far more posts and content than before prior to making a purchase. For instance, where I might have bought a product after reading only 10 posts in the past, I now feel the need to review more than 20 to be certain.”* It proves that negative experiences decrease platform trust, forcing consumer to double their research effort to reduce risk before making a purchase.

P6 further highlighted a significant case where she purchased a “sponsored” product from Xiaohongshu that caused severe skin and lip irritation, leading her to actively avoid content marked as “sponsored” and report the content creator. This reflects a more critical interpretation of algorithmic and commercial content on the platform. P12 also noted that while Xiaohongshu remains her primary source for product research, negative experiences may temporarily reduce her trust in specific recommendations, although she eventually returns to the platform due to its convenience and information richness: *“I probably won't trust the products recommended to me on Xiaohongshu for a short-term period. However, whenever I need to research a product later on, I will still choose Xiaohongshu as my primary medium to gather information.”*

These responses suggest that trust in Xiaohongshu is often preserved through a process of selective blame attribution. Rather than holding the platform itself responsible for negative purchase outcomes, participants tended to attribute dissatisfaction to sponsored creators, misleading recommendations, unsuitable products, or their own consumer judgement. As a result, the platform’s overall credibility remains relatively resilient despite repeated negative experiences. In this sense, Xiaohongshu is viewed less as a seller and more as an information infrastructure, where responsibility for poor outcomes is displaced onto individual actors within the platform ecosystem.

In conclusion, trust in Xiaohongshu is not entirely diminished by negative product experiences. Instead, users tend to adopt a more selective and critical approach, distinguishing between platform reliability and individual product performance. This indicates that trust in Xiaohongshu is conditional, shaped by both personal experience and continued reliance on the platform for beauty-related information.

4.4 User Awareness and Critical Perceptions of Algorithmic Recommendation Systems

4.4.1 Awareness of Algorithmic Tracking and Recommendation Mechanisms

Most participants demonstrate a relatively high level of awareness regarding the presence and operation of Xiaohongshu's algorithmic recommendation system, although the depth of understanding varies across individuals. While a minority of participants reported only a general or superficial awareness, the majority were able to identify specific mechanisms through which the platform tracks and responds to user behaviour.

At a basic level, some participants acknowledged the existence of algorithmic tracking without fully engaging with its implications. For instance, P1 recognised that the platform collects data based on users' liked content but perceived this function primarily as a tool for retrieving previously viewed posts, rather than as an active system shaping future recommendations: *"I feel like the Xiaohongshu platform just helps us retrieve posts we've already seen and browse (viewing history); I don't really feel like the recommendation algorithm is actually analyze my preference."* This reflects a functional misconception and limited understanding of the algorithm as a passive storage mechanism rather than an active recommendation system.

In contrast, many participants demonstrated a more developed awareness of how specific user interactions influence content exposure. Participants such as P5, P6, and P7

explicitly identified actions such as clicking, liking, and viewing duration as key signals used by the algorithm to personalise content. For example, P5 described how even an accidental click could trigger a stream of similar recommendations: *“For example, there was a time when I clicked into a post purely by accident and I wasn’t actually interested in the content, and I didn’t like or save it. However, after refreshing Xiaohongshu, I noticed that it started recommending similar content to me. This made me strongly aware that the algorithm was tracking my behaviour.”* This highlighting a strong awareness of the sensitivity of the algorithm to user behaviour.

P12 provided a more nuanced explanation by distinguishing between different levels of engagement, noting that longer viewing time significantly increases the likelihood of repeated exposure to similar content: *“Likes, favourites, and comments are certainly some of the factors the algorithm uses to record our preferences. However, I think the amount of time we spend on a video also plays an important role. For example, if I only watch Video A for two seconds, Xiaohongshu is less likely to frequently recommend similar content to me. But if I watch more than half of Video B or even complete it, it will almost certainly keep pushing similar content to me more frequently.”* These responses indicate that participants not only recognise the existence of algorithmic tracking but also understand its operational logic in shaping their content feeds.

Furthermore, several participants framed algorithmic recommendation as an intentional system designed to enhance user engagement. P4 described it as a form of marketing strategy that leverages user preferences to encourage continued platform use: *“I think this is a form of marketing strategy. When we search for content or like posts, the platform learns what we prefer and then recommends more posts based on our interests. As a result, many people feel that Xiaohongshu is convenient and understands their needs well. This encourages them to continue using the platform, while also attracting more users to join.”* Additionally, P8 even

characterised algorithmic tracking as an “open secret” necessary for maintaining user interest and platform relevance. P11 also expressed a positive perception of such personalisation, noting that the algorithm’s ability to curate preferred content reduces the need for active searching and enhances user experience.

The findings suggest that awareness of Xiaohongshu’s algorithm is widespread among participants, with many users demonstrating a practical understanding of how their interactions influence content recommendations. However, the extent to which this awareness translates into critical evaluation or behavioural change remains varied, indicating that recognition of algorithmic processes does not necessarily equate to resistance or reduced reliance on the platform.

4.4.2 Behavioural Responses to Algorithmic Awareness

Despite demonstrating awareness of Xiaohongshu’s algorithmic tracking mechanisms, such awareness did not appear to substantially alter participants’ browsing behaviour. Rather than consistently resisting personalised recommendations, many participants described a passive “let it be” approach, allowing the algorithm to curate content on their behalf.

For many participants, algorithmic personalisation enhances convenience and reduces the effort required to search for desired content. For instance, P1 explained that she prefers to “let it be” as the platform automatically presents content without requiring active searching. P3 and P11 also highlighted that algorithmic recommendations align with their existing preferences, making the browsing experience more efficient and enjoyable. These responses suggest that algorithmic mediation is generally accepted when it provides timely and relevant value. This acceptance is further reinforced by the perception that algorithmic tracking does not pose any significant risk to users. For example, P9 noted that she does not feel threatened

by the system, as it does not involve data leakage or harm, which makes her more comfortable allowing the algorithm to operate without interference: *“The recommendation mechanism doesn’t leak my personal data or pose any threat to me, I don’t feel too concerned. If it did, I would probably be more cautious. But for now, it doesn’t really cause me any harm, so I just let it be.”*

However, such acceptance was conditional rather than absolute. When recommendations became repetitive, irrelevant, or no longer useful, participants demonstrated mild forms of resistance. For example, P2, P7, and P10 stated that they would ignore such content or use the “not interested” function to reduce future recommendations. P8 further explained that temporary curiosity toward unusual content could lead to unwanted future recommendations, prompting her to avoid engaging with similar posts afterwards: *“Certain videos or posts are so odd that I click on them and spend more time on them (mainly to read the comments and replies of the post). Then, the algorithm may interpret this as genuine interest and start recommending similar content to me. So when I encounter such content again later, I may simply ignore it.”* These responses suggest that while users do not proactively resist algorithmic influence, they still exercise a limited degree of control through reactive filtering behaviours.

Additionally, timing also appeared to shape participants’ responses. During the information-search or pre-purchase stage, repeated recommendations were often perceived positively because they provided additional reviews, comparisons, and reassurance. In contrast, once a purchase decision had already been made, continued exposure to the same type of content became unnecessary and irritating. P4 noted that after purchasing a product, she found it annoying when similar content continued to appear on her feed: *“Once I’ve already learned about a product on Xiaohongshu and made the purchase, I find it quite annoying when the platform continues to recommend similar content to me.”* This indicating a temporal limitation

to the perceived usefulness of algorithmic personalisation. Despite this, such dissatisfaction rarely translates into a fundamental change in usage patterns.

To sum up, while participants were aware of algorithmic influence, they did not respond with consistent caution or rejection. Instead, their behaviour reflected a form of conditional acceptance, where algorithmic curation was welcomed when useful, but was subject to mild resistance when it exceeded participants' immediate needs or lost contextual relevance.

4.4.3 Algorithmic Recommendations: User Empowerment or Perceived Constraint

Participants expressed mixed and sometimes conflicting views regarding the long-term impact of algorithmic recommendations, reflecting a balance between perceived convenience and concerns over limited choice.

On one hand, several participants perceived the recommendation system as beneficial and user-oriented. For instance, P1 and P2 described the algorithm as a service mechanism that enhanced user experience by delivering content that appeared aligned with their interests, reducing the need for active searching. P10 similarly emphasised that such recommendations simplified decision-making by presenting seemingly relevant content directly to users. P11 further noted that this form of personalisation increased platform satisfaction, as users were consistently exposed to content they enjoyed. These responses suggest that participants often interpreted algorithmic recommendations as individually tailored assistance, even though such content may also reflect broader standardised categorisation based on shared behavioural patterns.

However, several participants also highlighted potential drawbacks of algorithmic recommendations, particularly in shaping uneven exposure to products and brands. P3 and P4 noted that repeated recommendations of the same brand could make certain products more

visible, while reducing the salience of alternative options during the browsing process. As a result, users' comparison process may become framed around repeatedly promoted brands rather than a broader range of available choices. P3 further explained: *"Algorithmic recommendations may also limit my exposure to different brands. For example, when I search for toner, the platform may only keep recommending Skintific products. If I spend more time viewing Skintific posts, the algorithm may assume I prefer that brand and continue pushing Skintific-related content to me. As a result, I may be exposed to fewer alternative brands for comparison and consideration."* This suggests that the issue may not be complete restriction of choice, but rather the concentration of attention toward specific brands through repeated visibility. In this sense, algorithmic recommendations may influence consumption not by removing alternatives, but by structuring which alternatives appear most visible and cognitively available to users.

This concern was further reinforced by P7 and P12, who explicitly described the phenomenon as an "information cocoon," where continuous exposure to similar content constrains users' awareness of other available options. P12 shared that she tried to overcome this information cocoon, however the result was not satisfactory: *"Although I could try to break out of Xiaohongshu's information cocoon by using other apps to discover more brands and products, as we discussed earlier, many platforms seem to be interconnected in terms of content and trends. Even when switching to different apps, the same popular brands from Xiaohongshu often still appear first. Therefore, I feel that this kind of mechanism and algorithmic recommendation may, to some extent, limit my choices and those of other users."*

P6 also noted that repeated exposure to a single brand may subconsciously influence purchasing decisions, as users are more likely to choose from familiar options while remaining unaware of alternatives: *"While the algorithm recommends products I have searched for, it tends to overlook other brands, resulting in me mainly seeing Judydoll. The more I am exposed*

to it, the more I may naturally perceive Judydoll as a good option and eventually decide to purchase it. However, upon further reflection, I realize that I may not actually be aware of other brands because I only know Judydoll. Then, after considering my options, I may end up choosing Judydoll by default.” These responses suggest that repeated exposure does not merely influence brand visibility but may also gradually narrow users’ perspectives by making familiar options appear safer and more desirable than unfamiliar alternatives. Over time, this may reduce users’ willingness to explore new products, reinforcing more routine and less flexible decision-making patterns. In this sense, algorithmic recommendation systems may shape not only what users consume, but also how they think about available choices.

While Xiaohongshu’s algorithmic recommendation system is largely perceived as beneficial in enhancing convenience and personalisation, it simultaneously raises concerns about reduced diversity of information and potential limitations on consumer choice. This reflects an inherent tension between user empowerment and algorithmic control, where the platform both serves user preferences and subtly shapes them over time.

Although all participants demonstrated broadly similar patterns in Xiaohongshu usage, several subtle differences were observed across the three faculty groups.

Participants from FBF generally exhibited more structured and research-oriented decision-making behaviours, relying heavily on multiple sources of information before making purchases. In contrast, FAS participants showed a more balanced pattern, where they were influenced by algorithmic recommendations while simultaneously demonstrating awareness and occasional resistance towards repetitive content. Meanwhile, FICT participants displayed more polarised behaviours, with some being highly susceptible to algorithmic influence, while others showed strong resistance and reliance on independent evaluation.

These differences suggest that while the grouping does not produce sharply contrasting behaviours, it reveals meaningful variations in how users engage with algorithmic recommendations and make consumption decisions.

CHAPTER 5 DISCUSSION AND CONCLUSION

This chapter presents the discussion and conclusion of the study by interpreting the findings reported in Chapter 4 in relation to the research objectives and relevant literature. The purpose of this study is to examine how Xiaohongshu's algorithmic recommendation system influences the beauty-related content consumption and purchasing behaviour of UTAR Malaysian female university students. Specifically, the study explored the fundamental behavioural patterns of students consuming beauty-related content on Xiaohongshu, the impact of algorithmic recommendations on product awareness, brand attitudes, and purchase intentions, as well as the relationship between algorithmic recommendations and unplanned beauty-product purchasing behaviour.

The findings of this study revealed that Xiaohongshu has become more than a social media platform for participants, functioning as an integrated environment for entertainment, product discovery, beauty learning, and consumption decision-making. Participants demonstrated clear awareness of how algorithmic recommendations shape the content they encounter. However, such awareness did not necessarily translate into resistance or cautious behaviour, as many participants continued to accept personalised recommendations due to the convenience, efficiency, and relevance they provided. At the same time, the findings also showed that repeated exposure to similar beauty-related content may narrow users' consideration of alternative brands, reinforce familiarity with frequently promoted products, and influence purchase intentions over time.

In addition, the study found that Xiaohongshu's algorithmic recommendations were associated with unplanned purchasing behaviour, although such influence was not absolute or deterministic. Rather than directly causing purchases, the recommendation system appeared to stimulate curiosity, increase product desirability, and encourage further information searching,

which sometimes resulted in spontaneous or unplanned purchases. Post-purchase experiences also revealed mixed outcomes, where some participants were satisfied while others experienced disappointment. Nevertheless, trust in Xiaohongshu as an information platform generally remained stable, as participants often differentiated between product suitability and platform usefulness.

This section discusses the key findings of the study in relation to the three research objectives. Based on the focus group discussions, the findings suggest that Xiaohongshu's algorithmic recommendation system plays an influential role in shaping participants' beauty-content consumption patterns, brand perceptions, and purchasing behaviour. However, such influence does not operate through direct control. Instead, it functions through more subtle mechanisms such as convenience, repetition, familiarity, and personalised visibility. At the same time, participants were not entirely passive users, as they also demonstrated selective judgement, occasional resistance, and conscious awareness of how the platform operates.

5.1 Fundamental Behavioural Patterns of Consuming Beauty-Related Content on Xiaohongshu

Consumption of beauty-related content on Xiaohongshu among young female users was highly habitual and deeply embedded in everyday routines. Research findings indicate that prolonged engagement with Xiaohongshu, which is often unintentional, causes users to exceed their planned or typical session times. Several users described their platform usage as prolonged and sometimes unconscious. This finding supports earlier studies which argued that continuous exposure to social media content can gradually shape users' cognition and behavioural habits over time. As highlighted by Xu et al. (2024) and Stella (2022), repeated online exposure may influence how users think, perceive, and behave. The present study

extends this argument by showing that such influence may not only affect cognition but may also normalise routine and prolonged platform usage. Xiaohongshu therefore appears to function not merely as a source of beauty information, but as an everyday digital environment integrated into the leisure practices of young female users.

The tendency of young female users to lose track of time while browsing also provides support for previous discussions regarding attention management and cognitive load in digital environments (Naik et al., 2025). Literature Review noted that platforms compete for user attention through continuous content delivery, while excessive engagement may reduce attentional control. The current findings suggest that Xiaohongshu's endless recommendation flow may contribute to immersive browsing behaviour, where users continue consuming content beyond their initial intention. This reinforces the attention economy perspective discussed in the literature review, whereby algorithmic systems are designed to sustain engagement by continuously presenting attractive and relevant content.

Another important finding was that Xiaohongshu is mainly used for entertainment and functional purposes. Users browsed beauty-related content for enjoyment, relaxation, and curiosity, while simultaneously relying on the platform for skincare advice, make-up tutorials, product reviews, and trend discovery. This finding is consistent with previous studies on user-generated content (UGC), which suggested that beauty-related content offers both emotional and functional value to users (Mei, 2024; Mayrhofer et al., 2020; Muda, 2019). UGC can provide practical product knowledge while also generating pleasure through aesthetically appealing and relatable content. The study supports this perspective by demonstrating that participants did not separate leisure from consumption preparation. Instead, beauty-related content browsing often served both leisure and consumption purposes at the same time.

However, the findings also extend previous literature by revealing the prevalence of passive browsing behaviour. Rather than actively searching for specific information at all times, many participants relied on Xiaohongshu's recommendation feed to automatically present content. This suggests that users increasingly delegate content discovery to algorithmic systems. While previous studies emphasised active interactions such as liking, commenting, and searching as mechanisms through which users engage with content and develop brand cognition (Nosita & Lestari, 2019), the present findings indicate that passive exposure may be equally influential. Users do not necessarily need to intentionally seek beauty information for awareness and interest to develop, as algorithmically selected content may shape attention through routine browsing.

At the same time, young female users did not remain entirely passive throughout the consumption process. During the pre-purchase stage, users adopted more active and deliberate behaviours by comparing multiple reviews, analysing comment sections, and seeking further opinions prior to making purchase decisions. This partially challenges the assumption that users are consistently passive recipients of algorithmic influence. Instead, young female users moved between passive browsing and active evaluation depending on context. When browsing for leisure, users were more likely to rely on algorithmic convenience, whereas potential financial commitment or product suitability prompted more deliberate judgement.

Furthermore, the study also complicates earlier claims in the literature that UGC primarily leads consumers toward rational and intentional purchasing decisions. Although young female users actively searched for reviews from the platform before purchasing the products, their information-search process was often triggered by repeated algorithmic exposure in the first place. This suggests that rational evaluation may occur within an algorithmically structured environment rather than in a fully independent decision-making

process. In other words, users may behave critically, but only after their attention has already been directed toward particular products or brands.

5.2 Impact of Algorithmic Recommendations on Product Awareness, Brand Attitudes, and Purchase Intentions

Xiaohongshu's algorithmic recommendation system played a significant role in shaping young female users' awareness of beauty brands and products, their attitudes toward brands, and their purchase intentions. However, the influence of the algorithm was not experienced as direct coercion. Instead, it operated through repeated visibility, perceived relevance, familiarity, and selective exposure, which gradually structured participants' consumption awareness and preferences.

Algorithmic recommendations substantially increased young female users' awareness of beauty products and brands. Repeated exposure to recommended products on Xiaohongshu appeared to increase users' awareness and familiarity with products that they had not initially intended to search for. The algorithmic recommendation system therefore played a significant role in shaping product visibility and directing users' attention towards certain beauty products through continuous feed exposure. This supports previous literature suggesting that recommendation systems shape the stimuli users encounter by filtering and prioritising selected content. Li and Cao (2025) argued that social media algorithms infer user preferences through behavioural data and subsequently deliver highly personalised content. The present study confirms that product awareness on Xiaohongshu was not solely driven by active search behaviour but was also generated passively through everyday browsing exposure.

Secondly, relevant algorithmic recommendations were generally perceived positively among young female users, particularly when the recommended content aligned closely with

their personal interests and preferences. The recommendation system appeared to create a sense of personalised understanding by efficiently presenting desirable products with minimal active searching effort from users. This suggests that Xiaohongshu's algorithm enhances user engagement by delivering content that feels highly tailored and relevant to individual consumption interests. This finding is consistent with Huang and Liu (2025), who found that users' perceptions of recommendation systems influence their trust, perceived usefulness, and behavioural intentions. In the current study, personalised recommendations were often welcomed because they reduced search costs and increased convenience. Nevertheless, this also extends prior literature by suggesting that what users interpret as personalisation may often be behavioural categorisation based on past interactions rather than genuine individual understanding.

In addition, the perception that Xiaohongshu "understood" users' personal preferences should be interpreted critically. This perceived sense of understanding may reflect the effectiveness of algorithmic personalisation mechanisms that continuously analyse users' browsing behaviours, interactions, and consumption patterns in order to deliver highly targeted content. From the users' perspective, the recommendation feed appeared highly tailored, as the platform continuously delivered beauty-related content that matched their viewing interests and past interactions. This created a sense of individualised attention, where recommendations felt specifically designed for each user. However, from a broader perspective, such personalisation may be more accurately understood as a standardised computational process rather than true individual tailoring. The system likely applies the same recommendation logic to all users by detecting similar behavioural signals, such as clicks, searches, likes, or prolonged viewing time, and then delivering comparable content patterns to users who display similar interests. In this sense, what is perceived by young female users as unique and personalised attention may, to some extent, be an outcome of algorithmic classification processes that simulate

personalisation through automated data-driven recommendations rather than genuine individualised care. Therefore, the recommendation system may feel highly personal at the micro level, while operating through uniform and scalable standardisation at the macro level.

Repeated algorithmic exposure appeared to shape favourable brand attitudes through familiarity effects. Young female users frequently reported repeated exposure to specific brands and products that they had previously searched for or engaged with, which over time increased the salience of these brands within their recommendation feeds. This continuous exposure appeared to enhance brand familiarity, which in turn contributed to perceptions of greater trustworthiness and increased consideration in their purchase decisions. This finding supports prior studies which argued that reinforcement loops increase the visibility and attractiveness of repeatedly recommended products. Yuhelna et al. (2025) stated that algorithmic systems tend to amplify content that already receives engagement, creating cycles of repeated exposure. The current findings suggest that brand preference may emerge not only from product quality or conscious evaluation, but from sustained familiarity created through algorithmic repetition. Repetition therefore appeared to transform visibility into preference.

However, the findings also reveal limitations and unintended consequences of algorithmic recommendations. Several participants expressed concern that seeing the same brands repeatedly reduced their awareness of alternative products. Some described this experience as an “information cocoon,” where users become surrounded by similar content while other options remain less visible. This supports earlier literature by Sun (2024) and Yang (2025), which warned that recommendation systems may narrow information diversity and reinforce existing preferences. The present study confirms that algorithmic influence does not necessarily remove user choice altogether, but it may shape the consumer’s consideration set by making some brands cognitively prominent while rendering others less noticeable.

The findings suggest that purchase intentions among young female users were often shaped through gradual and cumulative exposure rather than direct or immediate persuasion. Repeated encounters with reviews, product demonstrations, and user discussions within the recommendation feed appeared to stimulate curiosity over time, eventually influencing users' interest and consideration of products. Over time, continued visibility increased their willingness to further research and potentially consider purchase. This supports prior literature which argued that algorithms create persuasive environments where users are continuously exposed to socially validated and commercially relevant content (Metzler and Garcia, 2024). However, the present study also refines this argument by showing that young female users did not immediately buy products simply because they were recommended. Instead, recommendation exposure often served as the first trigger that led to later information seeking, comparison, and gradual desire formation.

At the same time, young female users retained a degree of critical judgement. Despite the influence of algorithmic recommendations, young female users still engaged in more deliberate evaluation processes before making purchase decisions. This included checking reviews, comparing comment sections, considering price differences, and assessing product suitability, indicating that final consumption decisions were still mediated by evaluative and rational considerations rather than being solely driven by platform recommendations. This partially challenges deterministic assumptions that algorithms directly control consumers' attitudes or intentions. Rather than fully dictating behaviour, the algorithm appeared to guide attention and frame available options, while final intentions remained negotiated through personal judgement.

Overall, Xiaohongshu's algorithmic recommendation system appeared to influence young female users less through direct or overt persuasion, and more through shaping what content becomes visible, increasing repeated exposure to certain products, and enhancing

perceived convenience in accessing relevant information. It shaped what users noticed, which brands felt trustworthy, and what products became worthy of consideration. Therefore, algorithmic power in this study was subtle but significant, operating not by removing consumer agency, but by structuring the environment within which consumer awareness, attitudes, and intentions were formed.

5.3 Algorithmic Recommendations as Drivers of Unplanned Purchasing

Xiaohongshu's algorithmic recommendation system plays a meaningful role in stimulating unplanned beauty-product purchasing behaviour among young female users. Users did not enter the platform with a fixed intention to buy specific products. Instead, purchases often emerged during casual browsing, where users were repeatedly exposed to beauty-related content, reviews, and product demonstrations. This supports Nyrhinen et al. (2024), who argued that unplanned purchasing frequently occurs in digitally mediated environments where purchase desire is generated during content exposure rather than through prior planning. In the present study, Xiaohongshu functioned not only as a social media platform, but also as an environment where consumption impulses could gradually develop through continuous recommendation flows.

One of the most significant mechanisms identified was repeated exposure. Young female users reported repeated exposure to the same brands or products following prior searches, clicks, or interactions with similar content, suggesting that algorithmic recommendation systems continuously reinforced product visibility based on prior engagement patterns. Over time, such repetition increased product familiarity and made certain items appear more relevant, attractive, or trustworthy. This finding is consistent with Joans and Sheila (2024), who noted that algorithmic systems significantly influence consumer decisions by continuously

highlighting selected products. Likewise, Rezaei et al. (2025) suggested that recommendation systems narrow users' perceived range of choices by repeatedly promoting a smaller set of visible options. In this study, repeated visibility appeared to transform product presence into product preference. Items that were repeatedly recommended became more cognitively accessible and therefore more likely to be considered during later purchase decisions.

However, the findings also suggest that unplanned purchasing on Xiaohongshu was not always purely impulsive or irrational. Rather than proceeding directly to purchase after exposure to recommended products, young female users often entered a short evaluation stage once their interest had been triggered. At this stage, they engaged in further information-seeking behaviours such as searching for additional posts, comparing user experiences, analysing comment sections, and reviewing multiple opinions before reaching a final purchase decision. This demonstrates that algorithmically influenced unplanned purchasing may involve a hybrid decision-making process. The purchase may not have been originally planned, yet the final decision was often supported by active information seeking. In this sense, algorithmic recommendations did not completely replace consumer agency, but instead redirected attention toward products that were then rationally assessed.

Another important factor shaping consumption behaviour was the persuasive influence of user-generated content (UGC). Young female users consistently highlighted peer reviews, before-and-after demonstrations, personal experience sharing, and comment sections as key informational sources that enhanced confidence and reduced uncertainty prior to purchase decisions. This finding supports Tan and Noor (2025), who found that perceived credibility strongly predicts purchasing intention among Malaysian consumers. It also aligns with Mei (2024), who argued that experiential beauty-related content reduces uncertainty by allowing users to evaluate products through the experiences of others. On Xiaohongshu, the algorithm did not simply recommend products in isolation; it recommended products embedded within

socially validated content ecosystems. Therefore, the persuasive strength of the platform appears to stem from the combination of algorithmic amplification and peer-generated trust signals.

The findings further reveal that participants often interpreted frequently recommended products as popular, effective, or widely approved. This suggests that recommendation repetition may create a perception of social consensus, where users assume that highly visible products are more credible because they are repeatedly encountered. In reality, such visibility may reflect algorithmic prioritisation rather than genuine market superiority. Nevertheless, for users, repeated prominence can function as a heuristic cue that simplifies decision-making. This showing that algorithmic systems influence not only what users see, but also how users interpret product value and popularity.

Overall, the present study demonstrates that Xiaohongshu's algorithmic recommendations system contribute to unplanned beauty-related brand and product purchasing through several interconnected processes: repeated exposure, increased familiarity, trust in UGC, and redirected consumer attention. While young female users still exercised some degree of evaluation before purchasing, their choices were often shaped within an algorithmically structured environment that made certain brands and products more visible and persuasive than others. Therefore, unplanned beauty product purchasing behaviour on Xiaohongshu should not be understood as purely spontaneous consumer irrationality, but as a behavioural outcome emerging from the interaction between platform design, social proof, and user decision-making processes.

5.4 Conditional and Limited Effects of Algorithmic Influence

Although Xiaohongshu's algorithmic recommendation system can shape consumer attention and encourage unplanned purchasing behaviour, its influence was not absolute or constant. Users' responses indicate that the effectiveness of algorithmic recommendations depended heavily on situational factors such as timing, immediate needs, browsing motivations, and post-purchase relevance. This suggests that users were not passive recipients of algorithmic influence at all times but responded differently depending on their personal context. Therefore, the impact of recommendations should be understood as conditional rather than universally persuasive.

One important condition identified in this study was the stage of the consumer decision-making process. During the pre-purchase stage, repeated algorithmic recommendations were often interpreted positively by young female users as they provided continuous exposure to reviews, comparisons, and peer reassurance. Such repeated content exposure enabled users to accumulate more information, evaluate alternative options, and gradually build confidence prior to making purchase decisions. In this context, repetition was interpreted as useful rather than intrusive. This finding supports Huang and Liu (2025), who argued that users respond favourably to recommendation systems when they perceive them as useful and relevant. For young female users in the present study, algorithmic repetition was generally received positively when it aligned with their immediate consumption goals, as repeated exposure was perceived as useful for reinforcing product awareness and supporting decision-making processes.

However, once a purchase decision had already been made, users' attitudes toward repeated content recommendations often changed. However, young female users also expressed frustration when the platform continued to recommend similar products after a purchase had already been made or when the product was no longer relevant to their current needs, indicating limitations in the adaptability of algorithmic recommendations. In these cases,

recommendations were no longer interpreted as helpful personalisation, but as excessive repetition and reduced relevance. This reveals a temporal limitation of algorithmic effectiveness. The same recommendation logic that was useful before purchase became irritating after purchase because users' needs had already shifted.

Another condition influencing algorithmic impact was users' daily routine and emotional state. Young female users reported stronger engagement with algorithmic recommendations during leisure periods, free time, or relaxed browsing moments, when they were more receptive to exploratory content consumption and less constrained by task-oriented or goal-directed browsing behaviour. When users had more time available, they were more likely to scroll unconsciously, explore recommended content, and become immersed in product-related posts. In contrast, when users were busy, usage became shorter and more functional, with less openness to prolonged browsing or purchase consideration. This finding extends previous literature by suggesting that algorithmic influence interacts with users' situational readiness and available cognitive attention. Recommendations may be powerful, but their effects are amplified when users are psychologically receptive and temporally available.

The findings also indicate that young female users exercised limited forms of resistance when algorithmic recommendations became irrelevant, repetitive, or no longer aligned with their interests, suggesting a degree of agency in managing their content exposure within the platform. Rather than fundamentally rejecting the platform, users commonly ignored unwanted content, scrolled past it, or selected the "not interested" option. This partially supports Yang et al. (2024), who discussed algorithm fatigue and user resistance emerging from repetitive exposure. However, unlike the stronger forms of disengagement reported in some studies, young female users in the present research primarily demonstrated mild corrective behaviours, such as ignoring, skipping, or quickly scrolling past irrelevant content, while still continuing

to actively use the platform. This suggests that dissatisfaction did not necessarily lead to rejection, but instead to minor adjustments within continued platform dependence.

Furthermore, despite being aware that algorithms track user behaviour and influence content exposure, young female users largely adopted a “let it be” attitude, reflecting a level of passive acceptance toward algorithmic personalisation practices. Convenience often outweighed concern. As long as recommendations remained enjoyable, useful, or harmless, users were willing to tolerate algorithmic monitoring. This finding reflects a pragmatic acceptance of platform surveillance, where efficiency and entertainment are prioritised over autonomy or privacy concerns. It also reinforces the argument that awareness of algorithmic influence does not automatically produce resistance.

In conclusion, the present study shows that Xiaohongshu’s algorithmic influence was meaningful but bounded by context. Recommendations were most effective when users were actively considering purchases, browsing during leisure time, or seeking convenient information. Their influence weakened when needs had already been satisfied, content became repetitive, or users lost interest. Rather than controlling users in a uniform manner, the algorithm operated through shifting moments of usefulness, irritation, convenience, and relevance. Therefore, algorithmic power on Xiaohongshu should be understood as situational, negotiated, and dependent on users’ changing everyday circumstances.

5.5 Conclusion and Recommendations

Through focus group discussions with 12 participants from three faculties, the findings demonstrated that Xiaohongshu has evolved beyond a simple social media application into an integrated digital environment for entertainment, beauty learning, product discovery, and consumer decision-making. Users’ usage was highly habitual, with many spending significant

daily time on the platform and engaging in browsing that was sometimes prolonged and unconscious. This suggests that Xiaohongshu had become embedded in users' everyday routines rather than being used only for occasional information seeking purpose.

The study further found that algorithmic recommendations played an important role in shaping young female users' awareness of beauty products, brand attitudes, and purchase intentions. Users generally welcomed recommendations when content was relevant, useful, and convenient. Many perceived the platform as "understanding" their interests because it continuously presented desirable products without requiring active searching. However, the findings indicate that such personalisation may function less as true individual understanding and more as automated behavioural categorisation based on prior clicks, searches, and viewing behaviour. Repeated exposure also increased familiarity with certain brands, making them appear more trustworthy and desirable over time. At the same time, several young female users were aware that the recommendation system could narrow their exposure to alternative brands, leading to what they described as an "information cocoon," where their attention tended to focus on a limited range of repeatedly promoted products over time.

In relation to purchasing behaviour, Xiaohongshu's influence was significant but not deterministic. Rather than directly forcing purchases, algorithmic recommendations appeared to stimulate curiosity, enhance desirability, and encourage further product research, which sometimes resulted in spontaneous or unplanned purchases. During the pre-purchase stage, repeated recommendations were often perceived positively because they provided reassurance, comparisons, and user reviews. However, once purchases had been made, the same repetitive content often became annoying or unnecessary. This shows that the effectiveness of recommendations was strongly dependent on timing and users' immediate needs. Post-purchase experiences were mixed: some participants were satisfied when products matched expectations, while others reported disappointment due to skin incompatibility or exaggerated

promotional claims. Despite this, trust in Xiaohongshu as an information platform generally remained stable, as participants tended to blame unsuitable products, sponsored creators, or personal mismatch rather than the platform itself.

5.5.1 Implications of the Study

This study contributes theoretically by extending existing literature on algorithmic recommendation systems, user cognition, and beauty consumption into the Malaysian context, particularly among female university students. It supports arguments that algorithms do not merely distribute content neutrally, but actively shape attention, familiarity, and perceived consumer choice. The findings also suggest that users are not fully passive victims of algorithms; instead, they negotiate algorithmic influence pragmatically, accepting recommendations when useful while occasionally resisting through minor corrective behaviours such as ignoring posts or selecting “not interested”.

Practically, the findings offer implications for consumers, marketers, and platform designers. Consumers should develop stronger algorithmic literacy and remain alert to the existence of an “information cocoon,” recognising that repeated visibility does not necessarily reflect product quality. Importantly, they should actively avoid becoming confined within algorithmically generated bubbles by consciously seeking diverse information sources beyond platform recommendations. Marketers may understand that algorithmic recommendation success depends not only on exposure frequency, but also on timing, credibility, and perceived relevance. For Xiaohongshu and similar platforms, the findings suggest a need to improve diversity in recommendations, transparency in sponsored content, and post-purchase recalibration mechanisms to reduce user fatigue and repetitive overexposure.

5.5.2 Limitations of the Study

Several limitations should be acknowledged. First, due to the time, resources, manpower constraints, the study involved only 12 participants from a single university, which limits the generalisability of findings to all Malaysian university students or broader consumer groups. Second, the study focused exclusively on female students who actively consume beauty-related content. However, the findings also suggest that algorithmic influence is highly contextual and shaped by users' interests, browsing behaviour, and temporal engagement patterns. As such, the effects observed in this study may vary across different user groups and content categories, such as fashion, food, or technology, where engagement contexts and consumption motivations may differ. Finally, the study examined users' perceptions of algorithmic influence rather than the actual technical operation of Xiaohongshu's proprietary recommendation system.

5.5.3 Recommendations for Future Research

Future studies should expand the sample size by including participants from multiple Malaysian universities, age groups, and demographic backgrounds to enhance representativeness. Comparative studies between male and female users, or between different ethnic and cultural groups in Malaysia, would also provide deeper insight into how algorithmic influence varies across audiences.

Secondly, future research may compare Xiaohongshu with other platforms such as TikTok, Instagram, or Shopee to examine whether similar recommendation effects occur across different digital ecosystems. This would be especially valuable given participants' perceptions that trends and recommendations often spill across multiple platforms.

Finally, future research should explore the long-term psychological and behavioural implications of prolonged algorithmic beauty-related content exposure, including effects on self-image, beauty standards, spending habits, and decision-making autonomy among young consumers.

In conclusion, this study demonstrates that Xiaohongshu's algorithmic recommendation system significantly influences beauty consumption decisions among Malaysian female university students, not through direct control, but through subtle mechanisms of convenience, repetition, familiarity, and selective visibility. While users benefit from efficient personalised discovery, they also risk narrowed choices and routine dependence. Understanding this tension is increasingly important in an era where algorithms quietly shape everyday consumer life.

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