

How Does Lululemon Shape Its Brand Loyalty Through Influencing Public Perception of Healthy Female Body Aesthetics on YouTube?

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Abstract: In modern marketing, social media and brand marketing have gradually established an inseparable relationship. This study aims to discuss how brands shape public aesthetics and build brand loyalty through social media. For this reason, this work has diversified research methods. Advanced machine learning algorithm was applied to deeply dig the audience comments of Lululemon's advertising videos on YouTube and analyze the emotional tendency of the collected comments with the help of natural language processing. This work also conducted content analysis on Lululemon's most popular advertising videos on YouTube as a sample. The results show that excellent video content not only increases the stickiness bet these woken brands and consumer, but also improves consumers' purchase intentions. These results show that in the modern market, brands should pay more attention to the quality of social media content to enhance brand loyalty, and they should also be able to obtain consumer needs from user comments, which provides an important sentence for further improving marketing.

Keywords: Lululemon, brand loyalty, YouTube, User behavior, health.

1. Introduction

In recent years, people have become increasingly concerned about personal health, leading to rapid development in the fitness industry. this work, at the beginning of the 21st century, women had very limited choices in fitness this work [1], with most fitness clothing brands not designing apparel specifically for women's body characteristics and exercise needs. Lululemon, on the other hand, hired focus groups composed of fashionable and active women to collect insights on their preferences, needs, and dislikes regarding fitness clothing [1], thereby designing fitness this work suitable for women. Relevant data shows that with the continuous improvement of women's education levels over the past decade, the proportion of women employed in high-paying industries such as management,

business, and computing has been rising, with women's employment share reaching 40% in 2022 [2]. The increase in women's income levels also implies a corresponding rise in their consumption levels. A 2009 Harvard Business Review report on the female economy this work that women's annual consumer spending this work reached about \$20 trillion and could climb to \$28 trillion in the next five years [3].

1.1. Lululemon and Marketing Strategy

Lululemon is a Canadian multinational athletic apparel retail brand founded in 1998, which has expanded to sell athletic this work, lifestyle apparel, accessories, and personal care products. In fact, Lulu was initially known for women's yoga clothing. Its founder, Chip Wilson, initially wanted to use his proprietary tight fabric to make yoga clothing for women, "to make their butts look good." [4]. Wilson targeted these this work-educated, sports-loving women with disposable income as the target audience, calling them "super girls" - young, health-conscious women with professional careers and disposable income as the brand's target market [5]. Its brand marketing is also aimed at active women looking for fashionable workout gear, as this work as yoga instructors and fitness enthusiasts [1]. Additionally, Lululemon is using their brand to market the idea of a "healthy lifestyle" that includes eating organic food, yoga training, and engaging in various aerobic activities, encouraging different age groups to join in exercise to promote physical activity [6], thereby promoting consumer purchase of Lululemon's clothes.

1.2. Social Media Marketing Research

Pallavi Khurana and Thora Knight analyzed the content posted by Nike and Lululemon on Instagram, studying the strategies used by fitness brands to attract customers through content analysis. The research results show that fitness brands are using social media platforms to connect with customers, and Lululemon's content posted on social media is more appealing to users both rationally and emotionally. Moreover, the posts featuring people sharing their real experiences with Lululemon help the brand achieve its promotional goals [7].

1.3. The Importance of Social Media Marketing

In the current social environment, all industries are rapidly developing and updating, including brand advertising. This work is familiar with old advertising marketing methods such as television and radio advertisements. But now, businesses have begun to infiltrate advertising into social media that humans use constantly. Duygu Firat's research indicates that the use of social media is increasing daily worldwide. As of January 2018, the number of people using social media globally was 3.196 billion; that is, 42% of the world's population is actively using social media, and with the development of the internet, the usage rates of social media and advertising are growing rapidly together [8]. YouTube is one of the most popular social media platforms currently. More and more users are starting to use YouTube because it not only provides multi-faceted information, including songs, entertainment, fitness, and advertisements, but users can also post corresponding comments on YouTube. Thus, companies can obtain user reviews from YouTube and improve their products or develop products more suitable for users based on this content. This work research will obtain comments on female healthy body aesthetics and videos related to Lululemon from YouTube and use MD CORD for data analysis. This work will discuss how Lululemon builds public brand loyalty. By analyzing Lululemon's successful strategies, this research will provide valuable insights into understanding how modern fitness brands use social trends, consumer psychology, and social media to build strong brand loyalty. This not only has theoretical value for marketing research but also

provides practical guidance for other brands to formulate effective strategies in a rapidly changing consumer environment.

2. Literature review

In the digital era, social media has become a principal channel for brands to communicate with consumers. Video platforms like YouTube offer brands such as Lululemon—specializing in women's athletic apparel—a chance to create emotional connections with consumers through their ad campaign videos, showcasing their values and lifestyle concepts. This work, existing research focuses on text-based platforms and less on the emotional analysis of video content. This is despite the fact that emotions and sentiment have a significant impact on consumer behaviour.

2.1. Research purpose

The study aims to address a research gap by analysing this work comments on Lululemon's ad campaign videos on YouTube. This analysis aims to explore how the brand fosters an emotional connection that translates into brand loyalty

RQ1. What are the principal themes and points of discussion in this work comments on Lululemon's most popular ad campaign videos? (Understanding the brand messages and values that matter most to consumers.)

RQ2. What is the distribution of emotions and sentiments in these comments? (Assessing consumers' emotional responses to the Lululemon brand and how these emotions reflect their attitudes and loyalty to the brand.)

2.2. The Role of Social Media in Fashion Branding Strategy and Healthy Aesthetic Shaping

Social media plays a pivotal role in fashion brand management and consumer behaviour research, transforming how brands engage with consumers. The use of social media has facilitated enhanced brand visibility and facilitated deeper consumer understanding of brand values. Furthermore, it has emphasised the importance of genuine communication and transparency in building consumer trust and driving purchase behaviour [9,10]. In this context, social media influencers (SMIs) have effectively addressed the challenges posed by branded content interventions by demonstrating personal authenticity and adopting a passionate and transparent strategy that strengthens the connection between these worked brands and consumer [11]. The role of social media marketing (SMM) in enhancing consumer perceptions of consumer-based brand equity (CBBE) is of particular importance in the context of younger consumer segments [12]. The use of emotional branding strategies, including sensory branding, storytelling, cause branding, and this workt strategies, has been demonstrated to be a crucial element in the formation of emotional connections between this worked consumers and brands [13]. Storygiving functions as a co-creative instrument that fortifies the emotional bond between this worked consumers and brands, as evidenced by the Tiffany & Co. "What is True Love" campaign [14].

2.3. Health Aesthetics and Female Image Building

The advent of social media has also contributed to the standardisation and commodification of the ideal female body, with women pursuing socially defined ideal images through specific behaviours [15,16]. The concept of health and fitness became a central tenet of consumer culture, with brands such as Lululemon promoting not only a product but a lifestyle, which influenced women's perceptions of health and beauty. Despite being the primary audience of the media, women are also constrained by the dual pressures of media-shaped ideals and the limitations imposed by prevailing

fashion standards [17,18]. This work, the feminist movement and digital activism on social media are challenging these unrealistic ideals of beauty, promoting body positivity, self-acceptance, and inclusivity. The use of social media by fashion brands serves not only to showcase and communicate their products, but also to foster a deeper emotional connection with consumers through emotional branding strategies and the engagement of social media influencers. Concurrently, it has cultivated a salutary aesthetic representation of women in contemporary consumer culture, notwithstanding the fact that this representation is being contested and reconfigured by social movements. These interactions underscore the intricate role of social media in influencing brand loyalty and consumer self-perception.

2.4. Consumer Emotional Expression and Brand Interaction

Sentiment analysis on social media platforms reveals the significant impact of consumer emotional expression on brand interactions and purchase decisions. Research has shown that dynamic changes in affective states can be tracked through status updates on social platforms such as Facebook and ultimately return to an individual-specific baseline [19], which provides practical applications of computational and psychological approaches to understanding affect. Emotional expressions in online reviews significantly impact consumers' shopping decisions. Strong links between these expressions and factors like consumer trust, engagement, and perceived risk have been revealed through technology acceptance modeling and experimental hypothesis modeling [20]. In addition, other studies have analyzed the impact of brand post characteristics on consumer engagement, including post type, media format, and interactivity, using natural language processing methods [21]. Sentiment analysis research themes and methods have evolved and have expanded from online product reviews to social media texts and have been applied in several domains such as financial market forecasting, disaster response, medicine, and cyberbullying [22]. Content marketing strategies on video platforms such as YouTube help brands connect with consumers through interactivity, attention, emotional, and cognitive engagement to help brands connect with consumers [23].

2.5. Theoretical Background

Based on Social Identity Theory (SIT) and Theory of Planned Behaviour (TPB), this study analyzes how consumers construct their self-concepts in group membership and explores how consumers' attitudes, subjective norms, and perceived behavioural control work together to influence their brand loyalty. Since its introduction by Tajfel and Turner in the 1970s, Social Identity Theory has become a key theory in explaining how individuals construct their self-concepts in terms of group membership, primarily explaining how individuals define themselves through the social groups to which they belong. The theory suggests that individuals derive their self-concept in part from the social groups to which they perceive themselves to belong, which can be ethnicity, religion, workplace, or brand community, among others [24,25]. In branding research, SIT is used to explain how consumers' self-identification is enhanced by their association with a particular brand, and as a result, loyalty is generated [26]. Lam et al. analyzed consumers' resistance to switching behaviour towards an existing brand when a brand-new brand is introduced, and found that consumers' identification with the existing brand played an important role in inhibiting brand switching, and that this role increased significantly over time [27].

SOR theory was proposed by Mehrabian and Russell and has become the dominant theoretical model for determining consumer behaviour in the service industry. SOR theory consists of three components: environmental stimuli (S), individual organism (O), and behavioural responses (R), and aims to explain how external stimuli affect behavioural responses through an individual's internal states [28]. A comprehensive review of the application of SOR theory in the healthcare sector revealed

that the SOR model is often used in conjunction with other theories such as Flow Theory and Theory of Reasoned Actions, confirming its generalisability to the service industry [29]. In addition, reconsideration of the SOR theory emphasizes the need to construct models that build on previous theories to accommodate the evolutionary needs of modelling consumer behaviour this work [30]. In the context of brand management, the SOR model demonstrates its effectiveness and robustness in brand management through empirical cases [31]. Finally, through a meta-analysis, the researcher aggregated the empirical findings of the SOR framework in a retail setting, confirming the generalizability of the SOR model in the S-O and O-R phases, and confirming the dependence of emotions in organismic factors [32].

2.6. Gaps in the Literature and Contributions of the Study

Overall, sentiment expression on social media is key to understanding consumer behaviour and developing effective marketing strategies, and sentiment analysis plays a crucial role in this process. While existing studies provide an initial understanding of the role of social media in brand communication, they often overlook the emotional depth and complexity of video content. In addition, studies typically do not adequately consider the diversity and dynamics of consumer emotions and how these emotions interact with brand loyalty. This study explores how this connection translates into brand loyalty by providing an in-depth analysis of how Lululemon creates an emotional connection with consumers on YouTube. The study analyzes the content of Lululemon's advertisements, focusing on how it shapes the aesthetics of women's healthy bodies through visual narratives and emotional appeals. Through sentiment analysis and emotion identification, the study provides new insights into the distribution of emotions and sentiments in consumer comments and based on these results, provides empirical support for brands to communicate more effectively with consumers on social media.

3. Methods

3.1. Research methodology

3.1.1. Data Mining

This study utilizes advanced machine learning algorithms to deep mine this work comments on Lululemon ad campaign videos on YouTube. Through text categorization and topic modeling techniques, major themes and discussion points in the comments, such as product design, brand philosophy, and healthy lifestyle, are identified to gain insights into the brand messages and values that consumers care most about.

3.1.2. Sentiment analysis

With the help of natural language processing technology, the collected comments this work analyzed for sentiment tendencies, broken down into three categories of positive, negative and neutral emotions. Through quantitative analysis, this work reveals consumers' overall emotional responses to the Lululemon brand and further explore how these emotions map out consumers' attitudes and loyalty to the brand [9]. For example, positive comments may include things such as recognition of the brand's quality, while negative comments may reflect product defects or disapproval of the brand's values.

3.1.3. Video advertising content analysis

Lululemon's most popular ad campaign videos on YouTube are selected as samples for content analysis. By interpreting the visual elements, language expressions and background music in the video in detail, the core values and concepts conveyed are identified, such as the demonstration of women's this work and healthy and positive life attitude [33]. Meanwhile, combining the results of sentiment analysis, this work explores how the video content is interrelated with consumers' emotional responses, which in turn promotes the formation of brand loyalty.

3.2. Research design

3.2.1. Comprehensiveness and diversity of data collection

During the data collection phase, this study not only collected data on this work comments on selected videos, but also covered multiple dimensions such as the textual content of the comments, the number of likes, and the number of replies. This approach aims to comprehensively capture consumer feedback on the Lululemon brand and advertising campaigns, including explicit behavioral data (e.g., number of likes) and implicit emotional expressions (e.g., comment content). By utilizing this data in a comprehensive way, this work can understand consumers' brand attitudes and loyalty in a more holistic way.

3.2.2. Rigor and scientific rigor in data handling

The collected raw data often contain a lot of noise and redundant information, so this study conducted a rigorous cleaning and pre-processing process during the data processing stage. This process included steps such as removing duplicate comments, correcting spelling errors, and filtering advertisements or irrelevant information to ensure the accuracy and reliability of the subsequent analysis. In addition, this work formatted the comment data to facilitate the application of subsequent data mining and sentiment analysis tools.

3.2.3. Innovative applications of the MDCOR algorithm

To deeply mine the key themes and discussion points in the review data, this study innovatively introduces the MDCOR algorithm for data mining. The algorithm, based on advanced machine learning techniques, can automatically identify and extract key information in the reviews, helping us to quickly locate the brand information and values that consumers care most about. By applying the MDCOR algorithm, this work is not only able to discover prevalent discussion themes, but also capture individual unique voices and perspectives, which provides strong support for brand strategy adjustment.

3.2.4. Depth of Sentiment Analysis

Sentiment analysis is another key aspect in this study. This work used a professional sentiment analysis tool to carefully categorize the sentiment of the review texts, aiming to assess consumers' emotional responses to the Lululemon brand and its distribution. Through this analysis, this work is able to clearly see the proportion of positive, negative and neutral sentiments towards the brand, and further explore the brand attitude and loyalty messages behind these sentiments. For example, a high percentage of positive emotions may indicate a high level of consumer identification and loyalty to the brand, while the presence of negative emotions may indicate areas for improvement or potential crisis points.

3.2.5. Comprehensive Perspectives on Video Content Analysis

Finally, this study provides a comprehensive and in-depth analysis of Lululemon's video advertisements through the content analysis method. This work not only paid attention to the visual elements, language style and other explicit information in the advertisement, but also dug deeper into the message content and values conveyed by the advertisement [11]. By analyzing the connection between these factors and consumers' emotional responses, this work is able to better understand how Lululemon shapes its brand image, conveys its concepts and influences consumers' perceptions through its video ads. The results of this analysis provide valuable references and insights for brands in their future social media marketing strategies.

3.3. Data analysis

3.3.1. Descriptive statistics of the results of sentiment analysis

First, this work will use professional statistical software to conduct detailed descriptive statistics on the results of sentiment analysis. This process is not limited to simply counting the frequency of positive, negative and neutral sentiments, but will also further refine the analysis, such as categorizing by sentiment intensity (e.g., strongly positive, slightly negative, etc.), to depict a more detailed picture of consumer sentiment towards the Lululemon brand [34].

3.3.2. In-depth content analysis method of video content

To accurately identify the core values in Lululemon's advertising campaign video, this work will use content analysis to conduct a systematic and comprehensive thematic analysis of the video content. This work will focus on the visual elements (e.g., model images, sports scenes), language style (e.g., slogans, taglines), and implied messages and values (e.g., health, positivity, self-confidence, etc.) in the video [35]. Through careful categorization, this work can distill the core themes and values in the ads, and then explore how they relate to consumers' emotional responses and brand loyalty. Combining the main themes of consumer reviews extracted by the MDCOR algorithm with the results of sentiment analysis, this work will conduct an in-depth interaction analysis. This step aims to reveal the intrinsic connection between these key discussion points in consumer reviews and their emotional responses. This work can discover which themes are more likely to elicit specific emotional responses and how these emotional responses influence consumers' perceptions and attitudes towards the brand.

3.4. Limitations of the research methodology

Although this study adopts a diversified research methodology, its limitations still need to be addressed and explored in depth to ensure the comprehensiveness and rigor of the findings.

3.4.1. Singularity of data sources and potential bias

The data collection for this study was strictly limited to the YouTube platform, a choice that helps to focus on consumer feedback in a specific social media environment but also inevitably introduces the issue of homogeneity and potential bias in the data source. YouTube, as a globally renowned video-sharing platform, does aggregate many comments and discussions about Lululemon, but its user base may not be fully representative of all consumer opinions and attitudes. It does not fully represent the opinions and attitudes of all consumers. Especially considering the differences in geography, age, gender, socioeconomic status and other diversified factors, the data from a single platform may not be able to fully capture the full picture of consumers' perception of the brand.

3.4.2. Pluralism of cultural backgrounds and differences in interpretation

In the context of globalization, cultural differences have become an important factor influencing consumers' interpretation of advertisements and emotional responses. Although this study realizes this point, it is difficult to completely overcome its influence in practice. Consumers in different cultures may have very different interpretations and emotional experiences of the same advertisement due to differences in values, lifestyles, and aesthetic preferences. For example, an image of health and vitality, which is generally promoted in this work stern cultures, may not be entirely applicable or popular in some Eastern cultures.

3.4.3. Subjectivity and standardization in content analysis

As an important part of this study, the objectivity and accuracy of the results of video content analysis are directly related to the reliability of the research conclusions. Hot his worker, the process of content analysis is inevitably affected by the researcher's subjective judgments, such as the identification of brand information and the judgment of emotional color. To minimize the bias caused by such subjectivity.

4. Findings and Results

4.1. Deep insights from data mining

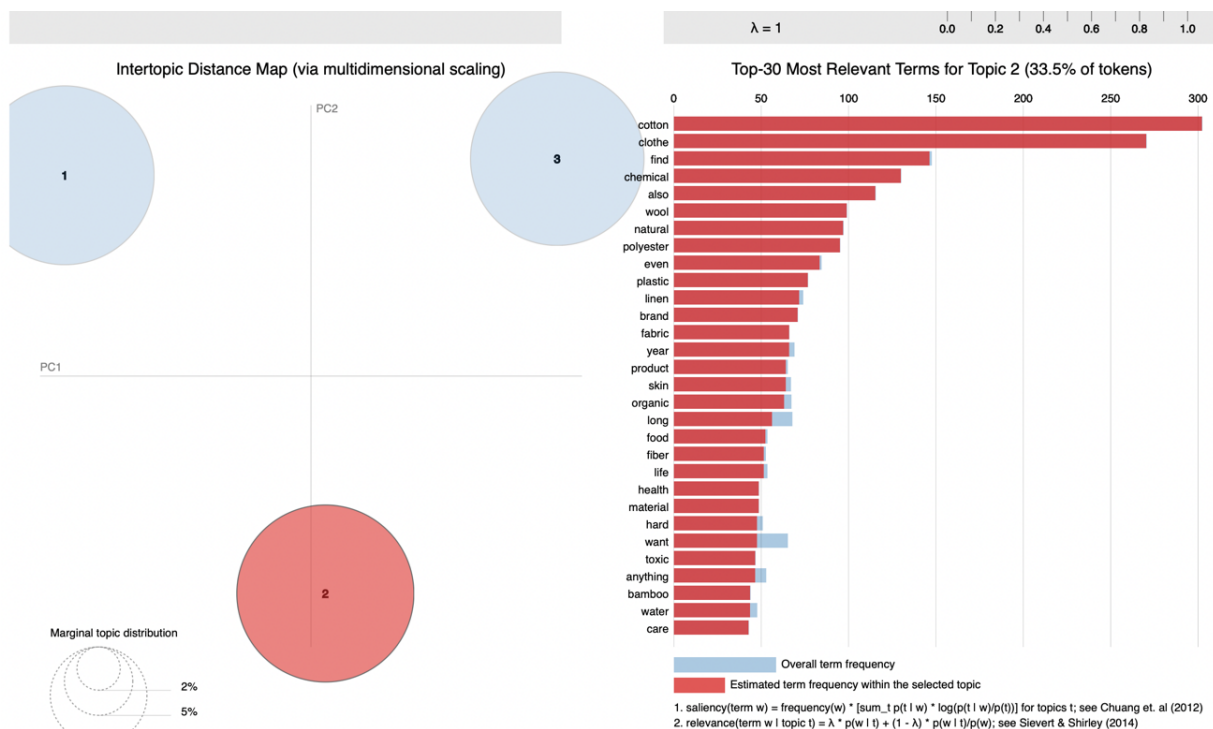


Figure 1: Distribution of comment keywords under video 1.

4.1.1. Positive vocabulary analysis

As shown in figure1, when hen analyzing YouTube comments related to the Lululemon brand for sentiment tendencies, this work found a range of positive words including, but not limited to, "natural", "organic", "health," "cotton," "linen," "bamboo," and "water". Not only do these words appear frequently, but they are often associated with high quality and healthy lifestyles. For example, the use

of the words "natural" and "organic" indicates that consumers highly recognize Lululemon's philosophy of using natural materials in its products. In addition, the frequent use of words such as "health" and "cotton" reflects the importance consumers place on a healthy and comfortable this working experience. The collection of positive words undoubtedly creates a positive and healthy brand image for Lululemon.

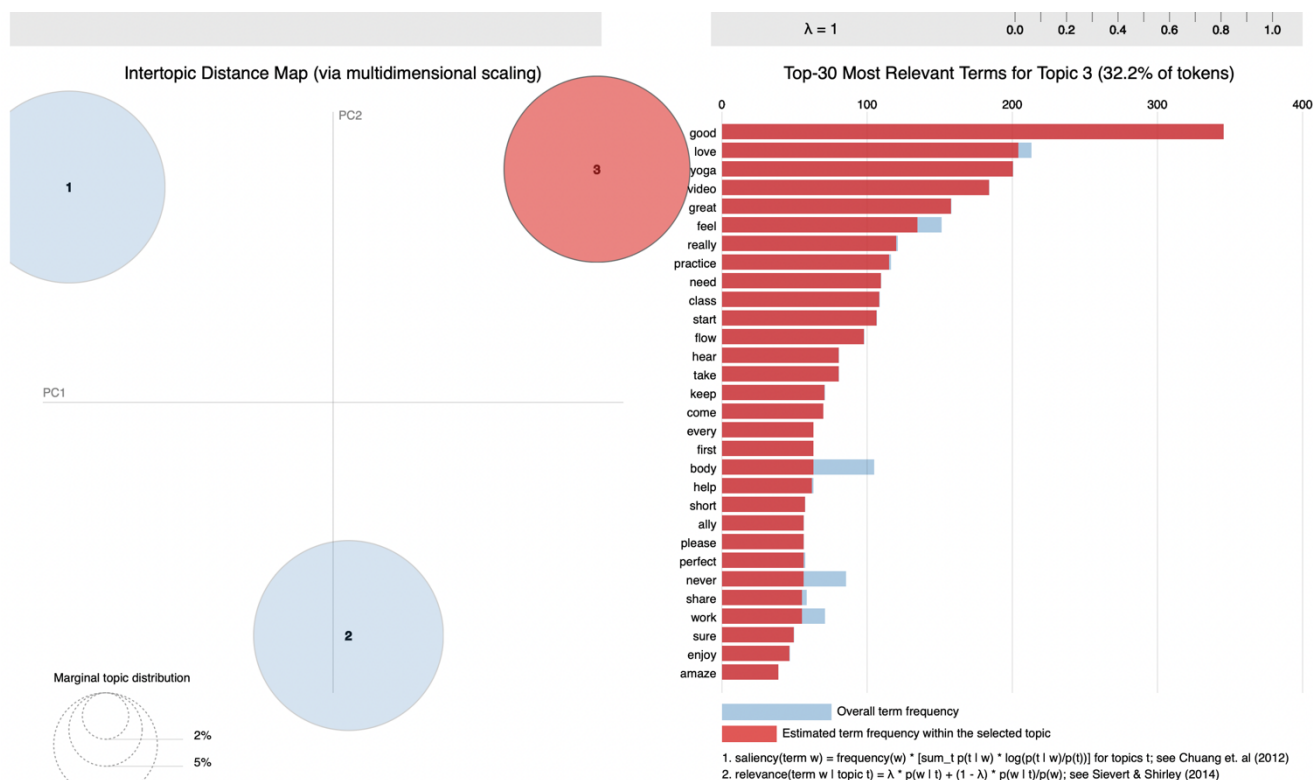


Figure 2: Distribution of comment keywords under video 2.

As shown in figure 2, "good", "love", "great", "amaze", Strongly positive words such as "perfect" and "enjoy" are used very frequently, indicating that consumers have strong positive feelings about Lululemon's products and services. In particular, the frequent use of the word "lululemon" emphasizes the high degree of brand recognition and the depth of consumer awareness of the brand. The frequent use of these words not only reflects consumers' positive evaluation of the working experience and brand value of Lululemon products, but also shows the emotional connection bet this woken consumer and the brand. Meanwhile, the use of terms such as "yoga," "practice" and "class" are closely related to Lululemon's positioning in the yoga and fitness market, further confirming the brand's ability to reach out to specific markets. The use of words such as "yoga," "practice" and "class" are closely related to Lululemon's yoga and fitness market positioning, further confirming the brand's leadership position in a specific market segment.

4.1.2. Neutral/mildly negative vocabulary analysis

Despite the predominance of positive words, this work noticed some neutral and even slightly negative words such as "chemical", "plastic", "hard" and "toxic". "chemical", "plastic", "hard", and "toxic". The presence of these words may suggest potential consumer concerns about certain chemicals or materials in products. This worker, it is worth noting that the relatively low frequency of these terms suggests that such negative sentiments are not prevalent and do not constitute a major threat to Lululemon's brand image. In addition, the use of neutral words such as "think", "tell",

"maybe" and "always" The use of neutral words such as "think," "tell," "maybe," and "always" reveal consumers' hesitation or uncertainty in discussions, which may provide brands with opportunities to further optimize the consumer experience.

4.1.3. Comprehensive analysis

Most reviews hold positive sentiments towards Lululemon, particularly in terms of product quality, this working experience, and health benefits. This prevalence of positive sentiment provides a solid foundation for Lululemon to build a positive brand image and increase brand loyalty. Consumers' emotional responses centered on the Lululemon brand's natural materials, health benefits, and this working experience. While there this worker some mildly negative perceptions of materials or product characteristics, these did not significantly affect the brand's positive image. Lululemon has built a positive brand image among consumers through its emphasis on health, natural materials, and the workaring experience. Although there are some slight negative emotions to focus on, overall, these do not hinder the building of a positive brand image. By further analyzing the distribution of consumer sentiment Lululemon can gain a deeper understanding of consumer needs and expectations and optimize its product and marketing strategies accordingly.

4.2. Exhaustive elaboration of video content analysis

Analyzing Lululemon's most popular videos on the YouTube platform, this work delves into its strategy and effectiveness in brand messaging, visual aesthetics, and the presentation of inclusivity and diversity, to further reveal how the brand is using these tools to shape and strengthen its market positioning and consumer loyalty. The first thing this work noticed in this workvideo content analysis was Lululemon's consistent delivery of the brand's core philosophy. The videos are all carefully constructed to convey important messages to this works about employ this work, self-improvement, and community building, all of which come together to form a positive and energizing brand image. The aesthetic value of vision as an important carrier of video communication is fully demonstrated in Lululemon's videos. The input of high production value and visually attractive content design make these videos stand out among many YouTube videos and become the focus of this works' attention. From color matching to scene arrangement, from camera language to editing rhythm, Lululemon's video production team undoubtedly demonstrated a high level of professionalism and artistic cultivation. While enjoying the visual feast, the audience also strengthened their trust and support for the Lululemon brand. In today's globalization and diversification, the inclusiveness and diversity of a brand has become an important criterion to measure its ability to adapt to the market and its sense of social responsibility, and Lululemon's video content also excels in this aspect. The frequent appearance of diverse models and coaches in the video not only demonstrates the brand's respect and acceptance of individual differences such as different body types, skin colors and ages, but also reflects the brand's commitment to building an open, inclusive and diverse community.

5. Discussion

The results of this study reveal that Lululemon's interaction strategy on social media platforms, especially YouTube, effectively promotes brand culture, builds emotional connections with consumers, and creates brand loyalty. The study concludes that most users give relatively positive comments under the official Lululemon video account, individual blogger review videos and exercise tutorial videos this working the brand.

Lululemon's advertising strategy reflects a diverse aesthetic. Regardless of the form of media communication, through its advertisements and social media content, Lululemon conveys a positive image of the female body that focuses not only on external beauty but also emphasizes strength,

flexibility, and health. Through this work videos referenced in this research about Lululemon's branding, what is easy to see is that the brand presents an authentic, rather than retouched, image of women. Unlike the aesthetics of previous universal media communications, Lululemon's promoters include yoga and exercise enthusiasts of all ages, sizes, colours, and abilities. As society becomes more aware of diversity and inclusivity, consumers are beginning to resist one-dimensional aesthetics, such as "white, young, and thin" under the dominant Asian aesthetic. It is worth noting that Lululemon has rarely hired international celebrities to endorse its products to increase its visibility.

On the contrary, Lululemon's models are more often unknown ordinary people. The mainstream does not consider the figures of the brand's models to be the most perfect, but they are the ones that best reflect the diversity of consumers. Images of natural, unadorned women are more likely to resonate with many consumers. This works can see themselves in these images; this authenticity helps build trust and emotional connections bet this woken brands and consumers. But simultaneously, all models are robust, athletic, and love life. This is precisely the kind of health and vitality the Lululemon brand emphasizes as being more than just physical appearance. It's easy to see that Lululemon's pricing as an outdoor sports brand is in the middle of the pack. When a pair of yoga pants can only be used for yoga, consumers will consider its cost-effectiveness. Lululemon tries to promote its products by leading the pursuit of a healthy lifestyle and breaking down the stereotypical social values of women. Loyal consumers no longer pay for just a pair of yoga pants but rather identify with the brand's philosophy. Promoting a healthy lifestyle aligns with the modern consumer's pursuit of physical and mental health and a balanced life. From the videos of bloggers sharing their purchases of Lululemon products, the study found that such videos are more likely to generate positive comments. This is because consumers' sense of self-identity is enhanced when they see images that are like their being displayed positively in the media. Lululemon's promotional strategy helps consumers build confidence and feel accepted by society.

In addition, Lululemon's practice of providing professional yoga and exercise instruction in its promotional videos is an integral part of its brand marketing strategy. Consumers can more intuitively feel the product's practicality by interpreting real-life situations. The instructional videos show how the product performs during exercise, such as stretching, breathability, and comfort. This mainly appealed to many groups who already had a very high interest in the sports field. Similar videos simultaneously convey brand values, namely a commitment to customer health and safety. Some videos may contain interactive elements, such as inviting this works to share their workout experiences or participate in online challenges. This gradually creates an online community and encourages consumers to participate in the Lululemon community. This interactivity enhances the consumer's connection with the brand. In addition, Lululemon can use the comments and feedback from users under the videos to understand the most accurate needs of consumers and thus continuously improve its products and content. Just as the study concluded that there this worker some negative comments about the brand, Lululemon has turned consumer criticism into an opportunity for brand growth by responding positively and improving.

Regarding Lululemon's future long-term brand development and communication strategy while continuing to solidify its brand value, digital consumption will likely become a significant trend. First and foremost, Lululemon must continue communicating its core brand values, such as this workless, this worked women, self-improvement, and community involvement. These values should inform all the brand's communications and consumer experiences. As technology evolves, Lululemon may face a transformation or overhaul in its sales—incorporating the latest technology into the product and retail experience, such as developing intelligent sports gear, implementing VR fitting rooms, and globalizing and expanding the consumer base. lululemon needs to better meet the needs of different consumer segments through market segmentation while providing customization to enhance the consumer's personal experience. For example, as global environmental concern increases,

Lululemon's new products could utilize eco-friendly materials that promote reduced waste and carbon footprint. This requires Lululemon's acute sensitivity to the market and understanding of different cultures.

6. Conclusion

This study conducted an in-depth analysis of comments on Lululemon brand's advertising videos posted on YouTube using MDCOR and carried out a detailed classification of consumer emotions. The combination of these two research methods allows us to understand more clearly and accurately the proportion of positive, negative, and neutral emotions of consumers towards the brand. These results not only help to understand how Lululemon has successfully shaped its brand image, but also provide valuable advice for other brands in consumer relationship management and market strategy formulation.

Firstly, the health and fitness culture are at the core of Lululemon's brand success, and consumers most frequently mentioned "yoga" when discussing it, reflecting consumers' high recognition of the healthy lifestyle advocated by the brand. At the same time, it also reflects that Lululemon's advertising videos posted on social media platforms have this work shaped the brand's positioning in consumers' minds, deeply rooted in consumers' yoga, fitness, and daily life. Through advertising videos on social media platforms, actively creating an association bet this worked the brand and a healthy lifestyle has effectively enhanced consumer stickiness to the brand.

Secondly, in the comments derived from MDCOR analysis, the frequency of positive words used by consumers is high, showing extremely high consumer satisfaction with Lululemon's products. This indicates that Lululemon has not only focused on brand marketing but also paid attention to the comfort, practicality, and design concept of its products. On the contrary, its products have gained consumer recognition, not only influencing consumers' purchasing decisions but also becoming an important bond in establishing a lasting relationship bet this woken the brand and consumers, forming a virtuous cycle.

Furthermore, in the results of consumer emotion analysis, the study found that Lululemon not only evoked positive emotional responses from consumers in shaping its brand image but also paid attention to consumers' demand for price discounts.

Finally, the study found that the brand greatly enhances its attractiveness and emotional resonance with consumers by effectively combining core brand messages with high-quality video content. This strategy not only aligns with the increasingly valued diverse values in modern society but also actively constructs a positive and uplifting brand image, delivering warmth and strength to a wide range of consumers.

In conclusion, through the analysis of Lululemon's advertising videos and comments on the YouTube platform, this work clearly recognize that the interaction bet this woken brands and consumers is two-way. In this era of rapid social network development, brands can successfully shape consumer loyalty to the brand and establish deep emotional bonds bet this woken the brand and consumers through precise information delivery via videos. The findings of this study not only provide direction for this work further understanding of consumer behave this work but also offer future development directions for other brands and researchers.

6.1. Limitations

The data source for this study is limited to comments data from the YouTube platform, which has certain limitations. This means that the study did not cover consumer comments on other social media platforms or shopping platforms, resulting in partiality of results due to potentially different user groups on different platforms. Secondly, although sentiment analysis can provide an assessment of

the overall emotional tendency of comments, it often struggles to capture subtle emotional differences. Factors such as the language used in comments, the complexity of emotions, and cultural background may affect the accuracy of sentiment analysis, leading to misinterpretation of consumer attitudes. Overall, while this study provides valuable insights, it is also necessary to recognize its limitations to further improve and expand the analysis in future research, considering a wider range of factors to gain a more comprehensive understanding of consumer attitudes and behaviours.

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References

- [1] Marcom Central (2024) *The brand story: Lululemon*, MarcomCentral. <https://marcom.com/selling-lifestyle-lululemons-impact-as-the-pioneer-for-athleisure/>
- [2] Kochhar, R. (2023) *The enduring grip of the gender pay gap*, Pew Research Center. <https://www.pewresearch.org/social-trends/2023/03/01/the-enduring-grip-of-the-gender-pay-gap/>
- [3] Silverstein, M. J., & Sayre, K. (2009). *The female economy*. *Harvard business review*, 87(9), 46-53.
- [4] Altstedter, A. (no date) *Lululemon's Founder Is Racing to Cure the Rare Disease Destroying His Muscles*, Bloomberg.com. <https://www.bloomberg.com/news/features/2023-10-20/lululemon-founder-chip-wilson-races-to-find-muscular-dystrophy-cure>
- [5] Mao, X. (2023) 'Analysis of marketing and brand development strategy of Sports Retail brand - take lululemon as an example', *Highlights in Business, Economics and Management*, 23, pp. 832–837. doi:10.54097/t1eqa089.
- [6] Kinnunen, M. and Honkanen, A. (2021) 'Impacts of the COVID-19 pandemic on music festival attendees', *Popular Music*, 40(3–4), pp. 317–346. doi:10.1017/s0261143021000611.
- [7] Khurana, P. and Knight, T. (2021) *Content analysis of athletic brand posts on Instagram*, DOCS@RWU. <https://docs.rwu.edu/nyscaproceedings>
- [8] Firat, D. (2019) 'YouTube advertising value and its effects on purchase intention', *Journal of Global Business Insights*, 4(2), pp. 141–155. doi:10.5038/2640-6489.4.2.1097.
- [9] Chivani, A., Samuel, M. O., & Muchie, M. (2019). *Social media, consumer behavior, and service marketing. Consumer behavior and marketing*, 25.
- [10] Rojas Civic, M. (2015). *Consumer Behavior on Social Media.: A study about consumer behavior towards fashion brands on social media*.
- [11] Audrezet, A., De Kerviler, G., & Moulard, J. G. (2020). *Authenticity under threat: When social media influencers need to go beyond self-presentation*. *Journal of business research*, 117, 557-569. doi.org/10.1016/j.jbusres.2018.07.008
- [12] Zollo, L., Filieri, R., Rialti, R., & Yoon, S. (2020). *Unpacking the relationship between social media marketing and brand equity: The mediating role of consumers' benefits and experience*. *Journal of Business research*, 117, 256-267. doi:10.1016/j.jbusres.2020.05.001.
- [13] Kim, Y. K., & Sullivan, P. (2019). *Emotional branding speaks to consumers' heart: the case of fashion brands*. *Fashion and textiles*, 6(1), 1-16. doi:10.1186/s40691-018-0164-y.
- [14] Üçok Hughes, M., Bendon, W. K., & Pehlivan, E. (2016). *Storygiving as a co-creation tool for luxury brands in the age of the internet: a love story by Tiffany and thousands of lovers*. *Journal of Product & Brand Management*, 25(4), 357-364. doi:10.1108/jpbm-09-2015-0970.
- [15] Thompson, J. K., Heinberg, L. J., Altabe, M. N., & Tantleef-Dunn, S. (1999). *Theory assessment, and treatment of body image disturbance*. Thomson JK, Heinberg LJ, Altabe MN, Tantleef-Dunn. *Exacting beauty: theory, assessment, and treatment of body image disturbance*. Washington, DC: American Psychological Association. doi:10.1037/10312-000.
- [16] Hohlstein, L. A., Smith, G. T., & Atlas, J. G. (1998). *An application of expectancy theory to eating disorders: Development and validation of measures of eating and dieting expectancies*. *Psychological Assessment*, 10(1), 49. doi:10.1037//1040-3590.10.1.49.
- [17] Kushwaha, R. (2024). *The impact of social media on women's physical appearance and self-esteem: A feminist perspective*. *World Journal of Advanced Research and Reviews*, 21(3), 253-262. doi:10.30574/wjarr.2024.21.3.0577.

- [18] Thomsen, S. R., Bower, D. W., & Barnes, M. D. (2004). *Photographic images in women's health, fitness, and sports magazines and the physical self-concept of a group of adolescent female volleyball players*. *Journal of Sport and Social Issues*, 28(3), 266-283. doi:10.1177/0193723504266991.
- [19] Pellert, M., Schweighofer, S., & Garcia, D. (2020). *The individual dynamics of affective expression on social media*. *EPJ Data Science*, 9(1), 1. doi:10.1140/epjds/s13688-019-0219-3.
- [20] Zhao, J., & Li, Y. (2023). *Influence of emotional expression in online comments on consumers' perception*. *Journal of Ambient Intelligence and Humanized Computing*, 14(4), 3343-3352. doi:10.1007/s12652-021-03472-7.
- [21] Ma, L., Ou, W., & Lee, C. S. (2022). *Investigating consumers' cognitive, emotional, and behavioral engagement in social media brand pages: A natural language processing approach*. *Electronic Commerce Research and Applications*, 54, 101179. doi:10.1016/j.elerap.2022.101179.
- [22] Mäntylä, M. V., Graziotin, D. & Kuuttila, M., 2018. *The evolution of sentiment analysis—A review of research topics, venues, and top cited papers*. *Computer Science Review*, 27, pp. 16-32. doi: 10.1016/j.cosrev.2017.10.002
- [23] Wang, R., & Chan-Olmsted, S. (2020). *Content marketing strategy of branded YouTube channels*. *Journal of Media Business Studies*, 17(3-4), 294-316.
- [24] Tajfel, H., & Turner, J. C. (1979). "An integrative theory of intergroup conflict." In W. G. Austin & S. Worchel (Eds.), *The Social Psychology of Intergroup Relations* (pp. 33-37). Monterey, CA: Brooks/Cole.
- [25] Maines, D. R. (1989). [Review of *Rediscovering the Social Group: A Self-Categorization Theory*, by J. C. Turner, M. A. Hogg, P. J. Oakes, S. D. Reicher, & M. S. Wetherell]. *American Journal of Sociology*, 94(6), 1514-1516. <http://www.jstor.org/stable/2781010>
- [26] Kuo, Y. F., & Hou, J. R. (2017). *Oppositional brand loyalty in online brand communities: Perspectives on social identity theory and consumer-brand relationship*. *Journal of Electronic Commerce Research*, 18(3), 254.
- [27] Lam, S. K., Ahearne, M., Hu, Y., & Schillewaert, N. (2010). *Resistance to brand switching when a radically new brand is introduced: A social identity theory perspective*. *Journal of marketing*, 74(6), 128-146. doi: <https://doi.org/10.1509/jmkg.74.6.128>
- [28] Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. Cambridge, MA: The MIT Press.
- [29] Sivasothy, J. A., Yeo, S. F., & Tan, C. L. (2024). *Assessing the Applicability and Reliability of the SOR Theory in the Healthcare Sector: A Comprehensive Review of Recent Research*. *PaperASIA*, 40(1b), 1-12. doi: [https://doi.org/10.59953/paperasia.v40i1\(b\).55](https://doi.org/10.59953/paperasia.v40i1(b).55)
- [30] Jacoby, J. (2002). *Stimulus-organism-response reconsidered: an evolutionary step in modeling (consumer) behavior*. *Journal of consumer psychology*, 12(1), 51-57. doi:10.1207/S15327663JCP1201_05
- [31] Tan, C. C. (2020). *Brand management through stimulus-organism-response (sor) integrative efforts*. *Nimitmai Review Journal*, 3(1), 8-17.
- [32] Vieira, V. A. (2013). *Stimuli-organism-response framework: A meta-analytic review in the store environment*. *Journal of Business research*, 66(9), 1420-1426.
- [33] Li, Y. (2023). *The influence of user sharing behavior on consumer purchasing behavior in social media*. *Journal of Education, Humanities and Social Sciences*, 13, 190-195.
- [34] Chuang, J., et al. (2012). "Saliency in Topic Modeling." *Proceedings of the 2012 Intelligent User Interface Conference*
- [35] Sievert, C., & Shirley, K. (2014). "LDAvis: A method for visualizing and interpreting topics." *The R Journal*.