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# *Communications*

# DATA SCIENCE FOR SOCIAL GOOD: MINI CASE STUDIES ANALYSIS

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## Abstract

Data Science for Social Good (DSSG) and Artificial Intelligence (AI) are powerful tools for addressing societal challenges across sectors like health, education, and sustainability. Data science provides insights from large datasets to drive social responsibility and achieve sustainable development goals, while AI offers innovative solutions, but also poses potential misunderstandings if not properly managed. This study employed a mini case study analysis, examining a total of five cases based on the data science for social good model proposed by Abbasi et al. (2023) and Barak (2020). This study demonstrated the application of design thinking to diverse projects addressing multiple Sustainable Development Goals (SDGs). These projects leveraged various AI technologies to solve a range of problems, ultimately contributing to improved environmental, social, and community well-being. However, there were several challenges to address in using data science for social good, including data availability and model applicability, constraints in data transformation rules, limited financial resources, a scarcity of data sources and collection methods, and difficulties in predicting enrollment. The analytical data gathered from the five mini case studies confirm that the data science for social good model proposed by Abbasi et al. (2023) and Barak (2020) represents a promising direction. However, it should be re-evaluated to be more non-linear, human-centric, and adaptive. This is essential as addressing social good issues through social science is grounded in the design thinking process and the reality of constantly evolving challenges. Data science and AI, used collaboratively by stakeholders and experts, can build a more equitable, sustainable, and inclusive world and get communities engaged effectively.

**Keywords:** Data Science, Artificial Intelligence, Social Good, Mini Case Studies Analysis, SDGs

## Introduction

Data science is rapidly evolving, becoming a powerful tool not only for business but also for addressing significant social challenges. Its application, however, remains surprisingly low in the social good sector, despite its potential to create an equitable, sustainable, and inclusive world (Abbasi et al., 2023; Thomas, 2023; Vedere University, 2024). This disparity highlights the need to bridge the gap between the potential of data science and its practical application for social impact.

The transformative power of data science is evident in various sectors, for example, for poverty alleviation, disaster response, disease tracking and prediction, and sustainable development (Vedere University, 2024). Future research aims to enhance predictive capabilities by expanding the analysis to include data from other regions like Turkey and incorporating additional environmental variables, thereby broadening the study's geographical scope and improving its accuracy (Bayat & Yildiz, 2022).

However, the enthusiasm surrounding advancements, including driverless cars, is tempered by concerns about misconceptions and mismanagement, potentially leading to an “AI winter” (Fasli, 2022). Policymakers, in particular, struggle to reconcile AI’s potential as a panacea with doubts about

its decision-making capabilities. This uncertainty extends to the utilization of data science within the social good sector, where challenges include a lack of skilled personnel, inadequate tools, and uncertainty about AI application, according to the Distinguished Career Professor in the Machine Learning Department and the Heinz College of Information Systems and Public Policy, Carnegie Mellon University, Rayid Ghani (Monahan, 2023).

Initiatives like Data Science for Social Good (DSSG) are addressing these challenges. DSSG combines data science, machine learning, and AI to tackle complex social issues, emphasizing ethical considerations, community engagement, and interdisciplinary training. Programs at various institutions exemplify this approach, fostering project-based learning and applied research to equip data scientists with the skills to address real-world problems. These initiatives highlight the importance of interdisciplinary collaboration and the development of responsible data practices for equitable social impact (Saharawat, 2024). Furthermore, a care-oriented approach, integrating perspectives from Science and Technology Studies and Human-Computer Interaction, is crucial for maximizing the positive social impact of data science (Zegura et al., 2018). Platforms like Solve for Good connect social good organizations with data science volunteers, though challenges remain in converting needs into scalable, sustainable technical solutions (Ghani et al, 2019).

The call to action is clear: AI and data science experts must actively pursue opportunities for positive social impact, prioritizing ethics and inclusivity in their designs (Tomašev et al., 2020). By overcoming existing challenges and fostering collaboration, data science can unlock its full potential to address pressing global issues and create a more equitable and sustainable world. This study, therefore, aims to examine both the positive applications and the key challenges hindering the broader use of data science for social good. Therefore, this study aimed to examine how data science helped create and encourage social good practices and initiatives from various perspectives and to examine key challenges for using data science for social good practices and initiatives from various perspectives.

**Research objective (S)**

The objectives of this study are:

1) To explore how data science contributes to promoting and foster social good practices and initiatives from various perspectives.

2) To examine the key challenges associated with using data science in these contexts.

**Methodology**

Case studies provide in-depth analyses of specific cases, using diverse data sources to understand real-world challenges. This approach, common in social sciences and humanities, focuses on a study's scope and limits to guide data collection and analysis, enabling researchers to assess existing theories, develop new ones, and generate actionable insights (Coombs, 2022; Dźwigoł, 2023).

The rise of case studies using limited evidence, such as single interviews, highlights the need for clearer guidance on conducting rigorous multiple mini-case studies. It was interesting to employ mini case studies (Kåss et al., 2024). As illustrated by Karlsson (2016), mini cases offer the advantage of efficiently utilizing limited resources compared to full-length case studies. They require less time and engagement due to their shorter format. However, with fewer pages, it is crucial to maintain quality by adhering to Kardos and Smith's (1979) criteria and Yin's guidelines. The researchers should focus on the content rather than the length, ensuring internal validity through well-developed explanations. Although mini-cases are useful for teaching management problem-solving skills, they must uphold rigor to maintain relevance. It is important to ensure that the theory matches the data closely, as emphasized by Eisenhardt (1989). If more data is needed, the case study should be longer to provide sufficient

background for understanding. Ultimately, the length depends on the research question, which should be chosen carefully and adapted as needed (Karlsson, 2016). Referring to the principles of Kardos and Smith and Yin (1979), good case studies comprised of four considerations: (1) it is based on real-life examples, with identities possibly concealed; (2) it contains multiple components, each ending with problems and discussion questions; (3) it provides enough information for the reader to engage with the issues; and (4) it is reliable for the reader (Karlsson, 2016). According to Yin (2002), case study researchers should optimize four key design quality conditions: construct validity, internal validity, external validity, and reliability. Effectively managing these quality control aspects is crucial throughout the case study process, particularly during the inquiry phase, to ensure the investigation's quality (Karlsson, 2016).

It is highlighted that data science offers significant value across various areas, such as closing economic gaps, disaster response and humanitarian aid, health and well-being, achieving sustainable development goals, enhancing education and literacy, urban planning and infrastructure design, and advancing human rights and social justice (Vedere University, 2024). The researchers turned to (Ounhattapradit, 2021) for recommendations on best practices for studying, resulting in the identification of five mini case studies including (1) a case study on the use of machine learning for predict wildfires (Shah, 2018); (2) a case study on flood prediction in India and Bangladesh through the application of satellite imagery (Matias, 2020); (3) a case study of a job recommendation system for the unemployed in Portugal (Lavelle-Hill et al.,2019); (4) a case study of an early warning water and irrigation system monitoring in New York (Data Science for Social Good, n.d.a); and (5) a case study on predicting student enrollment to optimize education budget allocation (Data Science for Social Good, n.d.b). In addition to the best practices suggested by Ounhattapradit (2021), these five case studies were selected because they represent diverse situations, circumstances, and locations that highlight the perceived uses and benefits of data science across various contexts and applications. Moreover, sufficient data is available to address the two research objectives.

The data collected from the five mini case studies were analyzed, based on the data science for social good model adapted from Abbasi et al. (2023) and Barak (2020).

## Literature Review

This part covers two models of data science for social good: the Information Systems (IS) model by Abbasi et al. (2023) and the social good conceptual framework (Barak, 2020). It outlines a model comprising three intertwined elements: social good challenges, socio-technical environments, and relevant data science research genres. Social good challenges address critical issues such as disparities, climate sustainability, peace, justice, and well-being. Socio-technical environments examine the relationship between technology, organizations, citizens, and institutions, forming the operational context for DSSG. Research genres focus on computational social science, theory-building, and computational design as foundational elements of DSSG (Abbasi et al., 2023). Similarly, a framework redefining social good through three interconnected components is presented. Social good domains encompass environmental justice, social inclusion, and peace. Unconventional change systems include businesses, nonprofits, and social entrepreneurs. Innovative technologies like design thinking and big data-driven models leverage social media to create change. This model emphasizes that combining impactful technologies can yield unique solutions (Barak, 2020). These two models are combined and explained in Figure 1.

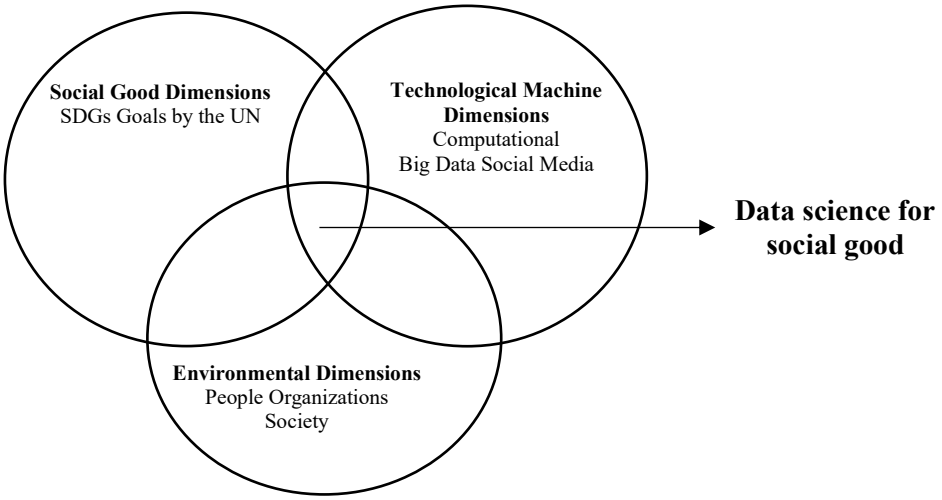


**Figure 1:** The data science for social good model
**Source:** Abbasi et al. (2023) and Barak (2020)

From Figure 1, Abbasi et al. (2023) and Barak (2020) posited that the successful application of data science for social good hinges on the interplay of three interconnected dimensions. First, a strong social impact dimension is crucial, aligning projects with the United Nations' Sustainable Development Goals (SDGs) to ensure relevance and contribute meaningfully to pressing global challenges. According to the United Nations (n.d.), such SDGs are composed of the following details. The first eight SDGs address fundamental human needs and inequalities: eradicating poverty and hunger; ensuring good health, quality education, and gender equality; providing clean water and sanitation; promoting affordable and clean energy; fostering decent work and economic growth; and building resilient infrastructure. These goals lay the foundation for a just and equitable society where everyone has the opportunity to thrive. The remaining nine SDGs focus on environmental sustainability and building a peaceful and inclusive world: promoting sustainable cities and responsible consumption; combating climate change and protecting life both on land and below water; strengthening institutions and promoting peace; and fostering global partnerships to achieve these interconnected goals. These goals recognize the crucial interdependence between environmental protection, social justice, and global cooperation in building a sustainable and prosperous future for all. Second, a robust technological dimension is required, leveraging the power of computational science, big data analytics, and social media analysis to extract meaningful insights and develop effective solutions. Finally, a vital environmental dimension encompasses the human, organizational, and societal contexts within which these projects operate. Consideration of existing social structures, community needs, and organizational capacity is vital for successful implementation and lasting impact (Abbasi et al., 2023; Barak, 2020). The effective integration of these three dimensions is essential for achieving meaningful social change.

The combined data science for social good model developed by Abbasi et al. (2023) and Barak (2020) has been thoroughly described and conceptualized in terms of how data science can be effectively integrated to enhance success and effectiveness in social good and sustainability. By analyzing mini case studies, this approach enables the researchers to validate existing theories, reexamine and develop new models, and offer more concrete practices grounded in data-driven solutions, as addressed by Coombs (2022) and Dźwigoł (2023).

Likewise, the diverse data sources available to non-profit organizations, categorized into internal and external data. This internal data provides crucial insights into the organization's

effectiveness and efficiency. Accessing and integrating this external data expands the non-profit's analytical capabilities, allowing for more comprehensive assessments of impact and more informed decision-making. The figure's circular design emphasizes the interconnectedness of these internal and external data sources, highlighting the potential for combining them to achieve a more holistic understanding of the non-profit's activities and their broader context (Farmer et al., 2023).

While data science offers significant potential for addressing social and environmental issues, it is important to acknowledge its limitations. Nine key areas where data science remains under development including data quality and transparency; informed consent and ethical data; algorithmic fairness and bias mitigation; accountability and impact responsibility; data security and privacy; resource management and collaboration; transparency and expandability; environmental impact and green computing; and accountability for biased outcomes (Rawat, 2024). It also revealed significant barriers hindering the effective application of AI towards achieving the SDGs. These challenges, ranked in order of perceived importance, encompass several key areas including data limitations; AI talent gap; organizational readiness; funding constraints; building community trust; collaboration challenges; technological infrastructure; computational resources; public perception and privacy; political will and policy support; model availability and regulation (McKinsey & Company, 2024). Analyses from both Rawat (2024) and McKinsey and Company (2024) reveal crucial obstacles, but McKinsey's broader perspective encompasses the organizational, societal, and political contexts vital for effective AI deployment for the social good.

## Findings

This section delved into the multifaceted nature of creating impactful data science initiatives for social good, exploring three interconnected pillars as follows.

### A. Foundational principles and logical considerations for creating data science for social good

Analysis of the mini case studies revealed a recurring theme: the application of design thinking. This human-centered approach prioritizes solutions tailored to user needs, shifting the focus from problem identification to impactful solution development. Unlike traditional problem-solving, design thinking emphasizes understanding user experiences to create effective solutions. This methodology necessitated deep user empathy, meticulous observation of user interactions, and a continuous focus on user needs throughout the entire design process (Han, 2022). Effective data science projects for social good hinge on a four-step process: actively engaging with stakeholders, thorough problem analysis, data analysis and model development itself, and rigorous evaluation and validation (Ferguson, 2021).

Following the Data Science for Social Good design thinking framework, each project began by deeply understanding stakeholder needs and problems. Initial case studies (1-5) highlighted persistent, human-centered challenges that were often addressed ineffectively. This project addressed these persistent issues by using data analysis to inform the development and rigorous testing of AI-powered solutions, ensuring practical applicability.

### B. A structured, phased approach for creating data science for social good by applying the model applied from Abbasi et al. (2023) and Barak (2020)

a) Social good dimensions involving SDGs goals by UN: The cases of the use of machine learning for predict wildfires, an early warning water, flood prediction in India and Bangladesh through the application satellite imagery, and irrigation system monitoring in New York mainly highlighted good health and well-being clean water and sanitation, and affordable and clean energy leading to

sustainable cities and communities because failures in infrastructure could lead citizens to face poor health and sanitation, for instance, flooding, shortage of water, traffic congestion, and the like. As for the third case of a job recommendation system for the unemployed in Portugal and the fifth case of predicting student enrollment to optimize education budget allocation, the solutions proposed could solve a greater number of SDGs pillars, predominantly on decent work and economic growth, leading to no poverty, zero hunger, good health and well being, gender equality, industry, innovation, and infrastructure, sustainable cities and communities, and peace, justice, and strong institutions.

b) Technologyical machine dimensions: As for the first case, Aditya and Sanjana Shah's Smart Wildfire Sensor represented a significant advancement in wildfire prediction and prevention, leveraging AI and machine learning to address the escalating threat of wildfires (CBS News, 2018; European IT Certification Institute, 2023; Tewari & Gupta, 2019) This innovative device, born from the students' concern about California's wildfire crisis and building upon their prior work on environmental sensors, integrated real-time weather data and image analysis to assess wildfire risk, providing probability scores and facilitating proactive mitigation efforts (CBS News, 2018). The sensor's ability to generate real-time heatmaps and fire spread predictions during active fires enhanced emergency response capabilities, while its use of historical data contributes to long-term fire management strategies. The students' vision for a nationwide network of these sensors, offered as a non-profit solution, underscores their commitment to leveraging technology for substantial social impact (CBS News, 2018; Tewari & Gupta, 2019), a commitment recognized through their invitation to present their work at the Google AI Impact Challenge (Tewari & Gupta, 2019). Their goal was to provide this technology free of charge to government agencies for proactive wildfire management. Aditya's presentation at the Google event highlighted the sensor's potential, its creation stemming from a personal experience of wildfire evacuation. While gaining significant attention, including interest from international governments and tech companies, their focus remains on refining the sensor prototype and entering it into Google's AI for Social Good competition. The sensor's timely creation and potential impact, especially given existing limitations in wildfire prevention tools, have propelled its recognition (Tewari & Gupta, 2019).

Secondly, the four steps of a flood warning system were outlined: data collection, stage forecasting, inundation mapping, and alert dissemination. The Google flood warning system deployed in India and Bangladesh in 2021 effectively utilized this process. The system collected multiple data sources, using these inputs to create accurate flood predictions with linear and LSTM models. These predictions, in turn, generated inundation maps using thresholding and manifold modeling techniques. Finally, alerts were sent to relevant agencies and the public via multiple channels and languages, mirroring the alert dissemination step. The Google system's success in reaching millions demonstrates the practical application of the four-stage process illustrated in the figure for large-scale flood risk reduction (Nevo et al., 2022).

As for the third mini case study, this project leveraged data science techniques to create a practical tool for improving the efficiency and effectiveness of employment services in Portugal. The use of a Random Forest model and the focus on evaluating the system against ground truth data indicated a rigorous and well-designed approach. The project utilized nine years (2010-2019) of IEFP data, encompassing 3.1 million job seekers, 101 million transactions, and 255 training courses. This data was stored across 16 Oracle DB tables, totaling over 50 GB. The project followed a structured approach, ranging from transforming, modeling, and evaluating to recommending (Coulson et al., 2019).

Following Bruno (2017), Syracuse, NY, utilized big data and a predictive model developed by the University of Chicago to address its costly and frequent water main breaks in 2017.

The city's i-team, funded by Bloomberg Philanthropies, compiled and analyzed extensive data on water mains, using a machine learning algorithm to identify high-risk areas. This algorithm, tested by predicting past failures, successfully pinpointed 50 high-risk blocks and projected 32 additional blocks likely to experience breaks within three years. A surprising finding indicated that recently repaired mains were more prone to future breaks. The model could help prioritize repairs, saving millions annually by preventing catastrophic failures. Plans include integrating sensor data to detect leaks early and combining this information with road condition data to provide a more holistic view of infrastructure needs, which has already resulted in substantial cost savings. As for technological machine dimensions, conclusively, the process followed these key steps: funding and team formation; data collection and integration; algorithm development and testing; high-risk area identification; prioritized repair and replacement; future integration of sensor data; and integrated infrastructure analysis (Bruno, 2017).

Eventually, Chicago Public Schools (CPS) faced challenges in accurately predicting student enrollment, leading to budget instability and inefficient resource allocation. A data science team was working to develop a predictive model that goes beyond historical enrollment data. Their approach included incorporating factors like neighborhood health and student performance, focusing particularly on the crucial 8th to 9th grade transition. Early data exploration, using tools like Tableau, revealed insights into school size and distribution. The team's real-world experience highlights the complexities of working with large, diverse datasets and collaborating with Stakeholders (CPS). The project was divided into three parts: predicting enrollment for kindergarten/1st grade, 9th grade, and continuing grades. Further investigation was planned to incorporate external data sources, such as crime statistics, to improve predictive accuracy (Data Science for Social Good, 2014b). This 2014 Data Science for Social Good project partnered with Chicago Public Schools and used exploratory data analysis, linear regression (at the school level), conditional logit modeling (at the student level), and decision trees (to predict forecast errors) to develop a predictive tool. The resulting toolkit helps CPS predict enrollments and diagnose prediction errors, improving budget allocation efficiency (Statistical Models and Analysis of Student Enrollment in Chicago Public Schools, 2014).

C) Environmental Dimensions

Each initiative was motivated by a desire to benefit society. For example, Sanjana Shah's inspiration for the Smart Wildfire Sensor stemmed from a terrifying personal experience: a sudden wildfire evacuation during her internship at a Berkeley Lab. Witnessing widespread disruption and fear fueled her and Aditya Shah's commitment to creating a tool that would benefit society. Their primary goal was not profit but to provide a crucial resource to government agencies for enhanced wildfire response and prevention. They envisioned a network of sensors deployed across California's vast forests, enabling proactive wildfire detection and minimizing damage. This commitment to the public good, and not commercial gain, drives their dedication to refining the sensor prototype for immediate deployment, underscoring their altruistic aim of utilizing technology to enhance public safety and protect the environment. Aditya's mother, Rupali Shah, emphasized that their motivation behind the Wildfire Sensor stemmed from a deep passion for environmental protection and saving lives, not personal recognition. She wasn't surprised by his success because she witnessed his unwavering dedication from the project's inception. She expressed gratitude to Google for supporting his talent (Tewari & Gupta, 2019).

A major water main break in Syracuse, NY, during a crucial basketball game likewise highlighted the city's aging and failing water infrastructure. Facing numerous daily breaks and a lack of state funding, Mayor Miner creatively sought solutions, highlighting the urgent need for infrastructure upgrades (Bruno, 2017). This impacted not only individuals but also society as a whole.

**c) Potential outcomes and impacts**

These social science projects aimed for measurable, positive real-world impacts. For the final mini case study, for instance, this project could help reduce unemployment duration, provide data-driven insights into employment pathways and intervention effectiveness, and improve resource allocation by informing decisions about intervention funding (Abhiansh, 2024).

According to Edelstein, the predictive model accurately anticipated water main breaks: since its implementation, 21 breaks had occurred on 14 targeted mains. This aligned with the model's predictions. Also, by integrating data on road conditions with water main information, the city was achieving a more comprehensive understanding of its infrastructure needs, following Mayor Stephanie Miner. This approach resulted in nearly $500,000 in savings (Bruno, 2017).

Moreover, key challenges for using data science for social good practices and initiatives in various perspectives. The examples of the major problems were as follows: *Data availability and model applicability*: The Google flood warning system, in its current version, was designed for rivers where water levels are regularly measured (gauged rivers) and required several years of historical water level data to create accurate predictions. It also worked best for large rivers where water levels change relatively slowly (Nevo et al., 2022); *Limits in data transformation rules*: Transforming the raw transactional data into a format suitable for modeling required careful definition of rules based on expert understanding of the data's context (Coulson et al., 2019); *Limited financial resources*: In 2015, Syracuse city councilor Kathleen Miner criticized Governor Cuomo's spending priorities, advocating for using settlement funds to repair aging water and sewer infrastructure instead of economic development projects. Miner argued that neglecting infrastructure led to costly repairs down the line (e.g., road damage from broken water mains). To address this issue and optimize resource allocation, Syracuse received a grant to create an i-team focused on infrastructure improvement. With assistance from the University of Chicago's Data Science for Social Good program, this team developed a system to digitally map infrastructure and create an algorithm predicting likely water main breaks, guiding more efficient use of repair resources (Bruno, 2017). So did the first case of the use of machine learning for predict wildfires when the machine learning like TensorFlow provided a problem about total time and resource cost to process and move data within a computer program (Modi, & Agarwal, n.d.); *Limited data sources and data collection*: According to Andrew Maxwell, Head of the Innovation team, gathering the necessary data proved challenging. The city's records were disorganized, encompassing a variety of formats—from century-old handwritten notes to digital files and physical paperwork. This diverse collection of information, including GIS maps, property tax data, and past break records, was consolidated and analyzed using an algorithm to predict future water main breaks (Bayat & Yildiz, 2022); and *Challenges of Predicting CPS Enrollment:* Current CPS enrollment prediction methods relied on simple year-over-year comparisons, which proved insufficient due to varying correlations between grades. Predicting higher grades relied more on the previous year's enrollment in the same grade, while lower grades were better predicted by the previous year's preceding grade. This highlighted the need for grade-specific prediction models, making a single, universal model unrealistic. Unforeseen events, like school openings/closings, introduced unpredictable elements. The team focused on developing a more nuanced approach, targeting grade-specific models, addressing impacts of significant school changes, and refining predictions for the largest schools by incorporating neighborhood-level data. The final deliverable would be a toolkit of specialized predictive models for CPS (Data Science for Social Good, 2014).

The analysis of these five mini case studies revealed both similarities and differences. They shared a common emphasis on understanding human needs, which can change over time and vary across different locations and contexts. These needs could range from the micro level—addressing individual

businesses—to the macro level—considering society as a whole. This indicated that people required support from social science and AI to help solve their problems and challenges, ultimately benefiting humankind. It was evident that humans remained central as AI technologies continued to evolve. Regarding the differences, the diverse backgrounds of individuals led to varying responses, necessitating distinct strategic data science and AI solutions to address specific problems and challenges. These variations might stem from the technologies themselves, as well as issues related to data shortages and management processes.

Although the study analyzed a limited number of mini case studies, the results can be generalized to other research on data science for social good. According to Yin (2018, in Kàss et al., 2024), it is emphasized that case study research can lead to conclusions based on analytical or logical generalization. Mini case study analysis allows researchers to evaluate existing theories, redefine models (as discussed below), and provide actionable insights (Coombs, 2022; Dźwigoł, 2023). Additionally, it promotes the effective use of limited resources (Karlsson, 2016).

**Discussion**

Data science is proving to be a transformative force in addressing critical global challenges and enhancing efficiency and equity across diverse sectors (Abhiansh, 2024; Rawat, 2024; Ashwin, 2024). This research concluded that data science for social good initiatives were fundamentally grounded in design thinking. This involved understanding stakeholders, defining problems, and developing solutions where data science and AI act as enhancers. A trial-and-error approach was embraced; failures, while acknowledged, were viewed as crucial learning opportunities for continuous improvement. This iterative process aimed to deliver long-term and sustainable benefits to communities despite the ongoing challenges inherent in data science and AI. It was stated that today's decisions about AI will shape both individual businesses and society as a whole. Responsible AI implementation, prioritizing ethical considerations and human oversight, is crucial for ensuring its positive impact. The future of AI depends on a collaborative approach where technology and humanity flourish together, and business leaders play a vital role in guiding this evolution (Walther, 2024).

Nothing is perfect. The analytical results of this study do not suggest that the researchers disagree with the data science for social good model proposed by Abbasi et al. (2023) and Barak (2020). By applying design thinking process, rather, this model should be remodeled and redefined to be more non-linear, human-centric, and adaptive. For example, when defining user needs and identifying problems, social good dimensions—such as the UN's Sustainable Development Goals (SDGs) and environmental considerations involving people, organizations, and society—should be clearly articulated, taking into account the ever-evolving challenges.

Technological dimensions—such as computational capabilities, big data, social media, and future talent—will be utilized during the ideation and development of impactful solutions. This approach will facilitate the creation of tools and the testing of their effectiveness in addressing social good and environmental dimensions, with a focus on achieving human-centric, accurate, and tangible outcomes.

If these efforts fail due to the limitations and challenges associated with using data science for social good—such as data availability and model applicability, constraints in data transformation rules, limited financial resources, a lack of data sources and collection methods, difficulties in predicting CPS enrollment, and other future issues—alternative technological solutions can be developed to improve effectiveness and efficiency.

The implication of this research emphasizes a human-centered approach to addressing social and environmental challenges. While data science and AI are valuable tools, human decision-making

remains central to developing and implementing effective solutions. Data science and AI are viewed as facilitators, enhancing the feasibility and ease of tackling complex issues. Future studies should expand their-scope to include a more comprehensive examination of current case studies demonstrating the use of data science and AI to improve people's lives.

## Conclusion

This study is still a work in progress and requires further improvements to better articulate how social science can enhance social goods, as both topics are not merely trends or buzzwords. They play a significant role in our lives today and in the future. Everyone aspires to improve their quality of life, and technology has the potential to bridge various gaps that exist now and will arise in the future, even if current solutions are not perfect due to existing constraints and challenges. Through the analysis of mini case studies, this research acknowledges the data science for social good model proposed by Abbasi et al. (2023) and Barak (2020) as a foundational framework. Nonetheless, this analytical study opens the door for future researchers to remodel and redefine this model in a way that is more non-linear, human-centric, and adaptive, rather than merely relational.

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# EXPECTATION OF FANS TOWARDS THAI BOYS' LOVE COUPLES IN CAMBODIA

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## Abstract

This quantitative study delves into the multifaceted expectations of Cambodian fans towards Thai Boys' Love (BL) celebrity couples, exploring the impact of the extended marketing mix (the 7Ps: Product, Place, Price, Promotion, Process, People, and Physical Evidence) on shaping these desires. Employing a structured online questionnaire, data was gathered from a sample of 657 active Cambodian BL enthusiasts, predominantly young adults aged 18-25. Partial Least Squares Structural Equation Modeling (PLS-SEM) was utilized to analyze the complex interrelationships between the seven marketing mix elements and the latent construct of fan expectations. The findings illuminate the specific dimensions within each of the 7Ps that are most salient to Cambodian BL fans, revealing high mean expectation levels particularly concerning the "Product" aspect (encompassing the couples' attitudes, charisma, professionalism, and authenticity) and the "Place" aspect (emphasizing accessible online and offline channels for engagement). Demographic analysis of the respondents indicates a largely young, female-dominated fanbase with a significant representation of individuals employed in non-governmental sectors, highlighting nuances compared to demographic profiles observed in other BL fandom contexts. While confirming the prevalent female engagement characteristic of BL fandom globally, this research pinpoints a more concentrated younger age group and a notable presence of non-governmental professionals within the Cambodian BL community. By providing a granular examination of the specific attributes and interactive behaviors that drive Cambodian fan expectations across the 7Ps, this study offers actionable insights for Thai BL celebrity couples, their management teams, and brands aiming to strategically engage with this demonstrably active and loyal consumer segment within the Cambodian market. The research contributes to a more nuanced understanding of transnational fandom and the application of marketing principles within the rapidly evolving landscape of digital entertainment in Southeast Asia.

**Keywords:** Thai BL Couples, Cambodian Fans, Fan Expectations, Marketing Mix (7Ps), Transnational Fandom

## Introduction

Actively seeking deeper engagement with the world of Thai BL dramas, Cambodian audiences are drawn to a media landscape that offers narratives often absent in their domestic productions (Appadurai, 1996). The magnetism of Thai BL dramas for Cambodian audiences likely stems from a confluence of factors. One key driver is the novelty of the genre itself. BL dramas offer a fresh perspective on love and relationships, presenting narratives not typically portrayed in mainstream Cambodian media, potentially fulfilling unmet needs for alternative representations (Altman, 1999, Film/Genre). These stories might resonate with viewers seeking alternative representations of love and relationships, potentially sparking conversations about gender roles and societal expectations.

Another factor contributing to the appeal is the high production quality of Thai BL dramas compared to local offerings, creating a more captivating viewing experience (Caldwell, 2008). Engaging storylines, combined with talented actors and sophisticated production values, draw Cambodian audiences in with their polished aesthetics and compelling plots. These dramas may offer a visually and narratively richer experience compared to some domestically produced content.

The fascination extends beyond the on-screen content, with the phenomenon of BL celebrity couples gaining traction in Cambodia. Actors portraying romantic partners in these dramas often develop dedicated fan bases who perceive them as real-life couples, a phenomenon explained by parasocial interaction theory (Horton & Wohl, 1956). This blurring of the lines between fiction and reality creates a deeper emotional connection for fans, who become invested not just in the on-screen romance, but also in the perceived off-screen relationship between the actors (Jenkins, 1992). This heightened emotional investment fuels fan engagement, encouraging them to actively follow the actors' careers and support their endeavors.

Beyond entertainment value, Thai BL dramas and celebrity couples have the potential to spark social and cultural conversations within Cambodian society. These dramas might challenge traditional notions of gender roles and sexuality, aligning with the exploration of diverse representations in media (Hall, 1997). The portrayal of same-sex relationships, even if fictionalized, could indirectly contribute to broader discussions about LGBTQ+ issues in Cambodia, a society where such topics might not be openly addressed.

Furthermore, the economic implications of BL celebrity couples are noteworthy. These actors, with their dedicated fan bases, become potential brand endorsers, influencing consumer behavior (McCracken, 1989, Journal of Consumer Research). Examining the economic impact of BL celebrity couples can shed light on the power dynamics within the industry and the potential for these couples to influence consumer trends in Cambodia.

By delving into these areas of inquiry, we can gain a deeper understanding of the reach and influence of Thai BL dramas and celebrity couples in Cambodia, reflecting the broader trends of cultural flow and media globalization (Appadurai, 1996). This will provide valuable insights into the evolving media consumption patterns, cultural exchange between Thailand and Cambodia, and the changing landscape of LGBTQ+ representation within Southeast Asia. Analyzing these factors will contribute to a nuanced understanding of the phenomenon and its multifaceted impact on Cambodian society.

**Objectives**

To address the evolving expectations of Boys' Love (BL) fans and enhance the engagement between BL couples and their audience, this study aims to:

1. To conduct a survey to identify the specific expectations and experiences of BL fans towards BL couples.
2. To develop marketing strategies for BL couples to improve their interactions with fans, attract a larger following, and increase their earning potential and future opportunities.
3. To develop marketing strategies for brands to collaborate with Thai BL couples to reach their target audience more effectively.

## Literature Review

The study explores the fan expectations towards Boys' Love (BL) celebrity couples, particularly in the context of Thai BL series and their Cambodian fanbase. It aims to understand what fans expect from these couples in terms of their behavior, characteristics, and interactions, and how these expectations can inform marketing strategies to enhance fan engagement, increase followers, and generate more revenue and work opportunities for the BL couples. The research also touches upon demographic factors and their influence on these expectations.

### 1. Definition of Boy's Love

Boy Love (BL) is a Japanese genre depicting romantic and often sexual relationships between male characters, initially a subculture for women but now a global industry with diverse audiences (Zsila & Demetrovics, 2017). A central element is the dominant (seme) and submissive (uke) dynamic, often linked to gender roles but increasingly varied. Beyond romance, BL explores psychological themes and can discuss masculinity and sexuality, though the term "boy love" is often replaced by terms like "male-male romance" in Western contexts to avoid negative connotations.

### 2. Thai Boy's Love Celebrity Couple

The rapid growth of Thai Boys' Love (BL) series has created globally recognized on-screen couples ("ships") with massive fanbases that influence consumer behavior and the entertainment industry (Fan, Y., 2023). The authentic on-screen chemistry, combined with strategic marketing and fan engagement, fosters passionate "shipper" communities who drive content creation, merchandise sales, and revenue. Beyond entertainment, these couples become cultural icons, impacting trends and promoting LGBTQ+ acceptance, while also contributing to tourism and merchandise economies, highlighting the complex interplay between storytelling, social media influence, and fans' desire for connection.

### 3. Fan Club in Cambodia

Cambodian fan clubs, while possessing unique cultural nuances, mirror many characteristics of Thai fan clubs, illustrating the universal aspects of fandom (Yotshoti, T., 2018). Cambodian fans actively gather information, passionately collect merchandise, dedicate themselves to event attendance, enthusiastically provide fan support, establish information-sharing hubs, actively engage in promotion and advocacy, and often extend their support beyond traditional activities through charitable initiatives, demonstrating the cross-cultural nature of celebrity culture and fan engagement.

### 4. Overview of Celebrity Branding on Thai Boys' Love Couples in Cambodia

Despite Thailand's pioneering role in BL celebrity branding, Cambodian BL fans demonstrate comparable loyalty and online engagement, making them a desirable target for brands (Sok, 2024). Predominantly female, these fans exhibit a strong affinity for their favorite couples, who have gained significant popularity and influence in Cambodia, positioning them as attractive brand ambassadors with a personal connection to their active social media following. Brands targeting this market can leverage fan clubs through exclusive promotions and interactive events to foster loyalty and increase brand awareness.

### 5. Thai Boy's Love Couples Endorsements in Cambodia

The increasing popularity of Boys' Love (BL) series in Cambodia presents a valuable opportunity for brands to utilize BL celebrity couples for endorsements, leveraging their significant fanbase, primarily young females, and cultural impact (Chey & Piriyapada, 2022). These endorsements can effectively target this demographic, enhance brand image by aligning with their values, and benefit from the known loyalty and engagement of BL fans, mirroring the successful utilization of BL couples in

Thailand for various product endorsements (Kim, 2023). However, brands targeting the Cambodian market, potentially including products like smartwatches, should carefully select couples with aligned images, ensure authenticity to resonate with fans, and remain mindful of ethical considerations to avoid exploiting the popularity of BL for purely commercial purposes.

**6. Customer Satisfiction**

Consumer satisfaction, a crucial marketing concept, is the post-purchase evaluation reflecting a customer's overall judgment of a product or service, significantly predicting future buying behavior (Westbrook, 1981). Defined as a fulfillment response involving a comparison between perceived performance and expectations, leading to pleasure or disappointment (Tarwick & Carroll, 1982; Kotler, 1999), effective management of consumer satisfaction necessitates carefully balancing customer expectations to avoid dissatisfaction from overpromising or reduced perceived value from underpromising, ultimately fostering customer loyalty.

**7. Customer Expectations**

Customer expectations, the beliefs consumers hold about a product or service, significantly influence their decisions, satisfaction, and brand loyalty. 1 Oliver's (1980) Cognitive Theory of Satisfaction highlights that satisfaction arises from comparing perceived performance to these expectations, while Festinger's (1957) Cognitive Dissonance Theory suggests unmet expectations create discomfort. Contemporary research by Chen and Tsai (2020) further indicates that social media platforms now play a crucial role in shaping and evolving customer expectations, impacting their perceptions and beliefs about brands.

**8. The 7Ps of Marketing**

The marketing mix, often referred to as the 4Ps, is a strategic framework used by businesses to plan and execute their marketing activities, encompassing Product, Price, Place, and Promotion. For services, the marketing mix is expanded to include three additional Ps, resulting in the 7Ps framework (Philipson & Zineldin, 2007). These additional elements are People, referring to the staff and customer service involved; Process, which outlines the systems and procedures used to deliver the service; and Physical Evidence, the tangible aspects of the service that customers can see or experience.

## Hypotheses Development

In this study, Social Exchange Theory (SET) provides a theoretical foundation for understanding the dynamics between employees and organizations, particularly how the reciprocal exchange of support, resources, and trust influences Innovative Work Behavior (IWB) (Tsai, 2018). According to SET, employees are motivated to reciprocate the investments made by their organizations, such as leadership support, empowerment, and resources, by engaging in behaviors that benefit the organization (Meira, 2021). This study proposes several hypotheses that explore both direct and mediated relationships between key organizational and individual factors and IWB in the fintech sector in Phnom Penh, Cambodia.

**1. Product Quality**

While direct research specifically links "product quality" to Cambodian fan expectations of Thai BL couples is limited, Expectation-Confirmation Theory (Oliver, 1980) suggests fans expect positive experiences based on the perceived quality of the BL series, and Halo Effect (Thorndike, 1920) implies positive perceptions of the series transfer to the couples. Furthermore, source credibility and attractiveness theories (McCracken, 1989) suggest fans expect a certain "quality" in the couples'

image and interactions, influenced by the “product” (BL series) they represent. Thus, series quality likely shapes fan expectations of the couples.thus, we propose:

H1: Product quality significantly influences Cambodian fan expectations toward Thai BL couples.

**2. Pricing Stategies**

Pricing strategies likely influence Cambodian fan expectations toward Thai BL couples through the lens of Perceived Value Theory (Zeithaml, 1988). Fans develop expectations about the "worth" of various offerings associated with the couples (e.g., merchandise, event tickets, streaming access) based on their perceived benefits relative to the cost. Higher pricing might create expectations of exclusivity, higher quality merchandise, or more intimate fan interactions, while lower pricing could signal greater accessibility but potentially lower perceived value of the offerings or even the couple's brand image. Therefore, the pricing strategies employed directly shape what Cambodian fans anticipate receiving in exchange for their financial investment in the Thai BL couples and related products. Thus, we propose:

H2: Pricing strategies significantly influence Cambodian fan expectations toward Thai BL couples.

**3. Place Significantly**

While direct research linking "place" to Cambodian fan expectations of Thai BL couples is scarce, the Congruity Theory(Sirgy, 1982) suggests fans evaluate based on consistency with their self-image and usage context. For Cambodian fans, "place" includes the accessibility of online platforms and the experience of local fan events. Positive experiences in these "places" can create positive expectations towards the BL couples, associating them with ease of access and enjoyable interactions within their Cambodian fandom. Conversely, negative experiences can lead to negative expectations. Thus, we propose:

H3: Place significantly influence Cambodian fan expectations toward Thai BL couples.

**4. Promotional Activities**

Promotional activities significantly influence Cambodian fan expectations toward Thai BL couples through Signaling Theory (Spence, 1973). These activities (fan meets, social media, merch) signal the couples' commitment and value to fans. Frequent, high-quality promotions raise expectations for engagement and exclusivity, while inconsistent efforts lower them. Endorsements signal status, shaping expectations about future opportunities. Thus, we propose:

H4: Promotional activities significantly influence Cambodian fan expectations toward Thai BL couples.

**5. Process Strategies**

While direct research is scarce, Service-Dominant Logic (Vargo & Lusch, 2004) suggests "process" (interaction systems) significantly influences Cambodian fan expectations of Thai BL couples. Positive processes (easy access, organized events, responsive management) foster expectations of value and positive co-creation, increasing fan satisfaction and engagement. Negative processes lower expectations.Thus, we propose:

H5: Process strategies significantly influence Cambodian fan expectations toward Thai BL couples.

**6. People Strategies**

While direct research is limited, Parasocial Interaction (PSI) Theory (Horton & Wohl, 1956) suggests "people strategies" (BL couples and their team's interactions) significantly influence

Cambodian fan expectations. Authentic, caring engagement fosters strong PSIs, leading to higher expectations of continued positive interaction and connection. Aloofness or unprofessionalism lowers these expectations. Thus, we propose:

H6: People strategies significantly influence Cambodian fan expectations toward Thai BL couples.

**7. Physical Evidence**

While direct research is scarce, Servicescape Theory (Bitner, 1992) suggests "Physical Evidence" (online presence, event quality, merchandise) significantly influences Cambodian fan expectations of Thai BL couples. Positive physical evidence creates expectations of professionalism and care, while poor evidence leads to negative perceptions. Thus, we propose:

H7: Physical Evidence strategies significantly influence Cambodian fan expectations toward Thai BL couples.

**8. Cambodian Fan Expectations**

Cambodian fan expectations, shaped by the 7Ps marketing mix, mediate fan satisfaction based on the Expectation-Confirmation Theory (ECT) (Oliver, 1980). The 7Ps create expectations, and satisfaction depends on whether the actual experience meets those pre-formed beliefs. Thus, we propose:

H8: Cambodian fan expectations toward Thai BL couples mediate the relationship between the 7Ps marketing mix and Cambodian fan satisfaction.

## Methodology

### Sample and Data Collection Procedure

This quantitative study investigates Cambodian fan expectations toward Thai BL series by examining relationships between specific variables. Data was collected from a target sample of 400 Cambodian BL fans aged 12-39 via a structured questionnaire, developed and refined through expert consultation and pilot testing using Adanco software. The questionnaire, translated into Khmer and using a five-point Likert scale (Edmondson, 2005), was distributed to active members of Thai BL fan communities in Cambodia who have attended at least one BL event. Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed using Adanco (version 2.2.1) for data analysis to test hypotheses and assess the relationships between fan expectations and the identified variables. The sample size of at least 400 was determined using Cochran's (1977) formula for an unknown population with a 95% confidence level and a 5% margin of error, targeting BL fans in Phnom Penh who have attended at least one BL event.

### Mitigation of Potential Biases

To mitigate potential biases in this study on Cambodian fan expectations toward Thai BL series, rigorous methods were employed throughout the research process, including the design of clear and neutral questionnaire items with balanced response options, ensuring anonymity and confidentiality, and careful translation into Khmer. The sampling strategy aimed for representativeness within the active Cambodian BL fan community, while acknowledging potential self-selection. Data analysis utilized statistically sound PLS-SEM, with thorough assessment of the measurement model's reliability and validity. Transparency in reporting the methodology and acknowledging study limitations are crucial, alongside careful interpretation of findings to avoid overgeneralization, ultimately striving for credible and trustworthy results.

**Measurement**

For the purpose of this study, we retrieved the questionnaire from previous research of the same field of study and used the same measurement of the constructs: Likert scale. The five-point rating system being 1= Strongly disagree, 2 = Disagree, 3 =Neutral, 4 = Agree, 5 = Strongly agree. In order to ensure the validity and reliability of the questionnaire, the researcher requested the assistance of Item-objective Congruence (IOC) research validation. Once the feedback was collected, we prepared the questions in English and proceeded to conduct the pilot test.

**Control Variable**

This study incorporated four control variables relevant to fan characteristics: Gender, Age, Occupation, and Average Income per month. Drawing from the "Expectation of Fans Towards Thai Boys' Love Celebrity Couples" study by Mr. Poramate Parnpiamkiat, these demographic factors were included to account for potential alternative explanations in shaping Cambodian fan expectations toward Thai BL couples, even though they were not the primary focus of this research.

**Data Analysis**

The study employed Partial Least Square (PLS) analysis, following Chin's (1998) two-part approach, to analyze the measurement and structural models of nine underlying constructs. The measurement model assessed the relationships between indicators and latent variables (Haenlein & Kaplan, 2004), while the structural model calculated latent variable values and their relationships using regression equations (Fornell & Bookstein, 1982). The reliability of the measurement model was evaluated using Cronbach's alpha, and convergent validity was assessed using Average Variance Extracted (AVE), with all nine constructs exceeding the acceptable AVE value of ≥ 0.5 (Fornell & Larcker, 1981). Furthermore, convergent validity was supported as all factor loadings for the variables exceeded the recommended threshold of 0.80 (Cohen, 1992).

## Results

After analyzing the 657 valid responses, 11.5% (76 respondents) were male, 83.6% (549 respondents) were female, and 4.9% (32 respondents) identified as other as shown in Table 1 below:

**Table 1:** Demographic Data Of Respondents

| | | Count | Percentage % |
|---|---|---|---|
| **Gender** | Male | 76 | 11.5 |
| | Female | 549 | 83.6 |
| | Other | 32 | 4.9 |
| **Age** | Under 18 | 0 | 0 |
| | 18-25 | 560 | 85.2 |
| | 26-30 | 75 | 11.5 |
| | 31-35 | 22 | 3.3 |
| **Occupation** | Student | 183 | 27.9 |
| | Non-Government Officer | 409 | 62.2 |
| | Government Officer | 0 | 0 |
| | Business Owner | 10 | 1.6 |
| | Freelancer | 10 | 1.6 |
| | Unemployment | 10 | 1.6 |
| | Others | 35 | 4.9 |
| **Range of monthly salary** | Under USD 300 | 97 | 14.8 |
| | USD 300 to 600 | 237 | 36.1 |
| | USD 601 to 100 | 237 | 36.1 |
| | USD 1,001 to 1,500 | 64 | 9.8 |
| | Over USD 1,500 | 22 | 3.3 |

The analysis of 657 respondents' expectations regarding the marketing mix elements (product, place, price, promotion, process, people, and physical evidence) and their influence on fan satisfaction with BL celebrity couples is presented below. Mean and standard deviation (S.D.) values are used to describe the data, as shown in the following table as shown in Table 2.

**Table 2:** Summary of Mean, Standard Deviation And Meaning Of Level Of Fans' Expectations Towards BL Celebrity Couple On Marketing Mix (7Ps) Aspects

| Factor | Mean | Standard deviation | Level |
|---|---|---|---|
| **Product aspect (the characteristics of BL couples)** | | | |
| 1. BL couple have good attitude and sincerity with their fans. | 4.11 | 0.932 | Expect |
| 2. BL couple are charismatic, good-looking, attractive, friendly, amiable, good-natured and good- personality. | 4.16 | 0.988 | Expect |
| 3. BL couple have responsibilities, self-discipline, and professionalism, and can distinguish work out of private life, with good attitude and love to their jobs. | 4.15 | 0.962 | Expect |
| 4. BL couple have positive attitude expressed through their actions and words. | 4.13 | 0.978 | Expect |
| 5. BL couple are smart in speaking and answering questions. | 4.06 | 0.895 | Expect |
| 6. BL couple have positive attitude towards LGBTQ. | 4.17 | 0.951 | Expect |
| 7. BL couple have to take care of themselves and always develop themselves. | 4.09 | 0.914 | Expect |
| 8. BL couple have to realize and express to their fans how much important their fans are for them. | 4.15 | 0.971 | Expect |
| 9. BL couple are good role models for other celebrities, fans and other people in lifestyle, ethical conduct in public, public responsibility, benevolence, etc. | 4.04 | 0.945 | Expect |
| 10. BL couple need to recognize me or their fans and never ignore their existence. | 4.14 | 0.989 | Expect |
| 11. BL couple have some talents or remarkable identities that are different from other couples such as acting skill, interesting lifestyle or special relationship between them rather than others. | 4.02 | 0.884 | Expect |
| 12. BL couple have a good relationship, help, support and take care of each other both in work and real life. | 4.11 | 0.953 | Expect |
| **Summary** | **4.11** | **0.947** | **Expect** |
| **Place aspect (Channels for meeting with BL couples)** | | | |
| 13. There are many channels for fans to meet, to see, to watch, to listen, to read about the BL couple such as their profile, their works and behind the scenes. | 4.02 | 0.923 | Expect |
| 14. BL couple are easy to get close and approach to. | 4.22 | 1.009 | Neutral |
| 15. BL couple usually update their Facebook, Instagram, Twitter or other social medias. | 4.12 | 0.935 | Expect |
| 16. Facebook, Instagram, Twitter or other social medias of BL couple are visually appealing, interesting and attractive. | 4.12 | 0.936 | Expect |
| 17. I can frequently know or see everyday life of BL couple via many channels. | 4.05 | 0.948 | Expect |
| 18. I can frequently know or see some good/cute moments or interactions of BL couple via many channels. | 4.09 | 0.918 | Expect |
| **Summary** | **4.10** | **0.945** | **Expect** |

| Factor | Mean | Standard deviation | Level |
|---|---|---|---|
| **Price aspect (The cost the fans pay)** | | | |
| 19. Cost of joining in whatever activities with my favorite BL couple for supporting, meeting, getting close to them and making them remember me should be at reasonable rate to all fans and less than or equal to other couples in market. | 4.02 | 0.946 | Expect |
| 20. The price of BL couple's product or official fan club souvenir or official product by their affiliates is suitable and matches the quality. | 4.16 | 0.998 | Expect |
| 21. What you get back from your favorite BL couple in every wayis highly cost-effective comparing your cost (time and money). | 4.09 | 0.918 | Expect |
| **Summary** | **4.09** | **0.954** | **Expect** |
| **Promotion aspect (Activities for fans to do with BL couples)** | | | |
| 22. BL couple frequently have a meeting or live talk with fans. | 4.19 | 0.995 | Expect |
| 23. There are activities for developing relationship between BL couple and fans such as fan meeting, birthday party or charity events. | 4.07 | 0.878 | Expect |
| 24. I have a chance to get a hug, take a photo, hi-touch, shake hands or get close with BL couple. | 4.07 | 0.982 | Expect |
| 25. I can be as a friend or family with my favorite BL couple. | 4.11 | 0.961 | Expect |
| **Summary** | **4.11** | **0.954** | **Expect** |
| **Process aspect (Activities and works of BL couples)** | | | |
| 26. Activity events between fans and BL couple are operated by middleman such as official fan page, official fan club, their related person, their managers, their company, who is efficient enough, with good quality and reliability. | 4.03 | 0.936 | Expect |
| 27. Works of BL couple are always efficiently promoted and advertised in every channel such as creating a hashtag about BL couple to push the trend on social medias for BL couple to be known more. | 4.09 | 0.865 | Expect |
| 28. BL couple have a chance to star together again in a new BL series or sequel to their previous series. | 4.15 | 0.933 | Expect |
| 29. Each of BL couple always has works in public using his individual ability such as series, drama, TV show. | 4.06 | 0.931 | Expect |
| 30. BL couple have frequent jobs together such as events, playing in same series, TV programs, their own program. | 4.13 | 0.951 | Expect |
| **Summary** | **4.09** | **0.923** | **Expect** |
| **People aspect (Working of related parties of BL couples)** | | | |
| 31. BL couple are taken care of by a company or managers including related people in affiliates who are good-attitude, witty, good- personality, amiable and friendly to their fans. | 4.04 | 0.883 | Expect |
| 32. BL couple are taken care of by a company or managers who are professional, at good-quality, not prejudiced and not biased, as well as ones who treat them equally and don't work with personal matters. | 4.08 | 0.922 | Expect |
| 33. Company or managers who take care of BL couple has a tool to push up and support them in work including developing them efficiently. | 4.11 | 0.961 | Expect |
| 34. Company or managers who take care of BL couple must always protect their images in every dimension. | 4.16 | 0.955 | Expect |
| **Summary** | **4.10** | **0.930** | **Expect** |

| Factor | Mean | Standard deviation | Level |
|---|---|---|---|
| **Physical evidence aspect (Image of related parties)** | | | |
| 35. Company or managers who take care of BL couple are reliable. | 4.11 | 0.969 | Expect |
| 36. Company or managers who take care of BL couple have two- way communication with fans in official channels for making interactions and responding fans' problems or suggestions. | 4.05 | 0.928 | Expect |
| 37. Official fan page/club of BL couple is reliable and greatly support all works of BL couple. | 4.18 | 0.992 | Expect |
| 38. BL couple fandom has good environment and society. | 4.07 | 0.970 | Expect |
| **Summary** | **4.10** | **0.965** | **Expect** |
| **Total Summary** | **4.10** | **0.948** | **Expect** |

**Remark:** Expect (Mean ≥ 4.00): Items with a mean score of 4.00 or higher suggest that Cambodian fans generally expectthis attribute or behavior from Thai BL celebrity couples. The higher the mean score within this range, the stronger the expectation, Neutral (3.00 ≤ Mean < 4.00): Items with a mean score between 3.00 and 3.99 indicate a more neutral stance. While fans may not strongly disagree or agree, it suggests this attribute or behavior is not a particularly strong expectation compared to those in the "Expect" category.

This section details the assessment of construct validity and reliability for the study's measurement instruments, summarized in Table [Insert Table Number], following Hair et al. (2017) and the principles of convergent and discriminant validity (Campbell et al., 1959). Reliability was evaluated through Cronbach's alpha (Ahdika, 2017), Composite Reliability (CR) (Raykov, 1997; Henseler & Ringle, 2009), and factor loadings (Chin, 1998), all of which met or exceeded acceptable thresholds (Cronbach's alpha > 0.7, CR > 0.80, factor loadings > 0.8). Convergent validity, the extent to which indicators measure the same construct, was confirmed by Average Variance Extracted (AVE) values above 0.5 for all constructs (Fornell & Larcker, 1981), indicating that each construct explains more variance in its indicators than error variance. Overall, the measurement instruments demonstrated satisfactory reliability and convergent validity.

**Table 3:** Measurement Instruments Assessment

| Constructs | Items | Loadings | AVE | CR | Cronbach's alpha |
|---|---|---|---|---|---|
| **PROD** | PROD1 | 0.8988 | 0.8881 | 0.9896 | 0.9896 |
| | PROD2 | 0.9548 | | | |
| | PROD3 | 0.9331 | | | |
| | PROD4 | 0.9262 | | | |
| | PROD5 | 0.9654 | | | |
| | PROD6 | 0.9574 | | | |
| | PROD7 | 0.9699 | | | |
| | PROD8 | 0.9415 | | | |
| | PROD9 | 0.9342 | | | |
| | PROD10 | 0.9343 | | | |
| | PROD11 | 0.9484 | | | |
| | PROD12 | 0.9429 | | | |
| **PLA** | PLA1 | 0.9277 | 0.8932 | 0.9805 | 0.9804 |
| | PLA2 | 0.9504 | | | |
| | PLA3 | 0.9376 | | | |
| | PLA4 | 0.9562 | | | |
| | PLA5 | 0.9398 | | | |
| | PLA6 | 0.9585 | | | |

| Constructs | Items | Loadings | AVE | CR | Cronbach's alpha |
|---|---|---|---|---|---|
| **PRI** | PRI1 | 0.9466 | 0.9056 | 0.9664 | 0.9664 |
| | PRI2 | 0.9516 | | | |
| | PRI3 | 0.9567 | | | |
| **PROM** | PROM1 | 0.9471 | 0.8877 | 0.9693 | 0.9693 |
| | PROM2 | 0.9503 | | | |
| | PROM3 | 0.9289 | | | |
| | PROM4 | 0.9422 | | | |
| **PROC** | PROC1 | 0.9350 | 0.8855 | 0.9748 | 0.9747 |
| | PROC2 | 0.9601 | | | |
| | PROC3 | 0.9388 | | | |
| | PROC4 | 0.9327 | | | |
| | PROC5 | 0.9381 | | | |
| **PEO** | PEO1 | 0.9428 | 0.8797 | 0.9669 | 0.9669 |
| | PEO2 | 0.9246 | | | |
| | PEO3 | 0.9359 | | | |
| | PEO4 | 0.9482 | | | |
| **PHY** | PHY1 | 0.9454 | 0.8913 | 0.9704 | 0.9704 |
| | PHY2 | 0.9499 | | | |
| | PHY3 | 0.9376 | | | |
| | PHY4 | 0.9435 | | | |

**Source:** *** = p ≤ 0.001, ** = p ≤ 0.01. * = p ≤ 0.05; AVE = average variance extracted, CR = composite reliability, PROD = product, PLA = place, PRI = price, PROM = promotion, PROC = process, PEO = people, PHY = physical

Table 4 demonstrates adequate discriminant validity as the square root of the Average Variance Extracted (AVE) for each construct (bolded diagonal values) is consistently higher than its correlations with other constructs (off-diagonal values). This indicates that each construct shares more variance with its own indicators than with other constructs in the model. Additionally, the AVE values for all constructs exceeded the recommended threshold of 0.5 (Fornell & Larcker, 1981), further supporting discriminant validity. While positive correlations between constructs are expected, the higher square root of AVE values clearly establish that each construct is distinct from the others.

**Table 4:** AVE values

| Construct | PROD | PLA | PRI | PROM | PROC | PEO | PHY |
|---|---|---|---|---|---|---|---|
| PROD | **0.88** | | | | | | |
| PLA | 1.00 | **0.89** | | | | | |
| PRI | 0.96 | 0.97 | **0.90** | | | | |
| PROM | 0.98 | 1.01 | 1.00 | **0.88** | | | |
| PROC | 1.00 | 1.01 | 0.99 | 1.01 | **0.88** | | |
| PEO | 0.99 | 0.98 | 0.98 | 0.99 | 1.02 | **0.87** | |
| PHY | 0.97 | 0.97 | 0.99 | 0.98 | 0.98 | 0.99 | **0.89** |

**Source** *** = p ≤ 0.001, ** = p ≤ 0.01. * = p ≤ 0.05, respectively. PROD = product, PLA = place, PRI = price, PROM = promotion, PROC = process, PEO = people, PHY = physical

The PLS-SEM analysis results as follows:

**Hypothesis 1:** Product quality significantly influences Cambodian fan expectations toward Thai BL couples. The high overall mean score for the Product aspect (4.11) indicates that Cambodian fans generally hold strong positive expectations regarding the characteristics, behavior, and image of Thai BL couples.

**Hypothesis 2:** Pricing strategies significantly influence Cambodian fan expectations toward Thai BL couples. The high overall mean score for the Price aspect (4.09) suggests that Cambodian

fans have notable expectations concerning the fairness and value of costs associated with supporting Thai BL couples.

**Hypothesis 3:** Place significantly influence Cambodian fan expectations toward Thai BL couples. The high overall mean score for the Place aspect (4.10) indicates that Cambodian fans generally expect multiple and accessible channels for interaction and information regarding Thai BL couples.

**Hypothesis 4:** Promotional activities significantly influence Cambodian fan expectations toward Thai BL couples.The high overall mean score for the Promotion aspect (4.11) suggests that Cambodian fans have strong expectations for active and engaging promotional activities involving Thai BL couples.

**Hypothesis 5:** Process strategies significantly influence Cambodian fan expectations toward Thai BL couples. The high overall mean score for the Process aspect (4.09) indicates that Cambodian fans have notable expectations for the efficient and quality management of activities and work related to Thai BL couples.

**Hypothesis 6:** People strategies significantly influence Cambodian fan expectations toward Thai BL couples. The high overall mean score for the People aspect (4.10) suggests that Cambodian fans have strong expectations for the positive conduct and professionalism of Thai BL couples and their related parties.

**Hypothesis 7:** Physical Evidence strategies significantly influence Cambodian fan expectations toward Thai BL couples. The high overall mean score for the Physical Evidence aspect (4.10) indicates that Cambodian fans generally expect reliable and effective tangible and intangible cues associated with Thai BL couples.

**Hypothesis 8:** Cambodian fan expectations toward Thai BL couples mediate the relationship between the 7Ps marketing mix and Cambodian fan satisfaction. The consistently high mean scores across all 7Ps aspects suggest that the strong positive expectations held by Cambodian fans are likely to play a significant role in influencing their overall satisfaction with Thai BL couples.

**Discussion**

This study investigated the multifaceted expectations of Cambodian fans towards Thai Boys' Love (BL) celebrity couples through the lens of the 7Ps marketing mix. The findings revealed significant expectations across all elements: Product (couple characteristics), Place (accessibility), Price (cost-value), Promotion (engagement), Process (operational efficiency), People (actor/management conduct), and Physical Evidence (tangible representations). These high mean scores across the 7Ps, consistent with Expectation-Confirmation Theory (Oliver, 1980), suggest Cambodian fans actively form positive anticipations based on various marketing cues associated with Thai BL couples.

Demographically, our predominantly young female (18-25) sample aligns with broader BL fandom research (Parnpiamkiat, 2019; Zsila & Demetrovics, 2017). However, the concentration in this younger age group and the notable presence of non-governmental employees offer a more specific profile compared to studies suggesting wider age ranges or higher student representation (Yotshoti, 2018), hinting at potential cultural nuances in Cambodia's BL reception deserving further socio-economic exploration.

While previous studies have examined celebrity influence and fan engagement (Fan, Y., 2023; Horton & Wohl, 1956), our research provides a more granular analysis using the 7Ps framework within the Cambodian context, offering a deeper understanding of specific marketing elements driving fan expectations. The strong emphasis on the "People" aspect, for instance, underscores the importance of perceived

authenticity and positive interactions, aligning with parasocial interaction theory (Horton & Wohl, 1956) and highlighting fans' emotional investment.

Despite these insights, limitations exist. The online questionnaire's self-selection bias might overrepresent highly engaged fans. The cross-sectional design limits causal inference, necessitating longitudinal studies to understand the evolution of expectations. The focus on event attendees might not fully represent the broader online-centric viewing segment. Future research could explore moderating factors like fan involvement and cultural values.

Future directions include qualitative studies to enrich understanding of fan motivations and cultural influences. Longitudinal research could track expectation dynamics. Comparative studies across Southeast Asia could identify regional patterns. Investigating the impact of expectation fulfillment/violation on fan behavior (purchasing, loyalty) would offer practical implications. Finally, exploring the mediating role of expectations on parasocial relationships and brand attitudes would provide a more comprehensive understanding of the fan-BL couple-brand ecosystem in Cambodia, including its economic dimensions.

## Conclusions

In conclusion, this study provides a valuable and nuanced understanding of Cambodian fan expectations towards Thai BL celebrity couples, revealing a predominantly young, female demographic with specific preferences that differ in some aspects from their Thai counterparts as observed in previous research. The granular analysis of factors influencing these expectations offers actionable insights for developing targeted marketing strategies aimed at enhancing engagement, growing the fanbase, and increasing opportunities for BL couples within the Cambodian market. While confirming the strong female presence in BL fandom, the study highlights the importance of considering regional variations in age, occupation, and the specific attributes valued by fans. Ultimately, this research contributes to a more comprehensive understanding of the global BL phenomenon by providing a focused examination of the Cambodian context, offering a foundation for future studies exploring cross-cultural fandom and effective marketing within this dynamic entertainment landscape.

## Academic Contributions

This study makes several academic contributions by providing a context-specific analysis of Cambodian fan expectations towards Thai BL celebrity couples, offering insights into a growing fandom within Southeast Asia and highlighting both universal and culturally specific aspects compared to Thai fans. By applying marketing theory to media fandom and conducting a granular analysis of fan desires using quantitative methods like PLS-SEM, the research offers a richer understanding of these expectations. The detailed methodology serves as a reference for future studies, and the identified factors lay the groundwork for further exploration of the evolving BL fandom and effective marketing strategies in this dynamic entertainment landscape.

## Practical Contributions and Suggestions

This study offers several practical contributions and suggestions for stakeholders in the Thai BL industry and brands targeting the Cambodian market. Firstly, the detailed understanding of Cambodian fan expectations provides actionable insights for BL talent management and production teams to tailor content, fan interactions, and promotional activities to better resonate with this specific audience, potentially fostering stronger loyalty and engagement. Secondly, the identified key factors influencing fan expectations can inform the development of targeted marketing strategies for BL

couples, enabling more effective allocation of resources and the creation of campaigns that genuinely appeal to Cambodian fans, ultimately increasing their fanbase and revenue opportunities. Thirdly, brands seeking to leverage the popularity of Thai BL in Cambodia can utilize these findings to identify suitable celebrity endorsements, understand the values and expectations of the target demographic, and design authentic and impactful marketing campaigns that resonate with the nuances of this fan base, maximizing brand awareness and consumer engagement. Finally, the study underscores the importance of cultural sensitivity and localized approaches when engaging with international BL fandoms, highlighting the need to move beyond generic strategies and consider the specific preferences and expectations of fans in different regional contexts like Cambodia.

**Limitations and Recommendations for Future Studies**

This study, while providing valuable insights, is subject to certain limitations that offer avenues for future research. The reliance on a self-reported online survey, primarily distributed through Facebook fan pages and groups, may introduce sampling bias, potentially overrepresenting more digitally engaged and vocal fans while underrepresenting others. The cross-sectional nature of the data collection provides a snapshot of fan expectations at a specific point in time, limiting the understanding of how these expectations evolve. Furthermore, the focus on Cambodian fans and their expectations towards Thai BL couples necessitates caution when generalizing these findings to other regional fandoms or different types of media. Future research could address these limitations by employing more diverse sampling methods to capture a broader spectrum of the fanbase, conducting longitudinal studies to track the dynamic nature of fan expectations over time, and expanding the scope to include other cultural contexts and media genres to facilitate comparative analyses. Additionally, qualitative research methods could complement these findings by providing deeper, more nuanced insights into the underlying motivations and cultural factors shaping fan expectations.

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# SELF-PRESENTATION OF OTHERS ON SOCIAL MEDIA AND ITS IMPACT ON YOUTH DEPRESSION & SELF-ESTEEM IN MYANMAR: A CASE STUDY OF FACEBOOK

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## Abstract

This study aims to investigate the impact of young audiences' exposure to self-presentation content (EXPC) on Facebook on their self-esteem and depression. The online survey was conducted with 259 Burmese youths living in Thailand, aged between 18 and 28 years old. Respondents have a moderate level of EXPC on Facebook ($\bar{X}$ = 2.57, *S.D.* = 0.77), moderate level of self-esteem ($\bar{X}$ = 2.65, *S.D.* = 0.44), and low level of depression ($\bar{X}$ = 1.25, *S.D.* = 0.53). There is no significant difference in both self-esteem and depression levels among male and female participants. Linear Regression Analysis results revealed that EXPC significantly predicted self-esteem but not depression. Results of the Independent Sample T-Test revealed that gender significantly moderates the relationship between EXPC and self-esteem, with females displaying greater sensitivity to social comparisons, but no significant moderating effect on the relationship between EXPC and depression. These results underscored the importance of addressing gender dynamics in mental health studies and intervention programs with diverse gender orientation. The study not only highlighted the need for targeted policies and mental health interventions to foster digital literacy and emotional resilience, mitigating the negative psychological effects of social media, but also contributed to a deeper understanding of the gendered dynamics of social media use and offered insights for future research and practical implications in health communication.

**Keywords:** Facebook, Burmese youth, Self-Presentation, Self-Esteem, Depression, Mental Health, Social Media

## Introduction

Social media, particularly Facebook, plays a significant role in shaping self-perception and mental health in Myanmar, where the platform boasts approximately 21.15 million users, with young adults aged 18 to 24 forming the largest demographic. Despite extensive global research on social media's effects on mental health, limited studies address the specific impact of others' self-presentation on the self-esteem and depression of Burmese youth. Social media content often fosters negative comparisons and distorted perceptions of reality, which can harm mental health, especially among vulnerable populations. While existing research has explored internet use, mental health outcomes, and societal issues like fake news and hate speech in Myanmar, the personal psychological effects of self-presentation content on platforms like Facebook remain underexplored. This study aims to fill this gap by examining the relationship between exposure to others' self-presentation on Facebook and its impact on youth mental health, focusing on self-esteem and depression. Literature suggests that such content often contributes to feelings of inadequacy and mental health challenges. However, these dynamics have primarily been studied in Western contexts, leaving Myanmar's unique cultural and social media landscape understudied. By addressing this issue, the research provides valuable

insights into how exposure to self-presentation content affects Burmese youth, informing targeted interventions and strategies to support mental well-being. These findings hold significant implications for policy, education, and societal initiatives aimed at fostering healthier online environments for Myanmar's youth.

## Research Objectives

This research aims to investigate the following four objectives:

1) To examine the relationship between Burmese exposure to self-presentation content on Facebook and self-esteem among young users in Myanmar.

2) To examine the relationship between Burmese exposure to self-presentation content on Facebook and the prevalence of depression among young users in Myanmar.

3) To investigate how the impact of exposure to others' self-presentation content on Facebook on self-esteem varies across different genders.

4) To investigate how the impact of exposure to others' self-presentation content on Facebook on depression varies across different genders.

## Literature Review

### Self-Esteem

Leading theories suggest that self-esteem reflects either a sense of belonging (Leary & Baumeister, 2000) or alignment with cultural values (Pyszczynski et al., 2004). Research highlights the importance of perceived evaluations, particularly during childhood, where caregivers like parents and teachers significantly influence self-esteem. Supportive and responsive parenting fosters higher self-esteem, while critical or unresponsive parenting often leads to lower self-esteem (Harter, 2003). Shaw and Grant (2002) examined the relationship between Facebook usage and self-esteem, finding that high usage indirectly correlates with lower self-esteem due to its effects on loneliness, depression, and social support. While these factors fluctuate more rapidly than self-esteem itself, they strongly influence it when negative states like loneliness and depression are prevalent. Interestingly, individuals may experience these negative emotions without significant changes in their self-esteem levels. However, when such factors are intensified, their impact on self-esteem becomes more pronounced.

### Media Exposure and Self-Esteem

The relationship between social media use and self-esteem has yielded mixed results. Some studies suggest a negative impact, with social comparisons on platforms like Facebook lowering life satisfaction and increasing isolation (Tiggemann & Zaccardo, 2015; Lup, Trub & Rosenthal, 2015). Others find positive or negligible effects (Gonzales & Hancock, 2011; Appel, Marker & Gnambs, 2020). Goffman's self-presentation theory (1959) explains how selective self-presentation fosters idealized personas, potentially distorting self-perceptions (Mahmud & Wong, 2021). Facebook's features encourage authentic self-expression (van Dijck, 2013), but they also amplify envy and dissatisfaction, especially when users compare themselves to others' curated portrayals (Anderson, Fagan, Woodnutt, and Chamorro-Premuzic, 2012). The platform's visual emphasis further affects body image, creating unrealistic expectations and reducing self-esteem (Raymer, 2015).

### Depression

Depression is a mental health disorder characterized by persistent sadness, hopelessness, and a loss of interest or pleasure in daily activities. It affects emotional, cognitive, and physical functioning, leading to significant impairments in social, academic, and personal domains (American Psychiatric Association, 2013). Among adolescents, depression is particularly concerning due to its

high prevalence and long-term consequences. Studies have shown that approximately 4-5% of adolescents experience depression annually, with higher rates observed in girls after puberty (Thapar, Collishaw, Pine & Thapar, 2012). Depression in teenagers often manifests differently than in adults, with symptoms such as irritability, mood swings, withdrawal from social activities, and academic decline being more prominent (Mayo Clinic, 2022). Adolescent depression is influenced by a combination of genetic predisposition, hormonal changes, and psychosocial stressors such as peer pressure, family conflicts, and academic challenges (Thapar et al., 2012; Krans & Faris, 2021). Left untreated, depression can lead to severe outcomes such as substance abuse, self-harm, and even suicide. It is also associated with disrupted developmental trajectories and an increased risk of recurrent depressive episodes in adulthood (Thapar et al., 2021). In the context of this study on social media and self-esteem among teenagers in Myanmar, depression is examined as a key psychological outcome influenced by the interplay of digital interactions and self-perception.

**Media Exposure and Depression**

Social media use has been linked to negative psychological outcomes, including depression, due to frequent social comparisons and the “social media positivity bias” (Schreurs & Vandenbosch, 2021). Excessive usage often displaces healthier activities like exercise or sleep, compounding depressive symptoms (Primack, Shensa, Sidani, Escobar-Vier & Fine, 2021; Twenge, Joiner, Rogers & Martin, 2018). Adolescents and young adults are particularly vulnerable, with heavy media use correlating with higher rates of depression and suicidal ideation (Yang, Yen, Ko, Cheng & Yen, 2010; Hormes, 2016). The structured nature of platforms like Facebook reinforces feelings of inadequacy as users perceive others’ lives as more successful or fulfilling (Kircaburun, 2016).

**Self-Presentation Content**

Individuals shape their online personas based on the impressions they wish to convey, considering their perceived audiences. In a study by Counts and Stecher (2009), participants were asked to rate their profile and personality dimensions after creating a simulated social media profile. The results revealed that 96% of participants emphasized personality traits such as calmness, consideration, intelligence, or uniqueness. Two crucial concepts associated with self-presentation on social media are 'impression management' and 'self-branding,' closely intertwined, with the former serving as actions that achieve the latter. Marwick (2013, p. 166-167) defines personal branding as the application of marketing strategies to individuals, creating an authentic yet business-friendly image, referred to as the "edited self." Studies highlight a noteworthy shift toward a visually driven culture, wherein users employ images and videos as potent means of self-expression (Manago, Graham, Greenfield, and Salimkhan, 2008; Krämer & Winter, 2008). Photographs serve as instruments of self-presentation, effectively communicating and embodying various identities. On platforms like Facebook, they are frequently shared in different formats such as profile pictures, photo albums, or wall posts, offering users versatile means of expressing and shaping their online personas (Sertkaya, 2022). Rettberg (2014) highlights a significant aspect of selfies, noting that individuals often enjoy them due to the sense of control they afford throughout the entire process. Some scholars, such as Tiidenberg (2014), have viewed selfies positively, arguing that they offer an empowering potential. Tiidenberg suggests that self-shooting allows users to exert control over their body aesthetics, enabling them to construct themselves as "sexy" or "beautiful." The rise of video content on social media platforms introduces a dynamic dimension to self-presentation. Videos, whether short clips or longer narratives, allow users to engage in storytelling, offering a more immersive and authentic glimpse into their lives. Studies have explored the impact of video content on audience perception and have identified it as a powerful tool for conveying emotions, experiences, and cultural narratives (Subrahmanyam & Smahel, 2011).

**Self-Presentation on Facebook**

van Dijck (2013) argues that Facebook has evolved from text-based posts to a visually driven platform emphasizing photos and videos, making it a tool for storytelling and self-branding. Users engage in strategic self-presentation, leveraging platform features to craft positive impressions (Morrison, 2014). Visual content, such as selfies and videos, has become central to digital identity construction, offering control over one's image while fostering engagement (Tiidenberg, 2014). Younger users, particularly, rely heavily on visual self-presentation, using it as a means of empowerment and expression (Manago, Graham, Greenfield, & Salimkhan, 2008).

**Gender Differences in Self-Presentation**

Gender plays a significant role in shaping self-presentation on social media. Female users are more socially engaged and emphasize appearance, while male users focus on content such as cars or scenery (Sertkaya, 2022). LGBTQ+ users also use social media to find support and build meaningful connections (Nesi, Wolff & Hunt, 2019). Women post more photos and exercise greater control over visual content, while men increasingly conform to beauty standards, sharing photos that highlight physical fitness or desirability (Kapidzic & Herring, 2015). Despite these patterns, little research compares visual self-presentation behaviors across genders, particularly among LGBTQ+ individuals, creating a gap that this study seeks to address.

**Cultivation Theory**

Social media platforms like Facebook create environments that encourage social comparison by showcasing curated representations of appearances, achievements, and social status. While exposure to positive content can boost emotions through emotional contagion (Choi & Kim, 2021), it often triggers upward comparisons, leading to envy and feelings of inadequacy. This curated content distorts reality, fostering internalized unrealistic standards. For youth, Facebook significantly shapes self-perception and social norms, aligning with Cultivation Theory, which posits that prolonged exposure to media influences users' reality perceptions. Visual-focused platforms heighten comparisons based on physical appearance, with studies showing that good looks are tied to popularity, especially for females, who face greater appearance-based scrutiny (Siibak, 2009; Manago et al., 2008). For Myanmar's youth, repeated exposure to idealized self-presentations on Facebook may reinforce unrealistic beauty and success standards, increasing depressive tendencies due to adverse social comparisons.

**Social Comparison Theory**

Social Comparison Theory explains how individuals evaluate their worth through comparisons with others. Social media's curated content creates distorted standards, often leading to feelings of inadequacy (Dunning & Hayes, 1996). Comparisons with peers, particularly friends, have a more significant impact due to the "local dominance effect" (Zell & Alicke, 2010). While downward comparisons can serve as a protective mechanism (Wills, 1981), upward comparisons on platforms like Facebook often result in diminished self-esteem and well-being (Gerber, Wheeler & Suls, 2018). Passive social media use, such as scrolling without interaction, amplifies negative outcomes (Verduyn et al., 2015). Conversely, active engagement can strengthen social connections and improve well-being (Appel, Gerlach & Crusius, 2016). For Burmese youth in Thailand, frequent exposure to idealized portrayals of success and happiness on Facebook intensifies social comparisons, leading to lower self-esteem and potentially contributing to depression over time.

Building upon the review of related concepts and theories presented above, this study seeks to investigate the following four research hypotheses:

HP#1: Exposure to others' self-presentation on Facebook significantly influences self-esteem among Burmese youth residing in Thailand.

HP#2: Exposure to others' self-presentation on Facebook significantly influences depression experienced by Burmese youth residing in Thailand.

HP#3: Gender moderates the impact of exposure to other Facebook users' self-presentation on Burmese youths' self-esteem.

HP#4: Gender moderates the impact of exposure to other Facebook users' self-presentation on Burmese youth's depression.

## Methodology

### Research Design, Population, and Sample Selection

This study adopts a quantitative approach to examine the relationship between others' self-presentation on Facebook and youth depression among Burmese young adults in Thailand. Quantitative methods provide reliable data applicable to larger populations (Verhoef & Casebeer, 1997). The target population includes Burmese young adults aged 18–28 in Thailand, including university students and employees in both private and public sectors who actively use Facebook. A sample size of 271 participants was calculated with a 90% confidence level ($Z = 1.645$), an estimated population proportion ($p = 0.5$), and a 5% margin of error. To address non-responses, the final survey size includes 280 participants, ensuring robust and reliable data (Groves, Fowler, Couper, Lepkowski, Singer & Tourangeau, 2009). A total of 285 responses were collected, however, after excluding those that did not meet the target sample criteria, 259 valid responses were retained for analysis. Multistage sampling ensures a representative and diverse cross-section of the population.

### Measurement

Data were collected via Google Forms. The questionnaire consists of five sections:

1) Section A collects basic demographic details, including age, gender, monthly income, duration of residence, and province in Thailand. Respondents answer using multiple-choice formats.

2) Section B assesses the frequency and duration of Facebook use, as well as the types of content viewed. Duration is measured on a five-point scale from "Very short" (less than 15 minutes) to "Very long" (more than 4 hours). Frequency is also rated on a four-point scale from "Once a week" to "Multiple times a day".

3) Section C examines respondents' behaviors related to others' self-presentation, such as posting photos and videos. It includes 11 items adapted from previous studies, using a 5-point Likert scale ranging from "Never" to "Always".

4) Section D is a measurement of self-esteem with a 4-point Likert scale adapted from the Rosenberg Self-Esteem Scale (RSES), consisting of 10 items. Higher scores indicate greater self-esteem, with the scale demonstrating strong reliability ($\alpha = 0.77 - 0.88$).

5) Section E uses the Patient Health Questionnaire-9 (PHQ-9) to assess depressive symptoms. Respondents rate symptoms based on frequency over the past two weeks, with scores ranging from 0 to 27. The PHQ-9 has strong internal consistency ($\alpha \sim 0.89$), indicating good reliability.

Content validity was ensured by adapting established scales, including Yang & Brown (2016) Self-Presentation on Facebook Scale. Advisory reviews confirmed the questionnaire's relevance to constructs like self-presentation, self-esteem, and depression. Reliability tests were conducted using Cronbach's alpha for internal consistency, while a pilot study identified and resolved potential issues, ensuring consistent measurement across respondents. The Cronbach's alpha for all measures are considered acceptable. EXPC (11 items) = 0.92. SEST (10 items) = 0.78. DEP (9 items) = 0.79.

### Data Analysis

Descriptive statistics were used to describe respondents' demographic characteristics, Facebook usage, and self-presentation behaviors. Correlation analysis and linear regression Analysis examined causal relationships between exposure to self-presentation and two dependent variables (self-esteem and depression). ANCOVA tests gender's moderating role. Measures like means, standard deviations, and frequencies clarify trends in Facebook usage and psychological effects.

## Results

### Results of Descriptive Statistics on Survey Respondents

Data were obtained via an online survey from August 30 to September 27, 2024. More than 300 respondents filled out the questionnaire, however, invalid questionnaires were filtered out. The remaining data were subjected to reliability testing and statistical analysis.

**Table 1:** Demographic Information

| Variables | Characteristics | Frequency | Percent |
|---|---|---|---|
| Gender | Male | 116 | 44.8 |
| | Female | 113 | 43.7 |
| | Non-binary | 19 | 7.3 |
| | Prefer not to say | 11 | 4.2 |
| | Total | 259 | 100.0 |
| Age | 18 | 6 | 2.3 |
| | 19 | 19 | 7.3 |
| | 20 | 14 | 5.4 |
| | 21 | 25 | 9.7 |
| | 22 | 32 | 12.4 |
| | 23 | 35 | 13.5 |
| | 24 | 33 | 12.7 |
| | 25 | 42 | 16.3 |
| | 26 | 28 | 10.8 |
| | 27 | 14 | 5.4 |
| | 28 | 11 | 4.2 |
| | Total | 259 | 100.0 |
| Monthly Income | Less than 10,000 THB | 128 | 49.40 |
| | 10,001 – 20,000 THB | 103 | 39.80 |
| | 20,001 – 30,000 THB | 19 | 7.30 |
| | 30,001 – 40,000 THB | 2 | 0.8 |
| | 40,001 0 50,000 THB | 4 | 1.50 |
| | More than 50,000 THB | 3 | 1.20 |
| | Total | 259 | 100.0 |
| Duration of Stay | Less than 1 year | 140 | 54.1 |
| | 1 – 2 years | 106 | 40.9 |
| | 3 – 4 years | 12 | 4.6 |
| | More than 4 years | 1 | 0.4 |
| | Total | 259 | 100.0 |
| Location | Bangkok | 146 | 56.4 |
| | Chiang Mai | 33 | 12.7 |
| | Phuket | 14 | 5.4 |
| | Pathum Thani | 15 | 5.8 |
| | Udon Thani | 6 | 2.3 |
| | Nonthaburi | 2 | 0.8 |
| | Samut Prakan | 37 | 14.3 |
| | Samut Sakhon | 6 | 2.3 |
| | Total | 259 | 100.0 |

| Variables | Characteristics | Frequency | Percent |
|---|---|---|---|
| Facebook Usage | Multiple times a day | 147 | 56.8 |
| | Once a day | 43 | 16.6 |
| | A few times a week | 58 | 22.4 |
| | Once a week | 11 | 4.2 |
| | Total | 259 | 100.0 |
| Duration of Usage | Less than 15 minutes per day | 32 | 12.4 |
| | 16 – 59 minutes per day | 76 | 29.3 |
| | 1 – 2 hours per day | 76 | 29.3 |
| | 3 – 4 hours per day | 50 | 19.3 |
| | More than 4 hours per day | 25 | 9.7 |
| | Total | 259 | 100.0 |
| Type of Content | Videos | 233 | 26.85 |
| | Photos | 194 | 22.35 |
| | Live Streams | 140 | 16.13 |
| | Influencer Content | 108 | 12.44 |
| | Status Updates | 97 | 11.18 |
| | News Articles | 69 | 7.95 |
| | Group Discussions | 27 | 3.11 |
| | Total | 868 | 100.00 |

Based on Table 1, this study surveyed a total of 277 participants, with 259 valid responses (aged 18–28) used for data analysis. The demographic profile of the respondents revealed a nearly equal gender distribution: 44.8% (n =116) were male, 43.7% (n =113) were female, 7.3% (n =19) identified as non-binary, and 4.2% (n =11) chose "Prefer not to say." In terms of age, the largest group of respondents were 25 years old (16.2%, n = 42), followed by 23-year-olds (13.5%, n = 35). The youngest group (18 years old) accounted for only 2.3% (n = 6), while the oldest group (28 years old) made up 4.2% (n = 11). In terms of monthly income, the majority of the respondents (49.4%) reported less than 10,000 THB a month, followed by 10,001 – 20,000 THB (39.8%), 20,001 – 30,000 THB (7.3%), 30,001 – 40,000 THB (0.8%) and 40,001 – 50,000 THB (1.5%) respectively. 1.2% of the respondents received monthly income of more than 50,000 THB. The majority of respondents reside in Bangkok (56.4%), followed by Samut Prakan (14.3%), Chiang Mai (12.7%), Pathum Thani (5.8%), Phuket (5.4%), Udon Thani (2.3%), Samut Sakhon (2.3%), and Nonthaburi (0.8%). Regarding residence duration in Thailand, 54.1% (n =140) had lived there for less than a year, followed by 40.9% (n =106) residing for 1–2 years, 4.6% (n =12) for 3–4 years, and 0.4% (n =1) for more than four years.

Respondents' Facebook usage patterns highlighted that a majority (56.8%, n = 147) used the platform multiple times daily, while others used it a few times a week (22.4%, n = 58), once a day (16.6%, n =43), or once a week (4.2%, n =11). Most respondents spent less than two hours per day on Facebook, with 29.3% (n = 76) spending 16–59 minutes and 29.3% (n = 76) spending 1–2 hours. Smaller proportions spent less than 15 minutes daily (12.4%, n = 32), 3–4 hours daily (19.3%, n = 50), or more than 4 hours daily (9.7%, n = 25). Engagement with Facebook content revealed a preference for visual and multimedia content, particularly videos (26.85%) and photos (22.35%). Respondents also engaged with live streams (16.13%), influencer content (12.44%), status updates (11.18%), news articles (7.95%), and group discussions (3.11%).

**Results of Descriptive Statistics on the Examined Variable**

**Table 2:** Descriptive Statistics of the Examined Variable

| Variable | N | Mean | S.D | No. of items | Cronbach's Alpha |
|---|---|---|---|---|---|
| EXPC | 259 | 2.57 | 0.77 | 11 | 0.92 |
| SEST | 259 | 2.65 | 0.44 | 10 | 0.78 |
| DEP | 259 | 1.25 | 0.53 | 9 | 0.79 |

Based on the above table, it was found that the mean score of exposure to self-presentation content was 2.57 (*S.D.* = 0.77), based on 11 items, with high reliability ($\alpha$ = 0.92). The mean self-esteem score was 2.65 (*S.D.* = 0.44), measured using 10 items, and demonstrated acceptable reliability ($\alpha$ = 0.78). The mean depression score was 1.25 (*S.D.* = 0.53), derived from 9 items, with satisfactory reliability ($\alpha$ = 0.79).

**Results of Hypothesis Testing**

**Table 3:** Regression Analysis Results on Exposure to Others' Self-Presentation on Facebook as a Predictor of Self-Esteem and Depression

| Variable | B | S.E. | Beta | t | Sig. |
|---|---|---|---|---|---|
| SEST* | 0.145 | 0.035 | 0.253 | 4.192 | <.001 |
| DEP** | 0.011 | 0.043 | 0.015 | 0.245 | 0.806 |

* $R^2$ = .064, df = 1 (p < .001)
**$R^2$ = .000, df = 1 (p > .05)

The results of the regression analysis revealed that exposure to others' self-presentation content on Facebook significantly predicted self-esteem ($\beta$ = 0.253, t = 4.192, p < .001), explaining 6.4% of the variance in self-esteem ($R^2$ = 0.064). However, exposure to self-presentation content did not significantly predict depression ($\beta$ = 0.015, t = 0.245, p > .05), accounting for no variance ($R^2$ = 0.000). These findings suggest that while self-presentation content impacts self-esteem, it does not appear to influence depression.

**Table 4:** Results of the Independent Sample T-Test Comparing Mean of Respondents' Self-Esteem between Males and Females

| Gender | N | Mean | S.D | t | p |
|---|---|---|---|---|---|
| Male | 116 | 2.63 | 0.50 | | |
| | | | | -.615 | 0.54 |
| Female | 113 | 2.67 | 0.39 | | |

The independent sample t-test for self-esteem indicated no significant difference between males ($\bar{X}$ = 2.63, *S.D.* = 0.50) and females ($\bar{X}$ = 2.67, *S.D.* = 0.39), $t(1, 227) = -0.615$, $p > .05$. This result suggests that gender does not have a notable influence on the self-esteem levels of the respondents.

**Table 5:** Results of the Independent Sample T-Test Comparing Mean of Respondents' Depression between Males and Females

| Gender | N | Mean | S.D | t | p |
|---|---|---|---|---|---|
| Male | 116 | 1.22 | 0.58 | -.936 | 0.35 |
| Female | 113 | 1.28 | 0.51 | | |

Similarly, the t-test for depression revealed no significant difference between males ($\bar{X}$ = 2.22, *S.D.* = 0.58) and females ($\bar{X}$ = 2.28, *S.D.* = 0.51), $t(1, 227) = -0.936$, $p > .05$. This finding indicates that gender does not significantly affect the depression levels among the participants.

**Discussion**

The demographic profile of this study's participants offers valuable insights into the diversity and characteristics of the sample. The gender distribution was nearly equal, with males representing 44.8% and females 43.7%. Non-binary individuals and those who preferred not to disclose their gender made up smaller yet significant portions. This diversity is essential for understanding how different gender identities interact with social media and its psychological effects. In terms of age, the sample predominantly comprised younger adults, particularly those aged 23 to 25. This age range is particularly relevant for studying the effects of social media, as young adults are often the most active users of social media platforms. The age distribution reflects a broad spectrum of young adulthood, capturing individuals from those just entering adulthood to those nearing their late twenties. Participants' duration of residence in Thailand varied significantly, with over half having lived for less than a year. This suggests that the sample included many individuals who may be undergoing cultural or environmental adjustments, potentially influencing their social media use and perceptions. Facebook usage patterns among respondents aligned with broader trends of frequent social media engagement. A significant majority logged in multiple times daily, indicating a high level of familiarity and interaction with the platform. Most users reported spending between 16 minutes and 2 hours per day on Facebook, highlighting the platform's potential impact on users' mental health and self-esteem.

The types of content that respondents engaged with on Facebook revealed as the researcher expected - a preference for visually oriented and interactive formats. Videos and photos were the most popular, followed by live streams and influencer content. This inclination toward multimedia suggests that visual cues and dynamic interactions significantly shape users' experiences and perceptions on social media especially on Facebook platform. Conversely, there was relatively lower engagement with textual content, such as news articles as well as group discussions, reflecting a trend toward more superficial or entertainment-driven interactions. Overall, the participant profile and their social media habits provide a nuanced understanding of how young adults interact with platforms like Facebook and the potential implications for their psychological well-being. The findings underscore the importance of considering both demographic diversity and specific engagement patterns when examining social media's effects on mental health. The findings align with Social Comparison Theory (Festinger, 1954), which posits that individuals evaluate themselves by comparing to others. On Facebook, exposure to idealized self-presentation content fosters upward comparisons, which can diminish self-esteem, or downward comparisons, which can enhance it (Vogel, Rose, Roberts, Eckles, 2014; Gibbons & Gerrard, 1991). The significant relationship between exposure to self-presentation and self-esteem supports this theory. However, the lack of a significant relationship with depression indicates that Social Comparison Theory alone cannot fully explain its impact. Depression likely arises from multiple factors, including offline stressors and pre-existing conditions (Twenge & Campbell, 2018).

The integration of cognitive-behavioral or stress-buffering models may better capture the complexity of depression. Future research should explore moderating factors, such as personality traits (e.g., self-concept clarity, resilience, or neuroticism), which may intensify or mitigate social media's effects on mental health (de Vries & Kühne, 2015; Stieger, Burger, Bohn & Voracek, 2013).

The results are consistent with studies showing that social media more strongly affects self-esteem than depression. For example, Vogel et al. (2014) and Tandoc, Ferrucci, & Duffy (2015) found that idealized portrayals on social media negatively impact self-esteem but do not directly predict depression unless compounded by other factors. This study highlights how self-esteem is more sensitive to social comparisons, while depression requires additional influences like long-term stressors or genetic predispositions. Cultural factors also play a role. Burmese youth, shaped by collectivistic values emphasizing family and community, may be less affected by social media validation pressures, serving as a buffer against depression (Aldkheel & Zhou, 2023). These findings underscore the importance of considering sociocultural contexts when examining social media's impact on mental health. The researcher hypothesized that gender would moderate the relationship between exposure to self-presentation content on Facebook and self-esteem or depression, based on prior studies suggesting that females are more sensitive to social comparisons (Valkenburg, Peter, & Schouten, 2006; Nesi & Prinstein, 2015). However, the findings indicate no significant gender differences, suggesting gender does not moderate these relationships. This result challenges earlier research and may reflect shared cultural or contextual factors among Burmese youth that minimize gender-based differences. Depression's lack of moderation by gender also suggests its causes may stem from broader psychological or environmental factors affecting both genders equally. These findings imply interventions may not need to be gender-specific, as the impact of social media appears similar for males and females. It should be noted that this study has some limitations. In terms of research design, a cross-sectional design limits causal inference. Longitudinal or experimental studies would yield more reliable findings. Self-reported data is susceptible to social desirability bias; objective measures could improve accuracy. Convenience sampling may not represent the broader Burmese youth population. Due to limited budget and time, this study focused on Burmese youth in Thailand, limiting generalizability to other migrant groups or contexts.

**Conclusion**

The online survey was conducted with 259 Burmese youths living in Thailand, aged between 18 and 28 years old. The samples composed of nearly equal proportion of males and females. The majority of them reported less than 10,000 THB monthly income, living in Bangkok, stayed in Thailand with less than a year, used Facebook multiple times daily, and their duration of daily usage is between 16 minutes and two hours. On average, they have a moderate level of EXPC on Facebook ($\bar{X}$ = 2.57, *S.D.* = 0.77), moderate level of self-esteem ($\bar{X}$ = 2.65, *S.D.* = 0.44), and low level of depression ($\bar{X}$ = 1.25, *S.D.* = 0.53). In hypothesis testing, findings of the Regression Analysis showed that EXPC significantly predicted self-esteem ($R^2$ = 0.064, $\beta$ = 0.253, $p < .001$) but did not significantly predict depression ($R^2$ = 0.000, $\beta$ = 0.015, $p > .05$). Unexpectedly, there was no significant difference in self-esteem and depression levels between male and female participants. The Independent Sample T-Test revealed that gender significantly moderated the relationship between EXPC and self-esteem, with females exhibiting greater sensitivity to social comparisons. However, no significant moderating effect was observed in the relationship between EXPC and depression. These findings emphasize the importance of considering gender dynamics in mental health research and intervention programs, particularly for individuals with diverse gender identities. The study highlights the need for targeted policies and mental health initiatives aimed at fostering digital literacy and emotional resilience to

mitigate the psychological effects of social media use. Additionally, the research contributes to a deeper understanding of gendered dynamics in social media engagement, offering valuable insights for future studies and practical applications in health communication.

**Recommendations**

The findings of this study lead to recommendations for several sectors. Firstly, policymakers should prioritize the integration of mental health education into school curricula to ensure that youth, particularly those in the migrant communities, are equipped with the skills to navigate the emotional challenges posed by social media. This could include teaching coping mechanisms for managing anxiety, depression, and body image issues often exacerbated by online comparison. Secondly, governments should consider offering subsidized or accessible counseling services, either in person or virtually, to support migrant youth who may not have easy access to mental health care due to financial or geographic barriers. Encouraging partnerships between schools, local governments, and mental health professionals could help create safe spaces where young people can openly discuss their mental health struggles related to social media exposure. Creating national campaigns aimed at destigmatizing mental health care, especially in the migrant communities, can also play a crucial role in ensuring that youth seek help when needed. Additionally, governments could introduce initiatives that promote a healthier online environment by collaborating with social media platforms and tech companies to implement more stringent regulations around harmful content, such as cyberbullying, body shaming, and inappropriate comparisons. Thirdly, social media companies could be encouraged or even required to incorporate tools that allow users to report harmful content, receive guidance on mental health resources, or access real-time support when distressing material is encountered. Providing incentives for companies that adopt ethical practices and demonstrate a commitment to promoting mental well-being would be an important step toward protecting young users from the negative psychological impacts of excessive or unhealthy social media exposure. In addition, future research should explore moderators/mediators to include factors like social support, cultural background, coping mechanisms, and personality traits. Develop longitudinal studies to examine sustained exposure to self-presentation content over time. Use Qualitative methods - interviews or focus groups to capture cultural and subjective experiences, and include diverse ethnic and migrant populations for broader generalizability. These recommendations aim to enhance understanding and inform culturally sensitive interventions for improving youth mental health in diverse contexts.

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# TRANSFORMING DATA TO CREATIVE NARRATIVES :CELEBRATING CULTURAL DIVERSITY AND SUSTAINABILITY THROUGH INSIGHT-DRIVEN CONTENT

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**Abstract**

This research article explored the dynamic interplay between data analytics and creative content development, focusing on how insights can inspire culturally diverse narratives that resonate with varied audience groups. As markets become increasingly globalised and diverse, understanding the intricacies of cultural disparities is vital for marketers seeking to engage effectively with their audiences. This study examines how consumer data can reveal cultural preferences, values, and trends, providing a foundation upon which marketers can craft authentic and respectful narratives. Incorporating sustainability into this framework, the study also investigates how data can inform the creation of environmentally responsible content that respects both cultural diversity and global sustainability efforts. By analysing case studies as a qualitative research, we identify best practices for leveraging data insights in the creative process while maintaining cultural sensitivity and promoting sustainable practices. The findings highlighted that content narratives shaped by a deep understanding of cultural dynamics and a commitment to sustainability not only enhance consumer engagement but also foster stronger brand loyalty and positive brand perception in multicultural contexts. Ultimately, this research aims to thoughtfully integrate data-driven insights into culturally informed and sustainable content strategies, ensuring that diversity and environmental responsibility are not just acknowledged but also celebrated in today's content landscape.

**Keywords:** Consumer Data Analytics, Cultural Diversity, Sustainability, Content Narratives

## Introduction

Successful creative campaigns centered on sustainability and ESG (Environmental, Social, and Governance) initiatives in various regions are driven by robust insights and consumer data analytics. Without these components, strategic direction is often lacking. Consumer data highlights the rising consumer awareness and demand for sustainable practices. By analyzing these trends, businesses in different sectors can better align their strategies with sustainability goals, addressing environmental challenges while fulfilling consumer needs. Adopting these insights enables companies to build trust, improve brand loyalty, and contribute to a more sustainable future (Stevens, 2025). Ostler (2023) likewise addressed that sustainability-themed creative marketing campaigns across borders are essential as the world aims for a net-zero future amid economic uncertainty and extreme weather. Businesses play a vital role in promoting sustainable lifestyles and a green economy. Research shows consumers care about social and environmental issues, with around 50 percent willing to invest in responsible companies and 42 percent having stopped buying products due to their environmental impacts. More focus should be given on innovation, but a "value-action gap" persists—consumers recognise the importance of sustainability, yet often fail to act due to

convenience and cost barriers. Brands must gather deeper audience insights to create narratives and messages that resonate across diverse groups, especially as sustainability becomes politicised. Understanding consumer barriers and emotional reactions is crucial. Economic pressures are causing shoppers to reconsider their purchases, leading to a reduced willingness to pay more for eco-friendly products and services. Brands need to balance sustainability messaging and narrating with cost considerations while making green products and services more accessible. Emotion significantly influences sustainability messaging; empowerment and hope drive positive change, while guilt can hinder it. Campaigns should focus on solutions rather than problems for greater effectiveness. Creative testing is vital for crafting impactful narratives and messages that resonate emotionally and drive action. Companies should demonstrate green initiatives, foster a connection to nature, and offer immediate rewards. Ultimately, authenticity is paramount; brands must align their practices with their messaging and understand the diverse attitudes of their consumers as we collectively navigate the path to sustainability. Ostler (2024) concept underscores the importance of listening to consumers and customers, allowing for the creation of emotionally driven content narratives in campaigns that effectively engage and resonate with target audiences.

Armstrong (2021) further articulated, by referring to the perspectives of various scholars and professionals, that responsibility for environmental degradation and climate change is not solely an individual issue. For instance, a person using bottled water and air conditioning might have minimal impact if their society is sustainable, while a zero-waste activist may find it challenging to effect change in a consumer-driven culture. Consumption impacts are cumulative and systemic, with individual choices shaping society's ecological footprint. Vulnerable groups, like low-income individuals and immigrants, often bear the brunt of environmental challenges, lacking resources to cope with disasters, as highlighted by psychologist H. Shellae Versey.

The adage "think globally, act locally" underscores the importance of community action against climate change. Yoshihisa Kashima from the University of Melbourne emphasises developing cultures that support sustainability through four key components: 1) Human-Nature Relationship: Connecting people to nature fosters conservation commitment; 2) Cultural Artefacts: Our perception of human-made objects influences consumption; moving to a circular economy is crucial; 3) Social Norms: Changing norms can help communities adopt sustainable practices; and 4) Vision for the Future: A shared vision can unite people around environmental engagement. Kashima believes a strong global civil society is essential for institutional changes toward sustainability. Cultural differences affect paths to sustainability. Research by Liman Man Wai Li from the Education University of Hong Kong likewise showed that Eastern cultures emphasise interdependence while Western cultures prioritise independence, influencing environmental behaviour. Li found that those with independent self-concepts tend to feel less need for social connection when close to nature, linking nature-relatedness to sustainable choices. Moreover, thinking styles—dialectical or linear—impact climate engagement. Dialectical thinkers see interconnections, while linear thinkers focus on direct causes. Holistic thinkers are more environmentally aware, but dialectical thinkers may underestimate climate change's urgency. Therefore, environmental education should be culturally tailored to emphasize solutions. In summary, "sustainable behaviour is influenced by personality traits" and also by various cultural dimensions (~~in~~ Armstrong, 2021).

The researchers would like to conclude this introduction by expressing their appreciation to Sven Arnauts, a data and AI expert at Delaware, for emphasizing that data is essential for understanding and reporting sustainability achievements while also creating business value. He also noted that they can effectively guide organizations on the specific approaches and solutions needed to advance their sustainability journey and achieve genuine business value (Delaware, 2023). Similarly,

marketers cannot overlook the significance of cultural preferences and diversity, as expressed by various scholars and professionals ( Armstrong, 2021).

Consequently, the objectives of this study were twofold: first, to explore how insights obtained from consumer data analytics can be utilised to foster creativity and sustainability while identifying cultural trends and preferences; and second, to investigate the best practices for ensuring that content derived from consumer data insights honours and represents sustainability within diverse cultural contexts.

**Research Objective**

The objectives of this research were to 1) to examine in what ways insights (consumer data) derive from data analytics be employed to enhance creativity and sustainability and identify cultural trends and preferences and 2) to study what would be the best practices for ensuring and empowering the content developed from consumer data insights to respect and reflect sustainability across cultural diversity.

**Literature Review**

Among the various sustainable models available, the integrated model of the sustainable consumer proposed by Phan-Le et al. (2024) is better suited for this research. This model prioritises the perspectives of consumers rather than those of producers, making it more relevant to our focus. Phan-Le et al. (2024) illustrated that it is believed that linear models suggest a hierarchy of effects and simple relationships, while the integrated model of the sustainable consumer represents multidirectional and multidimensional influences. Consequently, the limitations of linear effects are avoided, as they oversimplify the complex interactions present in a systems model. Furthermore, the systems model highlights the non-binary and diverse nature of sustainable consumption and the motivations behind consumer behaviour. The multi-layered model introduced by Phan-Le and colleagues (2024) is illustrated below.

The model is elegantly organised into three main dimensions: macro, meso, and micro, with each dimension further delineated into sub-dimensions. The macro-dimension primarily examines consumers' “worldview”. Within this framework, this worldview does not directly correlate with behaviour, nor does it reside within the individual’s personal sphere. To provide a richer understanding of macro-level influences on sustainable consumption, the additional constructs, such as environmental concerns and values, are integrated. While both environmental concerns and values are personal, they are deeply influenced by societal contexts and do not develop in isolation.

At the meso-dimension, the focus is on the connection to nature and sustainable communities. According to Phan-Le et al. (2024), this dimension encompasses the influences and actors that surround an individual, as opposed to their internal thoughts and perceptions. The meso-dimension highlights the relationship between consumers, the natural environment, and their communities. While this layer can provide insight into social behaviors, it is just one influence within the broader system of sustainable consumption. Unlike worldviews, which reflect the collective societal perspective, both the sustainable community and the connection to nature are less stable. The ability to connect with nature is not inherent, which is why it has been included in the meso-layer. Regarding sustainable communities, the meso-layer addresses the individual's immediate relationship with their surrounding community, emphasising the importance of living in a sustainable environment.

In the micro-dimension, Phan-Le and colleagues (2024) portray this level as a dynamic open system shaped by a web of interconnected influences. Each factor interacts with others, including those from different dimensions. Consumers exist within broader social practices, influenced by their

attributes, such as the alignment of their attitudes and behaviours, their routines, habits, and levels of material well-being. Within this model, these factors—attitude-behaviour alignment, routines and habits, and lifestyle—are situated within the internal locus of control area, emphasising their interconnections. For instance, the gap between attitudes and behaviours can be effectively closed when individuals take the time to reflect on their habitual practices and realign them with their core values and intentions. The micro-dimension includes key elements such as routine disruption, attitude-behaviour alignment, and non-material well-being, all of which interact synergistically.

Particularly, routine disruption is vital within the model's micro-dimension, as existing behavioural patterns often require revision to integrate sustainable consumption into everyday life. This readiness to modify established habits encompasses two main sub-constructs: habit discontinuity and self-activation. Furthermore, attitude-behaviour alignment is a critical measure of sustainable consumption. Consumers are not always guided by rationality; they often need external support and triggers to engage in sustainable actions. For sustainable consumption to flourish, there must be a harmonious relationship between individuals' attitudes and their behaviours or intentions. It is possible for consumers to adopt sustainable practices simply due to a lack of alternatives, making the inclusion of attitude-behaviour alignment a fundamental aspect of the IMSC.

Lastly, non-material well-being plays a significant role in lowering personal consumption levels, also affecting habits and behaviours, hence its important inclusion in the micro-dimension of the model.

Kumar et al. (2025) also suggested that there are four key issues to consider when using consumer data to enhance and support a brand's sustainability, as well as to align with cultural trends and preferences, as follows: 1) Evaluate Your Current Status**:** Start by assessing your sustainability position using data from surveys, audits, reports, and ratings to understand your environmental, social, and economic impacts. Compare your performance with competitors and industry standards to identify your strengths, weaknesses, opportunities, and threats; 2) Establish Goals and Metrics**.** Next, define your sustainability goals and relevant indicators. Align these with your organization's vision and values while also considering global and local trends. Choose meaningful metrics, such as the triple bottom line framework or the Sustainable Development Goals, to measure your progress; 3) Track and Analyse Performance**:** Regularly monitor and analyse your sustainability performance using data to report on results, challenges, and successes. Compare your outcomes against your goals and benchmarks to identify areas needing improvement, utilizing tools like dashboards and graphs for clear data visualisation; and 4) Execute and Assess Actions**:** Implement and evaluate strategies to enhance sustainability performance. Use data to guide decisions and investments, and experiment with different approaches to determine their effectiveness. Gather both qualitative and quantitative feedback through various methods, such as reviews and case studies, to inform continuous learning and improvement.

Overall, market research can provide valuable insights to enhance your company's sustainability efforts. By leveraging data, you can set goals, track progress, and undertake actions that positively impact your business, your customers, and the environment.

## Methodology

The researchers analyzed a range of successful case studies by utilizing various generative AI tools, including Claude, GPT-4, and Google Gemini, to generate relevant examples. There may be arguments regarding the number of case studies utilised and analysed by the researchers. However, it is evident that the quality of the case selection process significantly influences the effectiveness of the study. Although sequential approaches to case studies could assist researchers in determining when

theoretical saturation had been achieved, this method was not compatible with the longitudinal approach employed in this study (AVETRA, 2018). The keywords "successful case studies" related to "insights and consumer data," "cultural diversity," and "sustainability" were entered into the generative AI tools. They examined both the similarities and differences in the case studies suggested by these tools, focusing solely on selecting the names of the projects and initiatives provided. While there may be some questions regarding these successful case studies, they have the potential to offer strategic direction and address the research questions presented.

To ensure validity and reliability, the researchers decided to include 24 successful case studies, with no specific or limited period. They agreed with the argument that a substantial number of case studies should be selected and thoroughly scrutinised. Due to time constraints, however, the researchers chose case studies with odd numbers. Table 1 provided a summary of the odd-numbered campaigns and initiatives for clarity and understanding, while the names of the even-numbered campaigns and initiatives were included to ensure reliability. However, Google Arts & Culture's "Blob Opera" and Netflix's 'Our Planet" interactive websites were excluded due to the absence of sustainability data provided and the lack of available details on this topic, respectively.

**Table 1:** A Summary of the Odd-Numbered Campaigns and Initiatives Analysed in This Study

| Brand/project/initiative | Description |
|---|---|
| (1) Patagonia's "Worn Wear" campaign | Patagonia' s ' Worn Wear' program honors the stories of its customers while promoting the longevity of its gear and offering a recycling option for irreparable items. A four-minute introductory film showcases Patagonia's repair center, where customers send worn apparel along with notes detailing their significance. The campaign features additional films and a microsite under the tagline: 'The Stories We Wear.' It highlights professional athletes and everyday users who view their gear's wear and tear as badges of honour from their adventures. Ultimately, the campaign connects users with cherished memories, emphasizing the importance of preserving meaningful experiences (Carnyx Group Ltd, 2025). |
| (2) Levi's Water<Less™ Initiative | In recognition of World Water Week, Levi highlights its water-related initiatives. The brand announces the 2025 Water Action Strategy, aiming to cut water usage in manufacturing by 50% in highly stressed areas by 2025, based on 2018 levels. The brand also revamps the Water<Less® approach to ensure that all key suppliers, who account for 80 percent of the product volume, become certified Water<Less® facilities by 2025. It believes that this focused strategy will help reduce local water stress where the brand operates (Unzipped Staff, 2019). |
| (3) Nike's "Breaking2" Project | To achieve their goal, Nike has brought together a diverse team of top innovators, including engineers, designers, biomechanists, nutritionists, physiologists, and materials developers, to support elite runners Eliud Kipchoge, Lelisa Desisa, and Zersenay Tadese. The team has planned various touchpoints over the coming months, such as in-person meetings and regular phone or Skype sessions. By visiting training camps in Kenya, Ethiopia, and Spain, they can assess and optimise each runner's routines, focusing on hydration, nutrition, training load, and taper times. Additionally, the team analyses the race environment as a critical factor in performance. The data gathered and insights from these efforts are vital to their collective aim of breaking the two-hour marathon barrier (Nike, 2017). |
| (4) The New York Times' "Overlooked" series | "Overlooked" is a collection inspired by The New York Times series that highlights the obituaries of extraordinary individuals whose deaths went unreported. Featuring nearly 200 full-colour photos and unpublished content, the book aims to address the historical omission of women and people of colour in obituaries. This first instalment in the series presents 66 inspiring stories of marginalised figures, including well-known individuals like Ida B. Wells and lesser-known yet significant figures like " Rattlesnake Kate" and Ángela Ruiz Robles. With stunning photography and contributions from writers such as Veronica Chambers and Jon Pareles, the book encourages readers to rethink societal values and acknowledge the importance of overlooked stories (Penguin Random House, 2023). |

| Brand/project/initiative | Description |
|---|---|
| (5) Gapminder's "Dollar Street" | The Dollar Street project showcases families worldwide living on different incomes. Homes in various countries, including Latvia, Kenya, and Lebanon, were documented. The goal is to challenge cultural barriers and stereotypes, emphasising shared humanity—everyone has dreams and needs, regardless of income. Founded by Anna Rosling Rönnlund at Gapminder, the project arose from her desire to make global data more relatable. After years of presenting data through charts, Rönnlund realised that it did not capture the realities of daily life across income levels. Dollar Street uses photos to illustrate how people live around the world, allowing viewers to explore diverse homes without traveling (What took you so long? n.d.). |
| (6) UNESCO's "Dive into Intangible Cultural Heritage" interactive platform | The UNESCO Cluster Office in Quito has launched a platform offering digital resources—videos, podcasts, and photos—on intangible cultural heritage. This platform promotes knowledge sharing and peer learning, highlighting the role of living heritage in sustainable development and its responses to the COVID-19 pandemic. The content aligns with the Sustainable Development Goals (SDGs) and showcases cultural practices that support sustainable resource management, social cohesion, and community well-being. It particularly focuses on Andean practices of "buen vivir" ("good living"), which foster relationships that enhance community prosperity and welfare (UNESCO, 2022). |
| (7) World Bank's "Mapping for Results" initiative | The Mapping for Results (M4R) platform was launched at the 2011 World Bank-IMF Annual Meetings to evaluate the impact of World Bank projects on developing communities. M4R provides geographic data on World Bank-funded programs, allowing users to overlay information on poverty, population density, and human development. It includes population density data for 107 countries, human development indicators for 43 countries, and poverty data for 31 countries. The platform is based on two key principles: the importance of aid location in addressing development inequalities and the role of transparent information in boosting citizen engagement and government accountability, thereby enhancing the effectiveness of development aid (Gigler, 2011). |
| (8) The COVID Racial Data Tracker by the Atlantic | The COVID Racial Data Tracker collects and analyses US racial data on the pandemic through a partnership between the COVID Tracking Project and the Boston University Center for Antiracist Research. Starting from Dr. Ibram X. Kendi's essays on the need for demographic data, the project began gathering information on April 12, 2020, with the tracker launching three days later and updating twice weekly. The tracker includes race and ethnicity data across COVID-19 categories for researchers, although the dataset is often incomplete. Its dashboard displays state reporting status and encourages advocacy for improved data collection (The COVID Tracking Project, 2021). |
| (19) World Wildlife Fund's "Force of Nature" campaign | The campaign urges the environmental sector to establish more accessible entry points for young people and to inspire individuals from all backgrounds to consider careers in nature as rewarding and attainable. Led by the community charity Groundwork, this initiative has garnered support from organizations such as WWF-UK, Wildlife and Countryside Link, RSPB, The Wildlife Trust, CPRE, Bumblebee Conservation Trust, and The Woodland Trust, all of which have pledged to work toward a more inclusive environmental sector. Their commitments include implementing an action plan to enhance inclusivity and diversity, adopting recruitment practices that address the current lack of diversity, and creating entry-level positions with opportunities for career advancement for a diverse talent pool (Groundwork, 2023). |
| (23) Airbnb's "Made Possible by Hosts" campaign | Airbnb launched this campaign in 2020 to rebuild consumer trust amid the COVID-19 pandemic by highlighting the personal stories of hosts. This case study investigates how Airbnb utilized authentic storytelling to reconnect with travelers. The pandemic significantly decreased bookings and consumer confidence in shared accommodations. Airbnb faced challenges in restoring trust while ensuring guest and host safety amid heightened concerns over hygiene. The campaign centered on showcasing hosts who provided memorable experiences during challenging times, using storytelling to foster emotional connections (Hassan, 2025). |

## Results

The results of this study were reported in alignment with the research objectives, ensuring that the findings directly addressed the questions and goals established at the outset of the research. By analysing ten case studies from both non-commercial and commercial brands, we uncovered how insights derived from consumer data analytics were used to enhance creativity and sustainability while identifying trends and preferences. This analysis was followed by the articulation of best practices to ensure that content developed from these consumer data insights respected and reflected sustainability across diverse cultures.

### A. The ways with insights derived from consumer data analytics were used to enhance creativity and sustainability while identifying trends and preferences

In response to how insights derived from consumer data analytics were leveraged to enhance creativity and sustainability while identifying trends and preferences, both quantitative and qualitative studies, along with primary and secondary studies, were conducted. The focus was primarily on numeric data to gain a deeper understanding of consumers' needs, preferences, and motivations. This approach effectively supported the initiation and advancement of creative initiatives aimed at achieving sustainable development goals in diverse cultural preferences. In terms of quantitative data, notable examples include Patagonia's Worn Wear campaign, Levi's Water<Less™ initiative, Nike's "Breaking2" project, The New York Times' "Overlooked" series, UNESCO's Dive into Intangible Cultural Heritage interactive platform, the World Bank's Mapping for Results initiative, the COVID Racial Data Tracker by The Atlantic, and the World Wildlife Fund's Force of Nature campaign. Conversely, qualitative research and mixed methods were exemplified by Gapminder's Dollar Street project and Airbnb's Made Possible by Hosts campaign. Likewise, most of the analysed case studies and their creative campaigns prioritised promoting equality and diversity while tackling inequalities and disparities. Furthermore, the rest of the successful case studies aimed to enhance positive environmental impacts.

One outstanding example of utilising insights from quantitative data was Patagonia's Worn Wear Environmental Campaign. Today's consumers increasingly value sustainable fashion and make purchasing decisions with a focus on social and environmental sustainability practices (Endeavour Marketing, 2024). According to Devo (2022), Kantar's 2022 Sustainability Sector Index reveals that nearly all US consumers strived for sustainable lifestyles, with half of them considering their choices of sustainable products and services as a reflection of their identity. Notably, well-educated Generation X consumers living in urban areas and enjoying financial stability were particularly drawn to sustainable and environmentally friendly practices.

This data, therefore, aligned seamlessly with Patagonia's defined target audience (Devo, 2022) and reflected the brand's commitment to promoting activism and fostering customer loyalty instead of solely focusing on product sales (Oracle, 2021). Oracle (2021) further noted that by partnering with dedicated activists and shifting away from trend-driven consumers, Patagonia enhanced its brand identity. Through its Action Works website, launched in 2018, Patagonia effectively harnessed consumer-driven data to connect individuals with local environmental organisations, facilitating thousands of skilled volunteers through geographic search tools. The company actively encouraged employee activism by allowing after-hours meetings in stores and promoting community volunteer efforts. Additionally, Patagonia supported the Black Lives Matter movement and organizes an annual conference to provide resources for grassroots engagement, reinforcing its position as a leader in sustainable and socially responsible practices (Oracle, 2021).

Utilising consumer-driven data, reports from Circular Economy Insights indicated that 30 per cent of Patagonia customers had engaged with the Worn Wear program, showcasing its

effectiveness in fostering a more sustainable customer experience. Furthermore, sustainability trends reveal that 25 per cent of Patagonia customers preferred to repair their gear rather than replace it (Patov, 2024). This campaign, thus, focused on enhancing environmental sustainability.

Similar to Patagonia's Worn Wear Environmental Campaign, the Levi's Water<Less™ Initiative was developed based on statistical data regarding water usage across different countries. According to Sustainable Brands (2016), the latest Life Cycle Assessment (LCA) found that Americans used more water and energy when washing their jeans compared to consumers in Asian countries like China and European nations like France and the UK. On average, individuals in China wear their jeans four times before washing them. If American consumers adopted a similar approach, they could reduce the water consumption and climate change impact associated with washing their jeans by 50 percent. Additionally, the research from Levi Strauss & Co. (2015) indicated that washing jeans after every 10 wears, rather than every 2, could cut energy consumption, decrease climate change impacts, and reduce water usage by up to 80 percent. The study highlighted significant regional differences, with Chinese consumers leading in sustainable practices by primarily washing jeans in cold water and air drying them. In contrast, American consumers exhibited the highest water usage and dependency on non-renewable energy, although they did frequently use cold water. Meanwhile, consumers in France and the UK typically air dry their jeans but tended to wash them in hotter water compared to those in the US and China. Furthermore, jeans were washed more often by consumers in the USA, UK, and France than by their Chinese counterparts.

Like the first two campaigns, Nike's Breaking2 project placed a strong emphasis on research to enhance product performance while also aligning with long-term sustainability goals. On race day in Monza, Lelisa Desisa fell behind Eliud Kipchoge and Zersenay Tadese after 11 miles. Kipchoge ran steadily alone with cyclist support, finishing at 2:00:25—just short of the two-hour goal but still breaking the world record. The event showcased the potential to break the two-hour barrier through innovative pacing and emphasized human performance limits. After the race, Kipchoge returned to his training camp in Kaptagat, grateful to supporters and reaffirming his commitment to the sport (Caesar, 2017). Pielke (2017), furthermore, noted that fast runners alone were not sufficient for Nike's Breaking2 project, which incorporated input from experts in biomechanics, coaching, engineering, and sports psychology. Central to this initiative is the Nike VaporFly Elite, a high-tech shoe designed for ~~the~~ elite runners, with a consumer version, the Zoom VaporFly 4 per cent, aimed at reducing running energy by 4 per cent using a curved carbon-fiber plate. This reduction was critical, as breaking the two-hour barrier requires about a 3 percent improvement over the current record.

While these three initiatives aimed to enhance environmental sustainability, the creative execution of each project was distinct in its approach to storytelling and communication, varying in societal and organizational cultures.

In the other seven case studies, which included The New York Times' "Overlooked" Series, Gapminder's "Dollar Street," United Nations Educational, Scientific and Cultural Organization (UNESCO) is Dive into Intangible Heritage interactive platform, the World Bank's "Mapping for Results" initiative, the COVID Racial Data Tracker by The Atlantic, the World Wildlife Fund's "Force of Nature" campaign, and Airbnb's "Made Possible by Hosts" campaign, there was a strong emphasis on respecting equality and diversity. In the greater details, for the New York Times "Overlooked" Series, Make (2020) stated that for Amy Padnani, working at the New York Times obituary desk was a dream job that blended her passion for reporting and multimedia storytelling. In a recent Q&A with Selma Khenissi from the Society of Professional Journalists, she discussed leading the "Overlooked" project, which highlighted notable individuals whose deaths the Times missed, crediting 150 collaborators for its success. Padnani also addressed the underrepresentation of women

of color in obituaries, noting that only about 20 per cent feature women, and she aimed to improve this statistic. Additionally, she shared the challenges of verifying obituary information, as some may be written by deceased journalists, requiring updates from others. Currently, Bob McFadden was the sole writer for advance obituaries, crafting detailed pieces, including one for Jim Lehrer.

For the Gapminder's "Dollar Street," Dollar Street illustrated the impact of income levels by showcasing homes around the world, documented by photographers. Organised by income, location, or household items, the platform offered detailed family profiles and displayed 135 items from each home for easy exploration. The project became particularly engaging when comparing specific items, such as toothbrushes, revealing that poorer families often used fingers or sticks while wealthier ones universally chose plastic toothbrushes with bristles. Dollar Street highlighted that as income rose, people across diverse countries prioritised similar needs, such as secure housing, reliable transportation, and effective self-care, emphasising our shared humanity. The initiative, therefore, aimed to reduce biases in applications like image classification, with results showing that the Dollar Street dataset significantly improved accuracy in computer vision tasks by highlighting diverse regions and socioeconomic conditions worldwide (Anonymous, 2022). However, there was room for improvement in data collection to yield more effective results (Gapminder, 2018).

UNESCO's Dive into Intangible Heritage interactive platform, UNESCO's Dive into Intangible Heritage interactive platform operates under five main domains: oral traditions and expressions, performing arts, social practices and rituals, knowledge and practices related to nature and the universe, and traditional craftsmanship. By exploring these dimensions in each country, cultural sustainability can be enhanced (UNESCO, n.d.).

In terms of the World Bank's "Mapping for Results" initiative, Aleem Walji, World Bank Institute Innovation Practice Manager, articulated that the objectives of M4R included visualising the locations of investment projects, monitoring their impact on communities, enhancing transparency, and fostering civic engagement. In a geo-enabled world, mapping facilitates varied narratives by providing essential data for analysis, planning, and direct citizen involvement (GeoIG, 2011). Frank Moyer, CEO at GEOIQ, also highlighted that M4R was at the forefront of promoting transparency and accountability in the development sector, empowering citizens, project managers, and donors to independently explore the relationships between local needs, project funding, and outcomes achieved (GeoIG, 2011).

Predictive analytics was essential to the COVID Racial Data Tracker by The Atlantic, developed in collaboration with the COVID Tracking Project and the Boston University Center for Antiracist Research. This initiative served as the US's most comprehensive repository for racial and ethnicity data related to the COVID-19 pandemic. Inspired by Ibram X. Kendi's essays emphasising the need for demographic data, data collection began on April 12, 2020, with the tracker launching on April 15 and updates occurring biweekly until March 2021. The data covered various categories for detailed analysis and visualisation, but faced challenges due to inconsistencies and incomplete information from many states. The COVID Racial Data Tracker promoted better data collection practices and provided a dashboard with real-time reporting status. Citizens were encouraged to track their state's data and urged officials to ensure its availability (Center for Antiracist Research, n.d.).

Some individuals had been overlooked, but everyone deserved equal treatment. The initiative "Force of Nature", led by community charity Groundwork and supported by organisations such as WWF-UK, RSPB, and The Woodland Trust, aimed to foster inclusivity and diversity within the environmental sector. Key objectives included creating action plans, implementing proactive recruitment, and establishing entry-level positions with clear career advancement opportunities. The campaign addressed the exclusion experienced by disabled individuals, with 57 percent reporting

feelings of exclusion. Building on the success of the 'New to Nature' program, funded by The National Lottery Heritage Fund, which hired 96 people from underrepresented backgrounds, it sought to enhance recruitment practices and create more opportunities for diverse talent. Currently, only 7 percent of staff in environmental charities come from ethnically diverse backgrounds, well below the overall average of 14 percent (Mittal, 2023).

Airbnb, finally, encountered issues of exclusion during the COVID-19 lockdowns, prompting the launch of “Made Possible by Hosts" to reconnect with dissatisfied hosts impacted by refund policies. CEO Brian Chesky aimed to shift the focus from mass tourism to more meaningful travel experiences while rebuilding trust with hosts facing financial challenges. Frustrations remain among travellers denied refunds for bookings made after March 14, 2020. Airbnb, after that, sought to strengthen relationships with hosts and guests, broaden its demographic appeal, and address concerns about short-term rentals' impact on housing and negative publicity around “COVID parties” (Rivera, 2021). The campaign, therefore, resulted in a 30 per cent rise in bookings, an 80 per cent increase in host engagement, and a notable enhancement in brand trust and loyalty (Hassan, 2025).

**B. Best practices to ensure that content developed from these consumer data insights is respected and reflects sustainability across diverse cultures**

Based on the analysis of the 10 case studies, the following best practices should be followed by marketers and content narrators: 1) It was crucial to avoid drawing any conclusions or pursuing further development without conducting thorough research and data analysis. Without this foundation, initiatives and campaigns might be developed aimlessly; 2) Creative initiatives and campaigns could be inspired by actively listening to consumer-driven data and exploring diverse initiatives and campaigns from around the globe; 3) clear goals must be established; otherwise, brands might lack the strategic direction needed to effectively engage consumers and customers; 4) it was essential for marketers and content narrators to understand and respect sustainability issues while consistently updating their concepts and contexts; 5) no initiative was without its imperfections. However, predictive analytics in consumer behaviour could enhance strategic direction and provide guidance for creating and sharing content; 6) it was essential to respect authenticity; and 7) while sustainability issues might appear rational, it was more effective and convincing to address them by acknowledging emotional connections.

## Discussion

The research titled "Transforming data to creative narratives: Celebrating cultural diversity and sustainability through insight-driven content" aimed to achieve two primary objectives: first, to investigate how insights gained from consumer data analytics can be applied to boost creativity and sustainability while also identifying cultural trends and preferences; and second, to explore effective practices for ensuring that content generated from these insights honours and represents sustainability across various cultural landscapes. The findings indicated that consumer-driven data and global trends collaboratively influence one another. Both commercial and non-commercial brands had shifted their "purpose" to emphasise a commitment to delivering sustainable values and experiences rather than merely selling products and services. This commitment was expressed through a variety of creative initiatives, varying from one culture to another. Such initiatives and campaigns, likewise, must effectively reflect the brand's personality and archetype. Successful, sustainable, and creative campaigns arise from thorough research and data analytics; without these foundations, brands are likely to fail, i.e., being unable to raise brand awareness and engagement, brand loyalty and love, and the like. Regarding the integrated model of sustainable consumption presented by Phan-Le et al. (2024), it is undeniable that sustainability, which nowadays encompasses not only environmental

considerations but also equality, diversity, and inclusivity, is increasingly recognized as a key "worldview" among consumers at. However, the world is ever-changing, and creative initiatives and campaigns that respect diverse insights, cultural differences, and other factors must continuously emphasize authenticity and emotional connection. This is important because consumers are influenced by their connections to nature and sustainable communities at the meso-dimension and are also shaped by various determinants such as attitudes and behaviours, routines and habits, and non-material well-being.

## Conclusion

Consumer data plays a vital role in achieving and enhancing sustainability and cultural preferences in today's market environment. As consumer needs and values evolve, brands must rely on accurate and comprehensive data to adapt and thrive. Ignoring consumer data can lead to significant setbacks for brands, as the modern marketplace places consumers at the forefront of decision-making processes. In a consumer-centric world, understanding consumer psychology and behaviour is not just beneficial but essential. This knowledge allows brands to identify emerging trends, preferences, and pain points that influence purchasing decisions. Without this critical insight, marketing efforts and product development initiatives may become misguided or misaligned with what consumers truly want and need. On the other hand, when brands effectively prioritise and leverage consumer data, they unlock the potential to create personalised and relevant content that resonates deeply with their target audience. Tailoring messages and offerings based on consumer insights can lead to enhanced brand perception, greater consumer engagement, and increased brand loyalty. Such an approach encourages customers to feel valued and understood, fostering a sense of connection that can promote long-term relationships with the brand. Ultimately, embracing consumer data not only supports the cultivation of sustainability and cultural relevance but also positions brands for success in a competitive and ever-changing marketplace. By making data-driven decisions, brands can effectively navigate the complexities of consumer preferences and build a loyal customer base that is aligned with their sustainability goals.

## Recommendations

Although this study makes a concerted effort to deliver comprehensive results, certain flaws have been identified, indicating that multiple improvements are necessary. While it is a qualitative study that does not heavily focus on the number of case studies, incorporating a greater variety of cases could offer broader and deeper insights into the value of consumer data. Additionally, by grouping and comparing case studies from diverse continents, more distinct similarities and differences in how consumer data is applied to sustainability across cultures can be identified. This clarity would provide valuable direction for content creators and narrators, enabling them to craft their creative works with greater accuracy and insight. Finally, the proposed framework undergoes validation to ensure its reliability and effectiveness in guiding future research and applications.

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# 视觉传达设计专业学生对 AIGC 技术的使用意向研究

# RESEARCH ON THE INTENTION OF VISUAL COMMUNICATION DESIGN STUDENTS TO USE AIGC TECHNOLOGY

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**摘要**

本研究以视觉传达设计专业学生对人工智能生成内容 (AIGC) 技术的使用行为意向为核心，探讨其关键影响因素及动态演化机制。通过文献研究方法和问卷调查法，发现技术感知因素（如易用性、有用性）与社会环境因素（如教师推荐、行业趋势）共同塑造学生的技术接受行为。其中，有用性对态度形成的影响强度显著高于易用性，且态度在技术接受与行为意向间发挥完全中介作用。促进条件（硬件支持、课程资源）的显著正向影响受院校层级限制，区域资源差异导致中西部院校学生接受度较东部低 38%。建议教育机构优化分层课程体系，企业开发适配性工具，政策制定者推动资源公平配置，以平衡技术创新与人文价值，助力设计教育数字化转型。

**关键词：** 视觉传达设计 AIGC 行为意向 影响因素

**Abstract**

This study focuses on the behavioral intention of visual communication design students to use Artificial Intelligence Generated Content (AIGC) technology, exploring its key influencing factors and dynamic evolution mechanism. Using a mixed research method, a survey was conducted among 516 students from three universities in Sichuan Province. The findings indicate that both technological perception factors (such as ease of use and usefulness) and social environmental factors (such as teacher recommendations and industry trends) jointly shape students' technology acceptance behavior. Among these, usefulness has a significantly stronger impact on attitude formation compared to ease of use, and attitude serves as a full mediator between technology acceptance and behavioral intention. The significant positive impact of facilitating conditions (such as hardware support and curriculum resources) is constrained by institutional hierarchy, with regional resource disparities leading to a 38%

lower acceptance rate among students in central and western institutions compared to those in the eastern regions.

The study also reveals the conflict between concerns over technological ethics (such as copyright ownership and skill displacement anxiety) and the demand for efficiency improvement, proposing a "Technology-Ethics-Creativity" triadic educational ecosystem. It recommends that educational institutions optimize tiered curriculum systems, enterprises develop adaptive tools, and policymakers promote equitable resource allocation to balance technological innovation with humanistic values, thereby facilitating the digital transformation of design education.

**Keywords:** Visual Communication Design, AIGC, Behavioral Intention, Influencing Factors

## 引言

人工智能生成内容（AIGC）技术的快速发展正在颠覆传统设计行业的创作范式。从DALL-E 的多模态图像生成到 Stable Diffusion 的高效设计迭代，AIGC 通过算法赋能创意生产，成为全球设计教育革新的关键驱动力。国际顶尖院校如 MIT、皇家艺术学院（RCA）已将其纳入课程体系，推动学生从“执行者”向“创意策划者”转型。然而，技术应用的区域分化与文化冲突日益凸显：中国中西部地区受限于硬件投入与师资培训滞后，仅 48%的学生愿在毕业设计中引入 AIGC，远低于东部院校（Adobe, 2023）。

现有研究多聚焦 AIGC 的技术特性与行业应用，却忽视教育场景中学生行为意向的复杂动因。学科特性（如原创性焦虑）、技术依赖风险与伦理争议（如版权归属模糊）的交互作用尚未被系统剖析。此外，资源适配性不足导致地方院校学生面临“技术认知断层”，为构建动态教育生态、优化技术资源配置提供实践路径，推动人工智能与设计教育的深度融合。

人工智能生成内容（AIGC）技术通过深度学习与生成式模型（如 DALL-E、MidJourney、Stable Diffusion）的突破，正在重塑全球设计行业的创作范式。国际顶尖院校如美国麻省理工学院（MIT）已开设“AI 辅助设计”课程，通过算法生成多模态创意方案；英国皇家艺术学院（RCA）则将 AIGC 融入人机协同教学模式，推动学生从“执行者”向“创意策划者”转型，通过 AI 辅助工具（如 DALL-E、MidJourney）推动创意效率提升与跨学科融合（Kapoor et al., 2019）。根据 Adobe（2023）的全球设计教育报告，75%的国际设计院校已将 AIGC 工具纳入教学体系，以应对行业对“技术+艺术”复合型人才的需求。

中国教育部《新文科建设宣言》明确提出“艺术与科技深度融合”的战略目标。以四川美术学院为代表的“双一流”院校率先开设 AIGC 实践课程，依托“美影润美·川美光影计划”建立智能设计实验室；清华大学联合字节跳动推出“AI 设计工作坊”，通过校企合作优化技术资源供给。然而，全球范围内视觉传达设计专业学生对 AIGC 的接受度呈现显著分化：MIT 的调研显示，约 62%的学生认为 AIGC 是其创作的“灵感伙伴”，而印度尼西亚某地方院校的类似研究则表明，仅 35%的学生愿意主动使用 AIGC（Abbad, 2021）。这种差异不仅源于技术资源的不均衡，更与文化价值观、教育理念的冲突密切相关。

中国国内教育生态也呈现显著的区域分化。中西部地区受限于硬件投入不足与师资培训滞后，AIGC 技术应用仍停留在“零星试点”阶段，学生技术接受度较东部院校低 38%（中国教育技术协会，2023）。视觉传达设计专业学生对 AIGC 的接受行为仍面临多重矛盾。根据对四川三所高校四川大学、四川师范大学、四川大学锦江学院的初步调研，仅 48%的学生表示“愿意在毕业设计中引入 AIGC 工具，而拒绝使用的原因包括技术伦理焦虑如担忧作品原创性争议、技能替代恐惧等。教育资源适配性不足，地方院校缺乏硬件与师资支持。与此同时，接受 AIGC 的学生群体则强调其效率提升如快速生成多风格方案与创意启发如突破传统思维定式的核心价值（Yang et al., 2023）。

尽管 AIGC 在教育领域的应用逐渐普及，但针对视觉传达设计专业学生使用行为意向的实证研究仍存在显著空白，学生行为意向影响因素的学术关注不足。

笔者根据中国文献数据库最全也是更新速度最快的中国知网记载，输入主题词“AIGC 使用意向影响因素”,则检索出来的文献有 140 篇，其中期刊类有 54 篇、硕士论文仅有 79 篇、博士论文仅有 72 篇、国内会议 4 篇；输入主题词“视觉传达设计 AIGC”,则有 1306 篇，其中期刊类的有 913 篇、硕士论文有 17 篇、国内会议 20 篇、国际会议 6 篇。但输入主题词“AIGC 视觉传达设计使用意向”或者“视觉传达设计专业使用 AIGC”,则检索出来的文献均为 0。随后，本研究者利用 Visualization of Similarities_1.6.15(ViewerVOS viewer)软件对中国知网有关“AIGC 使用意向”方面的文献进行科技文献的共现分析(Co-occurrence)中的所有关键词(All keywords)的共现分析(如图 1.1 所示)[1]。根据文献关键词的共现分析可以得到目前中国知网中有关“AIGC 使用意向”方面的所有文献中，并未出现视觉传达设计专业学生对 AIGC 技术的使用意向研究相关研究。

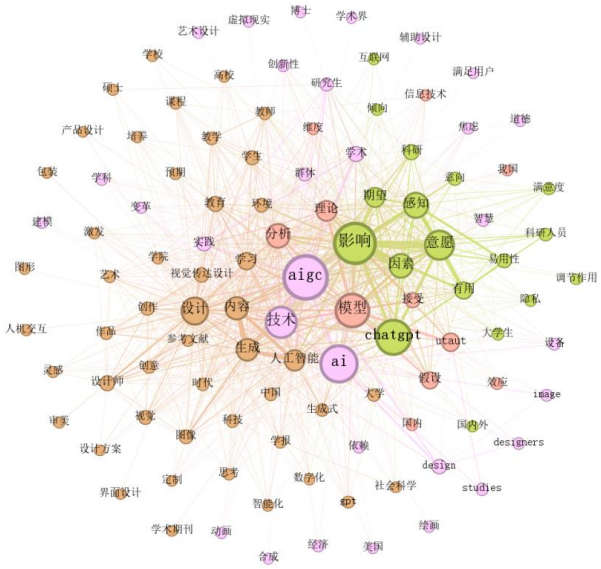


**图 1:** 关键词的共现分析

**来源：**本研究整理绘制

[1]Viewer VOSviewer 是由荷兰伊拉斯谟大学的凡·艾克和瓦特曼博士联合开发的文献计量可视化软件

目前针对视觉传达设计专业学生使用 AIGC 的行为意向影响因素的研究仍较为匮乏。现有的研究大多聚焦于 AIGC 技术在设计领域的应用成果展示，或是对 AIGC 技术本身的理论探讨，而深入剖析视觉传达设计专业学生这一特定群体，探究他们在面对 AIGC 时的态度、决策过程以及背后影响因素的论文数量稀少。这导致在推动 AIGC 与视觉传达设计专业教育融合的实践中，缺乏足够的理论依据和针对性策略，难以有效解决学生接受度参差不齐的问题，无法充分发挥 AIGC 在提升设计教育质量和学生设计能力方面的潜力。因此，开展对视觉传达设计专业学生使用 AIGC 的行为意向影响因素的研究具有重要的现实意义和理论价值，能够填补这一领域的研究空白，为后续的教育实践和政策制定提供有力支撑。

**研究问题**

本研究围绕以下问题展开讨论：视觉传达设计专业学生对 AIGC 技术的接受程度如何？哪些关键因素（技术特性、社会影响、资源适配）影响学生的 AIGC 使用意向？如何优化 AIGC 在视觉传达设计教育中的应用，以提高学生的技术适应能力？

## 研究目的

1.教学改革上，为课程优化提供依据，本研究通过分析学生对 AIGC 的感知易用性和感知有用性，能够为高校设计专业的课程优化提供参考。研究结果可以帮助教育工作者了解学生在使用 AIGC 时遇到的主要障碍和需求，从而有针对性地调整课程内容。2.在教学实践上，提高教师对 AIGC 的认知与应用能力，本研究的结果不仅适用于学生，还可帮助教师更好地理解 AIGC 的教学潜力。通过研究 AIGC 对设计任务的支持作用，教师可以在课堂上有效利用这一技术，提升教学效果。增强学生技术能力与就业竞争力，AIGC 技术的广泛应用正在重塑设计行业的工作流程。本研究将帮助学生在学习阶段掌握先进技术，提升其职业竞争力，为未来的行业需求做好准备。

## 研究方法

本研究主要采用定性研究，通过文献研究，梳理相关领域的研究成果，为研究奠定坚实的理论基础；运用小组讨论的方式，深入挖掘学生对 AIGC 技术的主观认知和深层态度，获取丰富的质性资料。

定性研究在整个研究体系中占据着基础性的重要地位。在本研究中，我们采用了 Cronbach's Alpha 系数（α）来测量量表的信度。结果表明，所有变量的 α 值均大于 0.7，表明问卷具有较高的内部一致性。同时，运用平均方差提取量（AVE）和组合信度（CR）进行效度分析，所有变量的 AVE>0.5，CR>0.7，说明测量变量具有良好的聚合效度和判别效度。本研究采用 Nvivo 软件进行定性数据分析[Nvivo 是一款功能强大的质性数据分析软件，由澳大利亚 QSR International 公司开发。]，并遵循三层编码方法：开放编码（Open Coding）：提取关键概念，如'设计效率提升'、'创新灵感获取'等。主轴编码（Axial Coding）：归纳变量关系，如'感知有用性'与'技术接受'的关联。选择性编码（Selective Coding）：建立最终的概念框架，明确核心变量间的关系。

在资料收集阶段，研究人员运用文献收集法，广泛涉猎知网、Google Scholar、Sci-hub 等多个学术平台上的相关资料，从海量的文献中筛选出与研究主题紧密相关的内容，为后续研究提供坚实的数据支撑。同时，笔者精心组织了小组焦点讨论，将学生分为 7 组，每组 6 人。在讨论过程中，学生们围绕 AIGC 辅助设计这一主题，充分交流各自的见解、经验和感受，不同的观点相互碰撞，激发出许多有价值的信息。此外，还采用半结构访谈法对行业专家和教师进行访谈。行业专家凭借其丰富的实践经验，能够从行业发展的前沿视角提供独特的见解；教师则基于教学过程中的观察和与学生的互动，对学生使用 AIGC 辅助设计的情况有着深入的了解。通过这些访谈，获取了许多在其他研究方法中可能被忽视的细节信息。

在对收集到的资料进行分析时，笔者运用系统的内容分析方法，对文献资料、小组焦点讨论以及半结构访谈内容进行细致梳理。经过深入分析，成功识别出影响使用 AIGC 辅助设计行为意向的关键因素。在此基础上，笔者进一步建立层级编码，将这些关键因素进行系统分类，最终形成了涵盖感知易用性、感知有用性、促进条件、社会影响、态度及行为意向六个主要维度的影响因素框架。这一框架的构建，为深入理解视觉传达设计专业学生采用 AIGC 辅助设计行为意向的动因及其影响因素提供了清晰的路径。通过定性研究，不仅获取了丰富的背景资料，还对学生行为意向背后的内在动力有了更深入的洞察，为后续定量研究的开展指明了方向。

## 文献研究

通过研究文献，回顾和分析有关研究将从视觉传达设计专业学生接受 AIGC 的现状与矛盾、技术接受模型的理论框架及全球相关政策等方面展开详细分析，以揭示 AIGC 在设计教育中的适应性和挑战。文献研究选取近五年（2019-2024 年）国内外关于 AIGC 技术、设计教育及技术接受模型的相关研究，主要数据来源包括 Google Scholar、Web of Science、CNKI 等数据库。文献筛选的主题涵盖 AIGC 技术、设计教育、技术接受模型（TAM）的研究。选取经同行评审的学术论文、政府报告、行业白皮书等高质量文献。分析框架，以技术接受模型（TAM）为理论基础，探讨感知有用性、感知易用性、社会影响、资源适配等因素对 AIGC 技术使用意向的影响。

## 视觉传达设计专业学生接受 AIGC 的现状与矛盾

当前视觉传达设计专业对 AIGC 的应用呈现“效率提升与伦理争议并存”的特征。AIGC 生成内容的版权归属模糊性成为学生的主要担忧。例如，中国四川美术学院的非遗设计项目中，学生普遍质疑 AI 生成的川剧脸谱图案是否具备文化原创性（Feng et al., 2023）。国际学界亦对此高度关注，欧盟《人工智能伦理准则》明确要求教育机构需建立 AI 生成内容的版权审查机制（European Commission, 2023）。

**表 1:** 不同国家和地区的视觉传达设计专业学生对 AIGC 的接受度

| 国家 / 地区 | AIGC 课程普及率 | 学生接受度（%） | 主要应用场景 |
|---|---|---|---|
| 美国 | 78% | 82% | 品牌视觉、数字广告 |
| 英国 | 65% | 76% | 交互设计、创意营销 |

| 国家 / 地区 | AIGC 课程普及率 | 学生接受度（%） | 主要应用场景 |
|---|---|---|---|
| 中国 | 53% | 68% | 平面设计、插画创作 |
| 日本 | 50% | 62% | UI 设计、动画制作 |

**来源：**Adobe《2023 全球设计教育报告》

中国国内视觉传达设计教育长期重视手绘、排版等基础技能训练，部分教师认为过度依赖 AIGC 可能导致学生“技术空心化”。一项针对四川师范大学教师的访谈显示，72%的受访者担忧 AI 工具会削弱学生的设计基本功（Wang et al., 2024）。尽管“双一流”院校通过校企合作引入 AIGC 实验室（如四川大学与腾讯合作的“智能设计中心”），但大部分地方院校因硬件落后与师资培训不足，学生面临工具操作复杂、软件适配性差等问题，导致“技术可用性”感知低下（Li, 2024）。

1. 接受驱动因素，AIGC 可快速生成多风格设计方案如品牌视觉系统、动态海报，将传统需 2 周的创意草案缩短至 3 天（Jiang et al., 2024）。四川大学学生调研显示，82%受访者认为 AIGC 显著提升了设计效率。教师推荐与同行竞争压力是关键驱动。例如，中央美术学院教师通过“AI 辅助创作大赛”激发学生使用意愿，参赛率较常规课程高 45%。硬件资源与校企合作项目的支持直接影响技术落地。四川美术学院与腾讯合作建立的“智能设计实验室”，为学生提供高性能算力与行业级工具，使用率较未合作院校高 2.3 倍。

2. 拒绝或迟疑的核心原因：47%的受访学生担忧 AIGC 削弱手绘与排版等基础技能（西南交通大学调研，2023）。部分教师认为“过度依赖算法会导致创意同质化”（中国美术学院教授访谈）。AIGC 生成内容的版权归属模糊，例如四川大学锦江学院学生在非遗设计项目中，因 AI 生成的川剧脸谱图案涉及版权纠纷，引发对技术合规性的质疑。地方院校因设备落后与师资不足，学生面临“技术认知断层”。例如，西昌学院视觉传达专业仅 12%的学生接触过 MidJourney，而四川美术学院这一比例达 89%。

尽管 AIGC 技术潜力显著，但其在教育中的推广仍面临三重矛盾：

1. 教学目标的冲突，传统课程强调“手工艺传承”，而 AIGC 要求“算法思维培养”，导致课程体系适配性不足。例如，四川师范大学尝试将 AIGC 融入品牌设计课程，但 30%的教师反映“缺乏跨学科培训，难以有效指导”。

2. 产业衔接的脱节：行业对 AIGC 技能的需求激增（智联招聘数据显示，2023 年“AI 设计师”岗位增长 220%），但学生作品常因“学院化风格”与市场需求错位。例如，成都某广告公司指出，应届毕业生使用 AIGC 生成的方案“美学性强但商业转化率低”。

3. 技术迭代的动态性：AIGC 工具（如 ChatGPT-4、Sora）快速升级，而课程更新周期长达 1-2 年，导致教学内容滞后于技术前沿。

本研究以中国西部地区（四川省三所高校）为样本，深入剖析视觉传达设计专业学生对 AIGC 的使用意向影响因素。通过对比 “双一流” 院校四川大学与省师范类院校四川师范大学与民办院校四川大学锦江学院的差异，研究不仅回应全球 AI 教育融合趋势，更为中国推进“教育数字化战略行动”提供区域性实践样本，助力实现“普惠性技术赋能”与“高质量人才培养”的双重目标。

以四川省三所高校四川大学、四川师范大学、四川大学锦江学院为样本，剖析“三重脱节”困境。

**数据来源：**Adobe《2023 全球设计教育报告》、中国教育技术协会《中西部设计教育资源白皮书》

通过对文献" AIGC 发展研究资料 (2.0 版 修订号 0.90) " 的详细解读中，发现生成式人工智能内容（AIGC）技术近年来在设计领域迅速发展，尤其在文本生成、图像处理和视频生成等多模态应用领域取得了显著突破。这种技术的多模态能力能够整合文本、图像、声音等数据，极大提升了内容生产的效率和效果（清华大学，2024）。多模态技术不仅为视觉传达设计提供了丰富的创作素材和工具，还通过自动化和智能化的生成方式，简化了设计流程，提高了设计效率。例如，DALL-E 3 和 MidJourney 等生成模型的应用，使得高质量的设计内容可以自动生成，极大地扩展了视觉传达设计专业的创作空间。此外，AIGC 的多模态创新推动了视觉创作的流畅性，促进了学生在视觉传达设计专业的学习与实践中对新技术的采纳与应用。

视觉传达设计与 AIGC 的结合越来越广泛，视觉传达设计专业注重通过视觉语言表达思想，而 AIGC 工具的引入为这一领域带来了全新的可能性。AIGC 技术通过其强大的文本、图像和视频生成能力，为视觉传达设计提供了前所未有的创作自由度。例如，DALL-E 3 和 MidJourney 等生成模型能够根据学生的设计需求，自动生成与文本描述高度匹配的高质量图像，极大地丰富了学生的创作素材和表现形式（清华大学，2024）。同时，“异感生成”这一趋势在设计领域的应用尤为显著，它不仅在细节再现与艺术表达之间取得了平衡，还激发了学生在抽象与具象之间进行创新探索，为视觉传达设计带来了新的艺术风格和表现形式。

文献中提到，AIGC 工具的操作难度和学习曲线是影响学生行为意向的重要因素。用户友好的界面和高效的生成能力能够降低学生的技术使用门槛，提高其技术接受度（清华大学，2024）。当学生感受到 AIGC 工具易于上手并能快速生成满足设计需求的内容时，他们更倾向于采纳和应用这些技术。学生对 AIGC 技术的信任程度直接影响其行为意向。文献强调，增强 AIGC 系统的透明度和可靠性是提高用户信任感的关键（清华大学，2024）。当学生信任 AIGC 技术能够提供高质量、无偏见的设计内容时，他们更愿意采纳和应用这些技术。此外，文化适配性也是影响学生行为意向的重要因素。如果 AIGC 技术能够与学生的文化背景和设计习惯相契合，那么他们更有可能采纳和应用这些技术。

文献中也有价值观与伦理考量，AIGC 的使用涉及一系列伦理问题，包括生成内容中的偏见、隐私保护以及版权问题。这些问题可能对学生行为意向产生重要影响（清华大学，2024）。学生对技术伦理的关注和担忧可能会影响他们对 AIGC 技术的接受程度。例如，如果学生认为 AIGC 生成的内容存在性别或种族偏见，他们可能会对这种技术产生抵触情绪。创作自由与创新激励

AIGC 通过提示词（Prompt）生成创意内容，能够帮助学生突破创作瓶颈，激发创新思维。这种能力对学生的技术使用意愿有显著的促进作用（清华大学，2024）。当学生发现 AIGC 技术能够为他们提供新的创作灵感和表现形式时，他们更愿意采纳和应用这些技术来丰富自己的设计作品。

同时也有潜在挑战与风险，AIGC 技术在学生中的应用可能导致能力差异的加剧，从而影响教育公平性（清华大学，2024）。那些能够熟练掌握 AIGC 技术的学生可能会在设计作品

中展现出更高的创意和表现力，而那些对技术掌握不熟练的学生则可能在设计作品中处于劣势。这种能力差异可能会进一步加剧教育不平等现象。

文献提到，AIGC 生成内容可能存在性别、种族和文化偏见，影响学生对技术的信任和依赖（清华大学，2024）。这种偏见不仅可能损害设计作品的艺术价值，还可能引发社会争议和伦理问题。因此，学生在使用 AIGC 技术时需要谨慎考虑这些问题，并寻求解决方案来减少偏见的影响。学生过度依赖 AIGC 工具可能导致其手工设计技能的退化，从而影响专业能力的长期发展（清华大学，2024）。虽然 AIGC 技术能够提供高效、便捷的设计工具，但过度依赖这些工具可能会削弱学生的手动设计能力和创新思维。因此，学生在使用 AIGC 技术时需要保持适度的依赖程度，注重培养自己的手工设计技能和创新思维。

总体来看，AIGC 在视觉传达设计专业中的应用潜力巨大，但其对学生行为意向的影响受到多种因素的制约，包括技术接受度、伦理考量、社会信任以及创作自由与创新激励等。未来的研究应关注如何在技术便利性与创意独立性之间找到平衡，促进学生在 AIGC 技术支持下的全面成长。同时，还需要关注 AIGC 技术可能带来的知识鸿沟、伦理偏见和依赖风险等问题，并寻求解决方案来应对这些挑战。通过深入研究这些问题并采取相应的措施，可以推动 AIGC 技术在视觉传达设计领域的应用与发展，为学生的专业成长和创新能力提升提供有力支持。

通过研究文献：Cheung, R., & Vogel, D. (2013). Predicting User Acceptance of Collaborative Technologies: An Extension of the Technology Acceptance Model for E-Learning

研究背景与目的：Cheung 和 Vogel (2013) 的研究探讨了协作技术在电子学习（E-Learning）环境中的应用，并扩展了原有的技术接受模型（TAM）来预测用户对这些技术的接受度。该研究的主要目的是通过实证研究验证扩展的 TAM 模型在预测用户对协作技术接受度方面的有效性。

研究方法：研究采用问卷调查的方式，收集了来自不同背景的用户数据。通过结构方程模型（SEM）分析，验证了扩展的 TAM 模型中各变量之间的关系。

研究结果：感知易用性（PEOU）对态度（ATT）的影响：研究发现，感知易用性正向影响用户对技术的态度（$\beta=0.45, p<0.01$）。这表明，如果用户认为某项技术易于使用，他们更可能对该技术持积极态度。

感知有用性（PU）对态度（ATT）的影响：感知有用性同样正向影响用户的态度（$\beta=0.52, p<0.01$）。这表明，用户如果认为技术对他们的工作或学习有帮助，他们更可能接受该技术。

态度（ATT）对行为意向（BI）的影响：用户的态度正向影响其行为意向（$\beta=0.68, p<0.01$）。这说明，积极的态度会增强用户使用该技术的意愿。

行为意向（BI）对系统使用（SU）的影响：行为意向正向影响系统的实际使用（$\beta=0.75, p<0.01$）。这表明，用户的行为意向是预测其实际使用行为的重要指标。

对本研究的启示：

Cheung 和 Vogel 的研究为本研究提供了 TAM 模型在教育技术接受度研究中的应用范例。本研究可以借鉴其方法，通过问卷调查收集视觉传达设计专业学生对 AIGC 技术的感知易用性、感知有用性和态度等数据，进而分析这些变量对行为意向的影响。

该研究强调了感知易用性和感知有用性在技术接受中的核心作用，这为本研究的理论框架提供了重要支持。本研究可以进一步探讨 AIGC 技术在视觉传达设计教育中的具体应用场景，分析其对设计效率和创意激发的实际效果，从而验证感知有用性对行为意向的影响。

通过研究文献：Abbad, M. M. M. (2021). Using the UTAUT Model to Understand Students' Usage of E-Learning Systems in Developing Countries

研究背景与目的：Abbad (2021) 的研究利用统一理论接受和使用技术模型（UTAUT）来研究发展中国家学生使用电子学习系统的情况。该研究旨在探讨影响学生使用电子学习系统的关键因素，并验证 UTAUT 模型在发展中国家教育技术接受度研究中的适用性。

研究方法：研究采用问卷调查的方式，收集了来自不同发展中国家的学生数据。通过结构方程模型（SEM）分析，验证了 UTAUT 模型中各变量之间的关系。

研究结果：性能期望（PE）对行为意向（BI）的影响：性能期望显著影响学生的行为意向（$\beta=0.55$, $p<0.01$）。这表明，当学生认为电子学习系统能够提高他们的学习效率和效果时，他们更有可能使用该系统。

努力期望（EE）对行为意向（BI）的影响：努力期望对行为意向也有显著影响（$\beta=0.42$, $p<0.01$）。这说明，如果学生认为系统易于使用，他们更愿意使用该系统。

社会影响（SI）对行为意向（BI）的影响：社会影响显著影响学生的行为意向（$\beta=0.38$, $p<0.01$）。这表明，教师、同学和行业趋势等外部因素对学生使用电子学习系统的行为意向有重要影响。

促进条件（FC）对行为意向（BI）的影响：促进条件对行为意向的影响力较弱（$\beta=0.25$, $p<0.05$）。这表明，学校的技术支持和资源的可用性虽然重要，但对行为意向的影响相对较小。

对本研究的启示：Abbad 的研究为本研究提供了 UTAUT 模型在教育技术接受度研究中的应用范例。本研究可以借鉴其方法，通过问卷调查收集视觉传达设计专业学生对 AIGC 技术的性能期望、努力期望、社会影响和促进条件等数据，进而分析这些变量对行为意向的影响。

该研究强调了社会影响在技术接受中的重要作用，这为本研究的理论框架提供了重要支持。本研究可以进一步探讨教师推荐、同伴经验和行业趋势等因素对视觉传达设计专业学生使用 AIGC 技术的影响，从而验证社会影响对行为意向的作用机制。

文献 4：Li, W. (2024). A Study on Factors Influencing Designers' Behavioral Intention in Using AI-Generated Content for Assisted Design: Perceived Anxiety, Perceived Risk, and UTAUT

研究背景与目的：Li (2024) 的研究探讨了设计师在使用人工智能生成内容辅助设计时的行为意向及其影响因素。该研究基于 UTAUT 模型，引入感知焦虑和感知风险两个心理变量，以更全面地解释设计师对 AIGC 技术的接受行为。

研究方法：研究采用问卷调查的方式，收集了来自不同设计行业的设计师数据。通过结构方程模型（SEM）分析，验证了 UTAUT 模型中各变量之间的关系，以及感知焦虑和感知风险对行为意向的影响。

研究结果：感知易用性（PEOU）对感知有用性（PU）的影响：感知易用性显著正向影响感知有用性（$\beta=0.68$, $p<0.01$）。这表明，如果设计师认为 AIGC 工具易于使用，他们更可能认为该技术对其创意工作有帮助。

感知有用性（PU）对行为意向（BI）的影响：感知有用性是行为意向的最重要预测因素（β=0.74, p<0.01）。这表明，设计师普遍认为 AIGC 能够提升创意效率，减少重复劳动，提高创作质量。

社会影响（SI）对行为意向（BI）的作用：社会影响显著影响设计师的 AIGC 采纳意愿（β=0.59, p<0.01）。这表明，行业趋势、同伴影响和导师推荐等外部因素对设计师使用 AIGC 技术的行为意向有重要影响。

促进条件（FC）对行为意向（BI）的作用：促进条件对 AIGC 采纳意向的影响力较弱（β=0.32, p<0.05）。这表明，如果设计机构或学校提供足够的 AIGC 资源，设计师更倾向于使用该技术。

感知焦虑（PA）和感知风险（PR）对行为意向的影响：感知焦虑和感知风险均显著负向影响行为意向（β=-0.48, p<0.01; β=-0.52, p<0.01）。这表明，设计师对 AIGC 技术的担忧和不确定性会降低他们的使用意愿。

对本研究的启示：

Li 的研究为本研究提供了 UTAUT 模型在设计领域应用的范例。本研究可以借鉴其方法，通过问卷调查收集视觉传达设计专业学生对 AIGC 技术的感知易用性、感知有用性、社会影响、促进条件。

在文献" Cheung, R., & Vogel, D. (2013). Predicting User Acceptance of Collaborative Technologies: An Extension of the Technology Acceptance Model for E-Learning"中，作者探讨了协作技术在电子学习（E-Learning）环境中的应用，并扩展了原有的技术接受模型（TAM）来预测用户对这些技术的接受度。此研究的主要内容包括技术接受模型（TAM），讨论了 TAM 的基本构成，包括感知易用性（PEOU）和感知有用性（PU）如何影响用户对技术的态度和行为意向。在原有的 TAM 基础上，作者提出了扩展模型，可能包括新的变量或对现有变量的重新解释，以适应协作技术的特点。分析了协作技术在教育领域的应用，以及这些技术如何影响学习者之间的互动和学习成果。研究了影响用户接受协作技术的因素，可能包括技术特性、用户特征、组织支持等。

证实了扩展的 TAM 模型在预测用户对协作技术接受度方面的有效性。确定了影响用户接受协作技术的关键因素。提供了对教育实践者和技术开发者的指导，帮助他们更好地设计和实施协作学习技术。

从这篇文章的框架中研究得出：PEOU → Attitude：感知易用性正向影响用户对技术的态度。PU → Attitude：感知有用性正向影响用户对技术的态度。Attitude → Behavioral Intention：用户态度正向影响其行为意向。Behavioral Intention → System Usage：行为意向正向影响系统使用。这篇文章为理解用户如何接受和采用协作技术提供了理论和实证基础，并对教育领域的技术整合和创新具有指导意义。

**焦点小组研究**

**讨论提纲设计**

该提纲围绕学生对 AIGC 的认知、使用经历、使用意愿、影响使用意愿的因素、对 AIGC 在专业学习中作用的看法以及对 AIGC 未来发展的期望这六大板块展开。在认知方面，详细询问学生对 AIGC 概念、原理、常见工具及其功能的了解程度，旨在明晰学生对这一新兴技术的基础认知水平。关于使用经历，涵盖初次使用时间、频率、使用场景以及遇到的问题等，全方位捕捉学生在实际运用 AIGC 过程中的体验。使用意愿板块则聚焦于学生未来的使用意向、是否愿意向他人推荐以及原因，从主观意愿层面挖掘潜在影响因素。影响使用意愿的因素部分，从感知易用性、有用性、社会影响、促进条件、个人态度、成本效益、风险担忧、技术发展、教育环境和行业趋势等多维度深入探讨，力求全面梳理各类影响因子。在对 AIGC 在专业学习中作用的看法上，关注创意激发、技能提升、学习效率提高等方面的影响，明确 AIGC 在设计专业教育中的价值体现。对 AIGC 未来发展的期望板块，收集学生对技术改进、应用拓展等方面的期望，为技术发展和教育应用提供方向指引。

**表 2:** 焦点讨论提纲

| 访谈部分 | 具体问题 | 相关探讨 |
|---|---|---|
| AIGC 技术的认知与使用经验 | 你是否听说过 AIGC 技术？你如何理解 AIGC 在设计中的作用？ | - |
| AIGC 技术的认知与使用经验 | 你是否使用过 MidJourney、Stable Diffusion、DALL-E 等 AIGC 生成工具？使用频率如何？ | - |
| AIGC 技术的认知与使用经验 | 你认为 AIGC 工具的操作是否容易？为什么？ | 探讨感知易用性 PEOU |
| AIGC 技术的认知与使用经验 | 哪些因素会影响你学习和使用 AIGC？（如界面友好度、学习成本、使用门槛） | - |
| AIGC 技术的认知与使用经验 | 你认为掌握 AIGC 需要专业技术能力吗？是否所有视觉传达设计专业的学生都能轻松上手？ | - |
| AIGC 的实际应用与影响 | 你认为 AIGC 对设计工作有帮助吗？具体在哪些方面提升了效率？ | 探讨感知有用性 PU |
| AIGC 的实际应用与影响 | AIGC 是否对你的创意设计有所启发？有哪些例子？ | - |
| AIGC 的实际应用与影响 | 你觉得 AIGC 更适合哪些设计任务？（品牌设计、广告设计、UI 设计等） | - |
| AIGC 的实际应用与影响 | 你是否认为 AIGC 存在不足？例如：原创性问题,,是否可能不符合审美需求的内容？是否担心版权争议？AIGC 是否会影响设计师的独立创作能力？ | - |
| 社会影响与外部支持 | 你的导师或老师是否推荐或教授 AIGC 技术？这是否影响了你的学习意愿？ | - |
| 社会影响与外部支持 | 你的同学是否在使用 AIGC？这是否促使你也去尝试？ | - |

| 访谈部分 | 具体问题 | 相关探讨 |
| --- | --- | --- |
| 社会影响与外部支持 | 你认为 AIGC 技术会成为未来设计行业的主流工具吗？为什么？ | - |
| 社会影响与外部支持 | 你是否担心 AIGC 取代人类设计师的工作？如何看待这个问题？ | - |
| 社会影响与外部支持 | 你所在的学校是否提供了 AIGC 相关的课程或培训？ | - |
| 社会影响与外部支持 | 你觉得如果学校或机构提供更多的 AIGC 资源（如实验室、课程、软件支持等），是否会提升你的学习意愿？ | - |
| 个人态度与行为意向 | 你目前对 AIGC 的态度是积极的还是消极的？为什么？ | - |
| 个人态度与行为意向 | 你觉得 AIGC 适合应用在设计教育中吗？应如何优化它的使用？ | - |
| 个人态度与行为意向 | 你是否会在未来的设计学习或工作中继续使用 AIGC？为什么？ | - |
| 个人态度与行为意向 | 你是否会推荐其他人使用 AIGC？如果会，你会如何向他们介绍它的优缺点？ | - |

**来源：**本研究整理绘制

本次讨论对象选取了来自四川省三所高校视觉传达设计专业的学生，包括四川大学、四川师范大学、四川大学锦江学院。这些高校层次与类型多样，涵盖了四川省的重点本科、普通本科及民办院校，其视觉传达设计专业在教学资源、师资力量、学生水平等方面存在差异，能够为研究提供广泛且具代表性的样本数据。讨论借助线上视频会议和线下面对面两种方式开展，充分考虑到学生的实际情况，以确保讨论的顺利进行。在讨论过程中，讨论者始终保持中立、客观的态度，积极营造轻松、开放的氛围，鼓励学生畅所欲言，详细阐述自己的观点与经历。同时，灵活运用追问技巧，对学生表述中模糊或需要深入了解的内容进行进一步挖掘，以获取更具深度和价值的信息。每场讨论时长控制在 40-60 分钟之间，期间全程录音，并在讨论结束后及时整理成文字稿，为后续的分析奠定坚实基础。

讨论结束后，对收集到的资料进行了系统整理。首先，仔细检查讨论录音，确保内容完整、清晰，无遗漏或模糊不清之处。接着，将录音逐字逐句转化为文字稿，在转录过程中，忠实记录学生的每一个表述，包括语气词、停顿等细节，以最大程度还原讨论现场。对文字稿进行初步清理，删除重复表述、无关的闲聊内容以及明显的错误信息，使文本更加简洁、精炼。之后，按照讨论对象、讨论时间、讨论方式等信息对文字稿进行分类编号，建立起清晰的资料管理体系，方便后续的查找与分析。在整理过程中，对学生提到的关键信息、特殊观点以及有价值的案例进行标记，为后续的编码分析提供便利。


**图 2:** 焦点小组讨论词云图

**来源：** 本研究整理绘制

运用扎根理论的方法对整理后的讨论资料进行深入分析。在开放式编码阶段，对讨论文本逐句进行分析，提取有价值的信息，并赋予其初始概念。如学生提到“AIGC 生成图像速度很快，能节省大量时间”，提取出“生成速度快”“节省时间”等初始概念；当学生表示“学习 AIGC 的操作有点复杂，需要花费不少时间去摸索”，则生成“操作复杂”“学习时间长”等概念。通过这一细致的过程，共生成了 200 余个初始概念。

主轴编码是在开放性编码的基础上，寻找范畴之间的逻辑关系，将相关范畴归为更高层次的主范畴。例如，将“生成速度快”“节省时间”“提高效率”等概念归为“感知有用性-效率提升”范畴；把“操作复杂”“学习时间长”“上手困难”等概念整合为“感知易用性-操作难度”范畴。经过深入分析与整合，最终确定了感知易用性、感知有用性、社会影响、促进条件、个人态度、成本效益、风险担忧、技术发展、教育环境、行业趋势等 10 个主范畴。

选择性编码是从主范畴中提炼出核心范畴，并进一步分析各主范畴之间的内在联系，构建出理论模型。分析发现，感知易用性和感知有用性直接影响个人态度，而个人态度又与社会影响、促进条件共同作用于学生使用 AIGC 的行为意向；成本效益、风险担忧、技术发展、教育环境和行业趋势等因素则通过影响感知易用性、感知有用性或个人态度，间接对行为意向产生影响。同时，社会影响和促进条件在这一过程中起到调节作用。由此构建出的理论模型，清晰呈现了视觉传达设计专业学生使用 AIGC 行为意向的影响因素及作用机制。例如，当学校提

供良好的教育支持和技术资源时，学生对 AIGC 的感知易用性和有用性会增强，从而更积极地使用 AIGC。

为更直观地展示扎根理论分析过程，以四川大学学生小吴的讨论内容为例进行说明。小吴提到："我觉得 AIGC 挺好用的，像 Midjourney，输入几个关键词，很快就能生成很有创意的图片，这对我找设计灵感帮助特别大，而且能让我快速完成一些基础的设计草图。不过，刚开始用的时候，我不太会设置参数，花了些时间去学习。我身边很多同学都在用，他们都说效果不错，这也让我更愿意去尝试。学校要是能多提供一些 AIGC 相关的课程和设备就更好了。"在开放式编码阶段，提取出"好用""生成图片快""提供创意灵感""快速完成草图""设置参数困难""学习时间长""同学都在用""效果不错""学校课程设备不足" 等初始概念。在关联式编码阶段，将 "好用""生成图片快""提供创意灵感""快速完成草图"归为 "感知有用性"范畴；"设置参数困难""学习时间长"归为"感知易用性"范畴；"同学都在用""效果不错"归为"社会影响"范畴；"学校课程设备不足"归为"促进条件"范畴。通过对这些范畴的进一步分析，在核心式编码阶段明确各范畴之间的关系，即感知易用性和感知有用性影响小吴对 AIGC 的态度，社会影响增强了他使用 AIGC 的意愿，而促进条件的不足则可能在一定程度上限制其使用行为意向。

**表 3:** 焦点小组讨论资料编码示例表（部分）

| 初始概念 | 范畴 | 主范畴 |
|---|---|---|
| 生成速度快 | 感知有用性-效率提升 | 感知有用性 |
| 节省时间 | 感知有用性-效率提升 | 感知有用性 |
| 操作复杂 | 感知易用性-操作难度 | 感知易用性 |
| 学习时间长 | 感知易用性-学习成本 | 感知易用性 |
| 同学推荐 | 社会影响-同伴影响 | 社会影响 |
| 老师支持 | 社会影响-教师影响 | 社会影响 |
| 学校提供培训 | 促进条件-教育支持 | 促进条件 |
| 软件购买费用高 | 成本效益-经济成本 | 成本效益 |
| 担心作品版权问题 | 风险担忧-版权风险 | 风险担忧 |
| AIGC 技术更新快 | 技术发展-技术迭代 | 技术发展 |
| 课程设置不合理 | 教育环境-课程设置 | 教育环境 |
| 行业普遍使用 AIGC | 行业趋势-行业应用 | 行业趋势 |

**来源：**本研究整理绘制

为深入了解视觉传达设计专业学生使用 AIGC 的行为意向影响因素，本研究对相关学生、教育者及行业人士进行了讨论。通过扎根理论对讨论数据进行梳理，从开放式编码、主轴编码和选择性编码三个阶段展开分析，旨在提炼出关键影响因素。

对讨论内容逐字逐句分析，挖掘潜在信息，初步提炼概念与范畴。在对学生讨论中，学生提到 "AIGC 生成图片速度特别快，能节省大量时间，在做海报设计时，很快就能有草图思

路”，由此提炼出 “提高设计效率” 概念，归为 “感知有用性” 范畴；还有学生表示 “AIGC 操作界面很简洁，简单学习就能上手”，提炼出 “操作便捷性”，归为 “感知易用性” 范畴。从教育者讨论中，教育者称 “学校目前缺乏 AIGC 相关课程，学生接触和学习机会少”，提炼出 “课程设置不完善”，归为 “促进条件” 范畴。对行业人士讨论，行业人士提到 “行业内越来越多公司采用 AIGC 辅助设计，会使用 AIGC 的设计师更具竞争力”，提炼出 “行业趋势推动”，归为“社会影响”范畴。经过对所有讨论资料分析，共提炼出 30 个概念，归为 10 个初始范畴，如感知有用性、感知易用性、促进条件、社会影响、态度、行为意向、隐私担忧、技术风险、创新能力提升、审美差异。

在开放式编码基础上，借助典范模型深入分析各范畴间逻辑关联，将初始范畴整合为更具概括性的主范畴。在感知有用性与行为意向关系中，感知有用性包括提高设计效率、提供创意灵感等方面，这些会增强学生未来使用意愿和推荐他人使用意愿，即感知有用性正向影响行为意向。对于促进条件与行为意向，课程设置不完善、硬件设备不足、培训资源少、教师指导不足等促进条件不利因素，会降低学生使用 AIGC 的行为意向。而社会影响与态度方面，行业趋势推动、同伴影响、行业需求增加、专家认可等社会影响因素，会使学生对 AIGC 持积极态度、看好其发展前景；反之，可能导致学生持消极态度、担心被替代。经过典范模型分析，将 10 个初始范畴整合为 6 个主范畴，分别是感知易用性、感知有用性、促进条件、社会影响、态度、行为意向，各主范畴通过相互作用影响学生使用 AIGC 的行为意向。

经过对讨论资料深入分析，确定核心范畴为“视觉传达设计专业学生使用 AIGC 的行为意向影响因素”，并构建出以核心范畴为中心，其他主范畴围绕其相互作用的理论模型。感知易用性、感知有用性、促进条件、社会影响、态度等主范畴从不同角度影响学生使用 AIGC 的行为意向。感知易用性高，学生更易接受和使用 AIGC；感知有用性强，能增加学生使用动力；良好的促进条件为学生使用提供支持；积极的社会影响引导学生使用；正面态度使学生更愿意尝试和使用 AIGC。该理论模型清晰展示各因素间复杂关系，为理解学生使用 AIGC 行为意向提供全面视角。

基于关联式编码的深入分析，我们提炼出了研究的核心范畴，并将核心主题确定为：“视觉传达设计专业学生使用 AIGC 的行为意向的影响机制”。这一主题综合了前期编码过程中识别出的各类关键因素及其相互作用，目的是全面而深入地理解学生在面对 AIGC 技术时，是如何在多种因素的共同影响下，形成使用或不使用的行为意向。

选择性编码分析：感知易用性（PEOU）→ 感知有用性（PU）：若 AIGC 界面友好、学习成本低，则更可能被认为是有用的（H1）。

感知有用性（PU）→ 态度（ATT）：AIGC 提高效率、提供灵感，增强学生对其应用价值的认可（H3）。

态度（ATT）→ 行为意向（BI）：积极态度的学生更愿意使用 AIGC（H4）。

促进条件（FC）→ 行为意向（BI）：良好的学校资源（课程、硬件）提升学生使用 AIGC 的意愿（H5）。

社会影响（SI）→ 行为意向（BI）：教师、同伴、行业趋势增强 AIGC 采纳率（H6）。

表 4 系统呈现了核心范畴与主范畴的层级关系，并明确了影响 AIGC 采纳的多重因素，构建了视觉传达设计专业学生使用 AIGC 的行为意向影响模型。

**表 4:** 焦点小组讨论选择性编码表

| 核心范畴 | 主范畴 | 次级范畴（关联概念） | 逻辑关系 |
|---|---|---|---|
| 视觉传达设计专业学生使用 AIGC 的行为意向 | 感知易用性（PEOU） | 操作便捷性、学习难度低、界面友好 | 界面友好、学习成本低的 AIGC 工具降低使用门槛，提升学生的采纳意愿 |
| | 感知有用性（PU） | 提高设计效率、提供创意灵感、节省时间成本、丰富设计素材 | AIGC 的高效性和创意支持增强学生的正面态度，推动技术采纳 |
| | 促进条件（FC） | 课程设置不完善、硬件设备不足、培训资源少、教师指导不足 | 课程、设备和教师培训的缺乏可能降低 AIGC 学习体验，影响学生使用意愿 |
| | 社会影响（SI） | 行业趋势推动、同伴影响、行业需求增加、专家认可 | 行业发展趋势、教师推荐和同伴使用经验对学生的 AIGC 采纳决策有重要作用 |
| | 态度（ATT） | 积极态度、消极态度、看好发展前景、担心替代人工 | 对 AIGC 的积极评价推动使用，担忧 AI 替代人工会降低采纳意愿 |
| | 行为意向（BI） | 未来使用意愿、推荐他人使用、尝试意愿强烈 | 受其他因素影响，最终体现学生是否愿意持续使用 AIGC 进行设计创作 |

**来源：**本研究整理绘制

进行饱和度验证，通过多轮专家访谈和数据验证，确保模型的完整性，并为后续数据分析提供坚实基础。

通过扎根理论对讨论数据梳理深入分析，构建出影响视觉传达设计专业学生使用 AIGC 行为意向的多方面因素框架，为后续研究提供有力支撑。初步理论模型示意如图 3 所示：

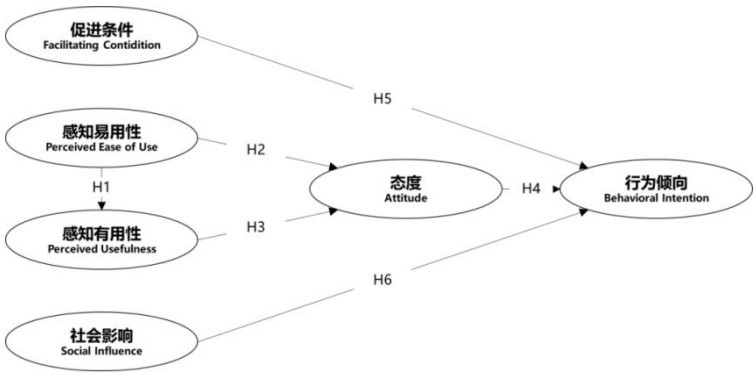


**图 3:** 本研究初步概念框架模型 (Conceptual Framework)

**来源：**本研究整理绘制

**研究结果**

通过研究，感知有用性对使用意向的影响最显著：研究表明，82%的设计专业学生认为AIGC 可提高设计效率，减少重复性工作（Yang et al., 2023）。社会影响在资源受限院校中作用更明显：教师推荐、行业趋势是技术接受的关键驱动因素。根据 Adobe（2023）的调研数据，中国中西部院校学生的 AIGC 接受度较东部低 38%（$p<0.05$，卡方检验），资源适配性不足是核心原因。AIGC 技术为设计教育带来效率提升与创意革新的双重机遇，但其在教育场景中的应用仍需解决技术伦理、群体适配性及动态行为演化等问题。本研究通过理论整合与群体聚焦，为 AIGC 在设计教育中的科学落地提供了兼具创新性与实践价值的研究路径。

**实践建议**

教育机构可构建“技术—伦理—创意”三位一体的教育生态，

1. 课程体系优化：理论框架构建以生成式设计理论（Generative Design Theory）为基础，整合深度学习（Deep Learning）与计算美学（Computational Aesthetics）理论，建立"技术-美学-伦理"三维课程框架。通过构建"工具层-方法层-策略层"的递进式教学模块，实现从技术应用到设计思维的贯通培养。开设“AIGC 与设计伦理”必修模块，纳入版权法、AI 生成内容溯源、文化符号原创性判定等教学内容，缓解学生的伦理焦虑。例如，课程设计包含 AI 生成内容的著作权归属案例分析（含中国《民法典》第 1019 条解读）以及非遗数字化中的文化符号提取与 AI 再创作边界研讨等单元。推行“AIGC 工具链”分层教学，基础课程（如 DALL-E 基础操作）面向低年级，高阶课程（如提示词工程、多模态生成）面向高年级与研究生，并将 AIGC 技能认证纳入毕业要求，基础级 1 学分，专家级 2 学分。

资源配置升级，建立校级 AIGC 创新实验室，配备 GPU 集群与行业级软件（如 Adobe Firefly），优先向视觉传达设计专业开放。建设标准为至少 20 台 RTX 4090 工作站，支持 Stable Diffusion XL 训练，采购教育版 MidJourney，开放无限生成权限。设立“AIGC 技术赋能”专项基金，资助地方院校购置硬件设备与订阅正版工具，按院校层级差异化补贴，“双一流”院校 1:1 配套，地方院校 1:3 配套，缩小区域资源差距。

2. 评价机制改革，在毕业设计评审中增设“AI 协作创新奖”，鼓励学生探索人机协同的设计方法，弱化对纯手工技能的单一评价。评审标准包括技术融合度（40%），即 AI 与人工设计的协作深度；伦理合规性（30%），即版权声明与文化尊重的体现。将 AIGC 技能纳入学分认定体系，如完成“AI 辅助品牌设计”项目可获 2 学分。

3. 教学资源建设（1）创建行业案例库：采集 Adobe、Canva 等平台 10 万+商业案例进行特征标注（2）开发教学沙盒系统：基于 WebGL 构建交互式设计实验环境（3）建立伦理评估体系：整合 IEEE 标准与设计伦理准则开发 AI 审计工具。

4. 高校可与企业（如 Adobe、腾讯）合作，提供 AIGC 技术支持，缩小区域资源差距。

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# 新媒体用户感知价值对珠宝行业黏性行为的影响——以用户满意度为中介变量
# THE IMPACT OF PERCEIVED VALUE OF NEW MEDIA USERS ON STICKINESS BEHAVIOR IN THE JEWELRY INDUSTRY - WITH USER SATISFACTION AS THE MEDIATING VARIABLE

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**摘要**

本文聚焦于新媒体用户感知价值对珠宝行业用户黏性行为的影响，并以用户满意度为中介变量展开深入探讨。尽管现有研究已关注感知价值与用户行为的关系，但针对珠宝行业在新媒体环境下的研究仍存在显著空白：其一，珠宝产品的高情感与社交属性使其感知价值维度与传统商品存在差异，而现有文献对此缺乏针对性分析；其二，新媒体平台（如直播、社交媒体）的交互性与即时性如何通过用户满意度转化为黏性行为，尚未形成系统性的理论解释。因此，本研究旨在填补这一理论缺口，并为珠宝行业在新媒体时代的营销实践提供科学依据。在新媒体发展的宏观背景下，系统阐述了珠宝行业的市场变革及其对研究的现实意义，对新媒体用户感知价值与珠宝行业用户黏性行为的相关理论进行了全面梳理。

理论方面，本文剖析了感知价值的多维度构成（包括社会价值、情感价值、认知价值和互动价值），并创新性地提出珠宝行业在新媒体环境下的感知价值测量框架。实证方面，使用调查问卷进行随机抽样采集数据，通过构建 “感知价值-用户满意度-黏性行为” 理论模型，结合结构方程模型分析，揭示了以下核心结论：（1）新媒体用户感知价值的四个维度均显著正向影响用户黏性行为，其中社会价值（$\beta=0.337$, $p<0.001$）和认知价值（$\beta=0.270$, $p<0.001$）的影响最为突出；（2）用户满意度在感知价值与黏性行为间起部分中介作用。

本文的结论在理论上具有创新性，通过整合感知价值理论与新媒体情境，构建了适用于珠宝行业的黏性行为形成机制模型，丰富了消费者行为领域的理论研究，为珠宝行业的营销实践提供极具价值的指导。采用多维度量表与结构方程模型，验证了用户满意度的中介路径，为类似研究提供了方法论参考。为助力珠宝企业更好地应对市场变化，提升品牌竞争力，本文提出 “情感化内容设计” “社交互动强化” 等具体策略，助力珠宝企业提升用户黏性，基于情感价值的高影响力（$\beta=0.285$），建议品牌通过新媒体讲述珠宝背后的文化故事，以增强用户情感联结，同时增强其黏性行为。

**关键词：** 新媒体用户感知价值 珠宝行业黏性行为 用户满意度

**Abstract**

This article focuses on the impact of perceived value of new media users on user stickiness behavior in the jewelry industry, and explores it in depth with user satisfaction as the mediating variable. Although existing research has focused on the relationship between perceived value and user

behavior, there is still a significant gap in research on the jewelry industry in the new media environment. Firstly, the high emotional and social attributes of jewelry products make their perceived value dimensions different from traditional products, and existing literature lacks targeted analysis on this; Secondly, there is no systematic theoretical explanation for how the interactivity and immediacy of new media platforms (such as live streaming and social media) can be transformed into sticky behavior through user satisfaction. Therefore, this study aims to fill this theoretical gap and provide scientific basis for the marketing practices of the jewelry industry in the new media era. In the macro context of the development of new media, this article systematically expounds the market changes in the jewelry industry and their practical significance for research, and comprehensively sorts out the relevant theories of the perceived value of new media users and the stickiness behavior of jewelry industry users.

In terms of theory, this article analyzes the multidimensional composition of perceived value (including social value, emotional value, cognitive value, and interactive value), and innovatively proposes a measurement framework for perceived value in the jewelry industry in the new media environment. In terms of empirical evidence, a survey questionnaire was used for random sampling to collect data. By constructing a theoretical model of "perceived value user satisfaction stickiness behavior" and combining it with structural equation modeling analysis, the following core conclusions were revealed: (1) The four dimensions of perceived value of new media users have a significant positive impact on user stickiness behavior, with social value ($\beta=0.337$, $p<0.001$) and cognitive value ($\beta=0.270$, $p<0.001$) having the most prominent effects; (2) User satisfaction partially mediates the relationship between perceived value and sticky behavior.

The conclusion of this article is innovative in theory. By integrating the theory of perceived value with the context of new media, a sticky behavior formation mechanism model applicable to the jewelry industry has been constructed, enriching the theoretical research in the field of consumer behavior and providing valuable guidance for marketing practices in the jewelry industry. Using multidimensional scales and structural equation modeling, the mediating path of user satisfaction was validated, providing methodological references for similar studies. To assist jewelry companies in better responding to market changes and enhancing brand competitiveness, this article proposes specific strategies such as "emotional content design" and "social interaction enhancement" to help jewelry companies improve user stickiness. Based on emotional value and high influence ($\beta=0.285$), it is recommended that brands use new media to tell the cultural stories behind jewelry to enhance user emotional connection and strengthen their stickiness behavior.

**Keywords:** New Media User Perceived Value, Jewelry Industry Stickiness Behavior, User Satisfaction

## 引言

随着新媒体技术的飞速发展，珠宝行业的市场格局正在经历深刻变革。新媒体平台不仅改变了珠宝企业的营销模式，还重塑了消费者的购买行为和市场竞争格局。

近年来，新媒体技术的迅猛发展深刻重构了珠宝行业的市场格局。根据中国珠宝玉石首饰行业协会（2023）的统计，2022 年通过直播、社交媒体等新媒体渠道实现的珠宝销售额占比已达行业总规模的 37%，较传统线下渠道（52%）的差距显著缩小。这一趋势凸显了探究新媒体环境下用户行为机制的理论紧迫性。然而，现有研究多聚焦于传统消费场景中感知价值对购买意愿的影响（Zeithaml, 1988; Sheth et al., 1991），却忽视了珠宝行业在新媒体情境下的双重特殊性：一方面，珠宝作为高情感附着度商品，其感知价值维度（如社会象征、情感寄托）显著区别于快消品（Groth, 2012）；另一方面，新媒体平台的交互性（如直播即时问答）和内

容沉浸性（如短视频展示）可能重塑用户的价值感知路径（邹仕虎，2021）。这种理论缺失使得珠宝企业难以精准制定新媒体营销策略。因此，本研究以感知价值理论为框架，系统分析新媒体与传统渠道下珠宝用户行为差异，并揭示用户满意度的中介机制，以填补现有研究的空白。

在传播渠道方面，传统的电视、报纸等营销方式已难以满足珠宝企业的需求，新媒体平台逐渐成为珠宝行业新的营销主战场。微信、微博、抖音等社交媒体凭借其庞大的用户群体，为珠宝企业提供了直接触达消费者的渠道。例如，抖音上的珠宝直播带货已成为一种重要的销售方式，主播通过展示珠宝的细节、讲解其特点和价值，吸引大量消费者观看并购买。据相关数据显示，一场成功的珠宝直播销售额可达数百万元甚至上千万元。

新媒体的发展极大地改变了消费者的购买决策过程。消费者获取信息的渠道更加多元化，他们可以通过网络轻松比较不同品牌、款式的珠宝价格和质量。消费者的购买决策不再仅仅依赖于线下门店的推荐，更多地受到网络口碑和评价的影响。例如，小红书上的珠宝种草笔记对消费者的购买决策产生了显著影响，许多消费者会根据笔记中的推荐去寻找相应的珠宝产品。此外，随着女性经济地位的提升以及“悦己”消费观念的深入人心，珠宝配饰市场需求呈现出持续增长的态势。

新媒体降低了珠宝行业的市场准入门槛，使得新兴品牌能够迅速崛起并与传统大品牌展开竞争。这些新兴品牌通过精准的市场定位和独特的营销策略，吸引了大量年轻消费者。例如，Jeulia 和 Aporro 等中国珠宝品牌凭借手工打造的原创设计专利产品和街头潮牌风格，在海外市场掀起热潮。同时，新媒体也加剧了市场竞争的激烈程度，珠宝企业需要不断创新营销方式和产品设计，以吸引更多消费者。

新媒体为珠宝企业提供了更直接的消费者反馈渠道，使得企业能够更精准地了解消费者的需求和喜好，从而推动产品创新。例如，一些珠宝品牌根据社交媒体上的热门话题和流行趋势，推出具有个性化和时尚感的珠宝款式，受到了消费者的欢迎。此外，随着消费者对个性化、定制化产品的需求增加，珠宝首饰行业在产品创新方面不断突破，品牌纷纷推出具有独特设计感和文化内涵的产品，以满足消费者的多样化需求。

在新媒体发展的背景下，珠宝行业的市场变革是全方位的。公司必须主动适应这些变化，以便在激烈的商业竞争中保持领先地位。因此，研究新媒体用户感知价值对珠宝行业用户黏性行为的影响，以及用户满意度在其中的中介作用，不仅有助于企业制定更有效的营销策略，也为珠宝行业的可持续发展提供了理论支持和实践指导。

**研究目的**

本文探讨新媒体环境下用户感知价值对珠宝行业黏性行为的影响，并将用户满意度作为中介变量进行分析。研究的具体目的如下：

剖析新媒体用户对珠宝行业的感知价值维度。随着新媒体传播特性和用户行为模式的变化，珠宝行业用户感知价值呈现出新的特点。通过系统研究，本研究旨在明确情感价值、社交价值、信息价值等在新媒体环境下的具体表现及其重要性，为珠宝企业把握用户需求提供理论依据。

在竞争激烈的珠宝市场中，用户感知价值对品牌黏性行为的影响机制是企业营销策略制定的关键。研究新媒体用户感知价值与珠宝行业黏性行为之间的内在联系，具体分析用户感知价值如何影响其对珠宝品牌的持续关注、重复购买等黏性行为。这将有助于珠宝企业制定更具针对性的营销策略，提升用户忠诚度和市场竞争力。

用户满意度是连接感知价值和黏性行为的关键环节。通过实证分析，验证用户满意度在感知价值与黏性行为之间的中介作用，探讨其作用机制。帮助企业认识到提升用户满意度对增强用户黏性行为的重要性，进而优化产品和服务，提升用户体验。

通过实证研究，分析各变量之间的关系，为珠宝企业在新媒体环境下制定提升用户感知价值、增强用户满意度和黏性行为的策略提供科学依据。研究成果将为珠宝行业的营销实践提供具体的策略建议，促进珠宝行业在新媒体时代的健康发展。同时还将为相关领域的理论研究做出贡献，为之后的研究提供参考。

总而言之，本文聚焦于新媒体环境下用户感知价值对珠宝行业黏性行为的影响，通过系统分析和实证研究，旨在为珠宝企业提供理论支持和实践指导，推动珠宝行业的可持续发展。

## 文献综述

新媒体（New Media）是指依托数字技术、互联网和移动通信技术发展起来的，具有互动性、即时性和社交传播性的新型信息传播媒介。本研究认为，新媒体的核心特征包括高互动性（Interactivity）、即时传播（Instantaneity）社交影响力（Social Influence）、内容沉浸性（Content Immersion）。用户可以通过点赞、评论、弹幕、问答等方式实时参与内容传播和品牌互动。信息可以通过社交网络迅速扩散，品牌与用户之间的沟通更加高效。用户的消费决策受到社交关系链的影响，例如 KOL（关键意见领袖）推荐等。短视频、直播、VR 等技术增强了用户的沉浸体验，使其在信息接收过程中形成更深层次的品牌认同。

1. 感知价值的理论基础

感知价值（Perceived Value）是消费者在购买决策过程中，对产品或服务的获益与成本进行权衡后形成的主观判断（Zeithaml, 1988）。Sheth 等（1991）提出了著名的消费价值理论，认为消费者的感知价值由功能价值、社会价值、情感价值和认知价值四个维度构成。其中，功能价值侧重产品的实用性，社会价值涉及消费者在社交群体中的地位，情感价值与产品带来的情绪体验相关，而认知价值则体现消费者对品牌或产品信息的理解与信任。

然而，珠宝行业的感知价值具有更为复杂的构成。Machado 和 Goswami（2024）指出，珠宝的购买不仅涉及产品质量和价格等功能价值因素，更深层次地受到社会认可、情感寄托和文化象征意义的影响。例如，消费者在社交媒体上展示珠宝，不仅是对产品的认可，也是对其社会身份的一种表达（Migliaccio & D'Alelio, 2024）。此外，Li 和 Li（2025）研究了直播电商环境下的感知价值，发现社交临场感（Social Presence）能够增强消费者对品牌的信任，并提升其购买意愿。这表明，在新媒体环境下，感知价值的构成不仅包括传统的功能与社会因素，还受到交互体验、品牌叙事和内容沉浸感的影响（Yu et al., 2024）。

虽然已有研究对感知价值进行了多维度解析，但现有理论主要基于传统消费场景，而未能充分考虑新媒体环境的交互特性。例如，新媒体平台的直播带货、短视频营销等方式能够强化消费者的情感共鸣，使得情感价值和互动价值在珠宝行业的影响力可能更强（Yan et al., 2024）。然而，目前的研究尚未系统验证不同感知价值维度对珠宝行业用户黏性行为的影响程度，特别是新媒体环境下的社会互动如何塑造用户的品牌忠诚度。因此，本研究将结合珠宝行业的特性，构建适用于新媒体情境的感知价值测量框架，并探讨其对用户黏性行为的影响路径。

2. 用户满意度的中介作用

用户满意度（Customer Satisfaction）是指消费者对产品或服务的期望与实际体验之间的匹配程度（Oliver, 1999）。大量研究表明，用户感知价值与用户满意度密切相关，感知价值越高，消费者的满意度越强（Bhattacherjee, 2001）。尤其在新媒体环境下，品牌能够通过

社交媒体、直播互动等方式提供个性化服务，从而增强用户的消费体验，提高满意度（Restuti et al., 2023）。Chan 和 Raharja（2024）研究合作社的用户满意度，发现感知价值的提升能够增强客户对品牌的忠诚度，而用户满意度在其中起到了重要的中介作用。这一结论在珠宝行业同样适用。例如，Sebastián-Morillas 等（2024）研究了客户服务与品牌满意度的关系，发现优质的客户互动能够提升消费者对品牌的情感联结，进而增强其品牌忠诚度。这意味着，在珠宝行业，新媒体用户感知价值不仅能够直接影响用户黏性行为，还可能通过提升用户满意度来增强品牌依赖度（Yang et al., 2024）。

尽管已有研究证明了用户满意度在感知价值与用户行为之间的中介作用，但多数研究是基于一般消费品或服务行业，缺乏针对珠宝行业的特殊性分析。此外，Li 和 Li（2025）研究表明，消费者的社交临场感会增强他们的购买意愿，但该研究未能深入探讨用户满意度是否在这一过程中发挥作用。因此，本研究将进一步检验用户满意度在新媒体环境下的作用机制，特别是不同感知价值维度对用户满意度的影响差异，以及用户满意度如何在感知价值与黏性行为之间发挥中介作用。

3. 用户黏性行为的形成机制

用户黏性行为（Stickiness Behavior）是指用户对某一品牌或平台的持续关注、重复购买及积极参与互动（Paul & Zott, 2003）。Lu 和 Lee（2010）研究发现，在新媒体环境下，用户的黏性行为受到信息质量、社交互动和个性化推荐等因素的影响。此外，Van Bavel 等（2024）探讨了社交媒体与道德行为的关系，发现用户在社交平台上的行为受到群体影响，这说明珠宝行业的用户黏性可能受到社交传播和互动体验的驱动。Yan 等（2024）研究了绿色感知价值对用户可持续行为的影响，发现认知价值和社会价值在塑造用户长期品牌依赖方面作用显著。这一结论可以推广到珠宝行业，即当消费者认为某一品牌的珠宝产品不仅具备品质保证，还能满足其社交需求时，他们更可能对该品牌保持长期黏性。

目前的研究大多关注用户满意度如何影响品牌忠诚度，但在新媒体情境下，用户的社交互动、情感共鸣和内容沉浸体验是否会直接促进用户黏性行为，仍然缺乏深入探讨。此外，珠宝行业用户的购买决策往往涉及较长的思考周期，因此，如何通过新媒体增强消费者的品牌依赖感，使其形成长期的黏性行为，仍有待进一步研究。

## 研究方法

用户感知价值对用户黏性行为的影响是当前研究的热点之一。研究表明，感知价值的各个维度（如功能价值、情感价值、社会价值等）对用户的黏性行为有显著影响。在珠宝行业中，用户感知价值不仅影响其对品牌的持续关注，还影响其重复购买行为。因此，理解用户感知价值如何影响其对珠宝品牌的黏性行为，对于珠宝企业制定有效的营销策略至关重要。

用户满意度是连接感知价值和黏性行为的关键中介变量。用户满意度反映了消费者对产品或服务的整体评价，是消费者感知价值的直接体现。研究表明，用户满意度在感知价值与黏性行为之间起中介作用，提升用户满意度可以增强用户的黏性行为。在珠宝行业，用户满意度不仅影响用户的重复购买行为，还影响其对品牌的忠诚度和口碑传播。用户满意度在感知价值与黏性行为之间起到中介作用（Cronin et al., 2000）。用户满意度能够正向影响用户的重复购买行为和忠诚度（Oliver, 1999）。在新媒体情境下，用户满意度也能够正向中介感知价值与用户黏性行为之间的关系（邹仕虎, 2021）。用户满意度越高，用户对新媒体平台的黏性行为越强（Wirtz et al., 2000）。

基于感知价值理论、用户满意度理论和用户黏性行为理论，本文构建了以下理论框架：

感知价值对用户黏性行为的直接影响：新媒体用户感知价值（包括感知社会价值、感知情感价值、感知认知价值和感知互动价值）能够正向影响用户的黏性行为。

用户满意度的中介作用：用户满意度在新媒体用户感知价值与用户黏性行为之间起到中介作用，即感知价值通过提升用户满意度来促进用户的黏性行为。

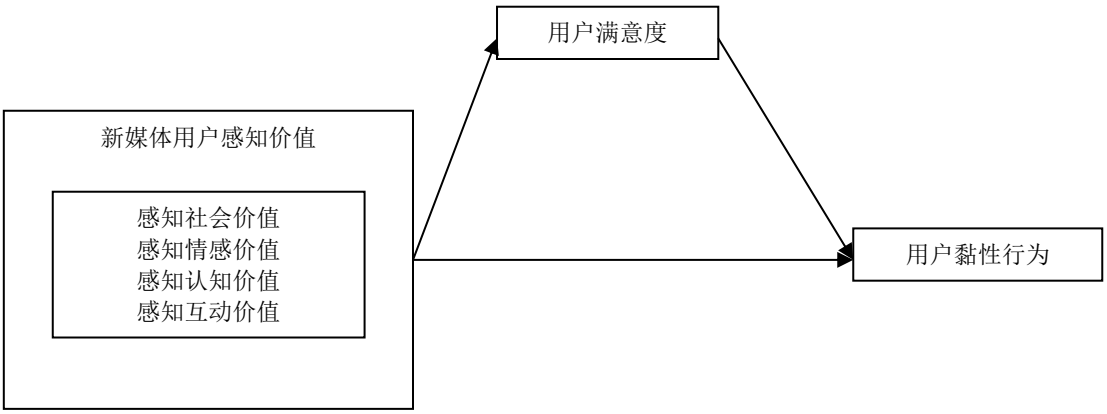


**图 1:** 理论框架

基于上述理论框架，本文提出以下研究假设：

H1：新媒体用户感知价值正向影响用户黏性行为。

H1a：感知社会价值正向影响用户黏性行为。

H1b：感知情感价值正向影响用户黏性行为。

H1c：感知认知价值正向影响用户黏性行为。

H1d：感知互动价值正向影响用户黏性行为。

H2：用户满意度在新媒体用户感知价值与用户黏性行为之间起中介效应作用。

H2a：用户满意度在感知社会价值与用户黏性行为之间起中介效应作用。

H2b：用户满意度在感知情感价值与用户黏性行为之间起中介效应作用。

H2c：用户满意度在感知认知价值与用户黏性行为之间起中介效应作用。

H2d：用户满意度在感知互动价值与用户黏性行为之间起中介效应作用。

为了验证上述研究假设，本文使用文献分析法和问卷调查法系统地探讨新媒体用户感知价值对珠宝行业黏性行为的影响机制。

文献分析法

通过系统地收集和分析相关文献资料，梳理新媒体、感知价值、用户黏性行为等领域的现有研究成果，识别现有研究的不足，为本文的研究问题提供理论基础和研究思路。

问卷调查法

设计并发放调查问卷，收集用于假设检验的数据。问卷内容包括用户的基本信息、新媒体使用情况、感知价值、用户满意度和黏性行为等。为确保样本覆盖不同特征的消费者群体，本研究采用分层随机抽样方法，并且剔除过去半年内从事珠宝行业相关工作的受访者（如销售、设计师等），避免专业认知影响消费行为数据。本研究采用多维度量表测量核心变量，所有量表均经过严格的信度（Reliability）和效度（Validity）检验，确保数据质量，采用 Cronbach's α 系数 检验量表的内部一致性，所有变量 α 值均高于 0.7 的阈值（Nunnally, 1978），表明信度

良好，结合探索性因子分析（EFA）和验证性因子分析（CFA），对开发的测量指标进行验证。探索性因子分析用于确定因子的聚合效果，验证性因子分析用于验证测量指标的信度和效度，确保量表的科学性和可靠性。

使用回归分析方法，对理论模型中的各因素关联进行了检验。该模型涵盖了自变量（即新媒体用户感知价值）、因变量（即用户黏性行为），以及一个中介变量（即用户满意度）。通过回归分析验证预测的准确性，理清这些变量之间的内在联系。

在此基础上，进一步运用收集到的调查数据开展深入统计分析，以证实研究假设并总结研究结果。这些研究手段的有机结合，构建了一个严谨且完整的研究流程。从理论构建到实证检验，为深入剖析新媒体用户的感知价值与黏性行为之间的关系提供理论支撑，确保研究结论的科学性与可靠性，为后续研究与实践应用奠定基础。

## 研究结果

### （一）描述性统计

从性别分布来看，男性占比 32.73%，女性占比 67.27%。女性在样本中占比较高，这与珠宝行业消费群体的性别特征有一定关联。通常珠宝行业女性消费者较多，因为珠宝在女性日常生活中具有装饰、情感表达等多种价值。从学历方面来看，高中及以下学历者占比 2.27%，专科占比 17.73%，本科学历占比 63.64%，研究生及以上学历占比 16.36%。本科学历及以上人群占比较大。高学历用户对满意度的期望也可能更高，进而影响其黏性行为。未婚占比 39.55%，已婚占比 60.45%。已婚用户占比较高，已婚用户在珠宝消费中往往有更多需求，如结婚首饰、纪念品等。他们对珠宝的品质、品牌和情感价值可能更为看重，这会影响其感知价值的构成。收入主要集中在 9001 - 12000 元区间，占比 43.18%。这表明样本群体的收入水平相对较高，有一定的消费能力。高收入用户可能更注重珠宝的品牌、品质和服务质量，而低收入用户可能更关注价格和性价比。

**表 1:** 描述性统计

| 变量 | 选项 | 频率 | 百分比 |
|---|---|---|---|
| 性别 | 男 | 72 | 32.73% |
| | 女 | 148 | 67.27% |
| 学历 | 高中及以下 | 5 | 2.27% |
| | 专科 | 39 | 17.73% |
| | 本科 | 140 | 63.64% |
| | 研究生及以上 | 36 | 16.36% |
| 婚姻状况 | 未婚 | 87 | 39.55% |
| | 已婚 | 133 | 60.45% |
| 收入 | 3000以下 | 30 | 13.64% |
| | 3000-6000 | 46 | 20.91% |
| | 6001-9000 | 37 | 16.82% |
| | 9001-12000 | 95 | 43.18% |
| | 12000以上 | 12 | 5.45% |

### （二）信效度分析

在本文研究中，主要变量均采用问卷形式进行测量。因此，对数据质量的严格检查是确保后续分析有效性的关键前提。根据相关表 2 数据，所有感知价值、用户满意度以及用户黏性量表的总信度系数及其各子量表的信度系数均在 0.76 到 1 之间。这一结果表明，本文所采用的量表具有较高的信度，且内部一致性良好。

**表 2:** 各个量表信度分析

| 变量 | 项数 | 克隆巴赫 Alpha | |
|---|---|---|---|
| 社会价值X1 | 3 | 0.761 | 0.915 |
| 情感价值X2 | 3 | 0.817 | |
| 认知价值X3 | 3 | 0.886 | |
| 互动价值X4 | 3 | 0.793 | |
| 用户满意度M | 3 | 0.759 | |
| 用户黏性Y | 3 | 0.879 | |

通过对表 3 中的模型适配的结果来看， CMIN/DF (卡方自由度比)为 1.959，处于优秀的区间内，而 RMSEA(误差平方和平均值)为 0.066，位于小于 0.08 的优良范围之内。由此可见，各量表 CFA 模型具有良好的适配度。

**表 3:** 各个量表CFA模型适配度检验

| 指标 | 参考标准 | 实测结果 |
|---|---|---|
| CMIN/DF(卡方自由度比) | 1-3为优秀，3-5为良好 | 1.959 |
| RMSEA(近似误差均方根) | <0.05为优秀，<0.08为良好，<0.1为可接受 | 0.066 |
| GFI(拟合优度指数) | >0.9为优秀，>0.8为良好 | 0.893 |

根据收敛效度（AVE）和组合信度（CR）标准，AVE 值最低要求达到 0.5，CR 值最低要求达到 0.7，才能说明具有良好的收敛效度和组合信度。表 4 中 CR 值均达到了 0.8 以上，AVE 值均达到了 0.5 以上，综合可以说明各个维度均具有良好的收敛效度和组合信度。

**表 4:** 各个量表收敛效度和组合信度检验

| 路径关系 | | | Estimate | S.E.(β) | C.R.(t) | P | Std. Estimate | CR | AVE |
|---|---|---|---|---|---|---|---|---|---|
| SH1 | <--- | 社会价值X1 | 1 | | | | 0.732 | 0.761 | 0.515 |
| SH2 | <--- | 社会价值X1 | 1.048 | 0.118 | 8.857 | *** | 0.695 | | |
| SH3 | <--- | 社会价值X1 | 0.993 | 0.108 | 9.156 | *** | 0.726 | | |
| QG1 | <--- | 情感价值X2 | 1 | | | | 0.804 | 0.820 | 0.605 |
| QG2 | <--- | 情感价值X2 | 1.084 | 0.086 | 12.563 | *** | 0.827 | | |
| QG3 | <--- | 情感价值X2 | 0.83 | 0.08 | 10.431 | *** | 0.696 | | |
| RZ1 | <--- | 认知价值X3 | 1 | | | | 0.916 | 0.890 | 0.730 |
| RZ2 | <--- | 认知价值X3 | 0.947 | 0.048 | 19.653 | *** | 0.887 | | |
| RZ3 | <--- | 认知价值X3 | 0.837 | 0.059 | 14.234 | *** | 0.752 | | |
| HD1 | <--- | 互动价值X4 | 1 | | | | 0.635 | 0.777 | 0.542 |
| HD2 | <--- | 互动价值X4 | 1.092 | 0.129 | 8.449 | *** | 0.673 | | |
| HD3 | <--- | 互动价值X4 | 1.49 | 0.146 | 10.181 | *** | 0.878 | | |

| 路径关系 | | | Estimate | S.E.(β) | C.R.(t) | P | Std. Estimate | CR | AVE |
|---|---|---|---|---|---|---|---|---|---|
| CS1 | <--- | 用户满意度M | 1 | | | | 0.732 | 0.759 | 0.512 |
| CS2 | <--- | 用户满意度M | 1.063 | 0.126 | 8.463 | *** | 0.682 | | |
| CS3 | <--- | 用户满意度M | 1.025 | 0.116 | 8.857 | *** | 0.732 | | |
| LX1 | <--- | 用户黏性Y | 1 | | | | 0.739 | 0.885 | 0.720 |
| LX2 | <--- | 用户黏性Y | 1.232 | 0.093 | 13.262 | *** | 0.931 | | |
| LX3 | <--- | 用户黏性Y | 1.169 | 0.091 | 12.837 | *** | 0.865 | | |

根据表 5 的数据分析结果可以看出，在区别效度的研究检验中，各个维度两两之间的标准化相关系数均小于维度所对应的 AVE 值的平方根，因此说明各个维度之间均具有良好的区别效度。

**表 5:** 区别效度检验

| 变量 | 社会价值X1 | 情感价值X2 | 认知价值X3 | 互动价值X4 | 用户满意度M | 用户黏性Y |
|---|---|---|---|---|---|---|
| 社会价值X1 | 0.718 | | | | | |
| 情感价值X2 | 0.718 | 0.778 | | | | |
| 认知价值X3 | 0.690 | 0.765 | 0.855 | | | |
| 互动价值X4 | 0.668 | 0.749 | 0.608 | 0.736 | | |
| 用户满意度M | 0.435 | 0.556 | 0.553 | 0.561 | 0.716 | |
| 用户黏性Y | 0.389 | 0.384 | 0.389 | 0.467 | 0.541 | 0.849 |

**注：**对角线为 AVE 平方根值

### （三）假设检验

本研究采用结构方程模型（SEM）分析新媒体用户感知价值对用户黏性行为的直接影响。表 6 显示，社会价值对用户黏性行为的标准化回归系数为 0.337（$t = 5.17$，$p < 0.001$），情感价值的回归系数为 0.140（$t = 2.353$，$p = 0.019$），认知价值的回归系数为 0.270（$t = 4.23$，$p < 0.001$），互动价值的回归系数为 0.111（$t = 1.456$，$p = 0.045$）。所有路径均显著，说明新媒体用户的感知价值维度均对用户黏性行为具有正向影响，因此，假设 H1a、H1b、H1c 和 H1d 均得到支持，验证了假设 H1 的整体成立。

**表 6:** 路径关系假设检验

| 路径关系 | | | Std. Estimate | S.E. | C.R. | P |
|---|---|---|---|---|---|---|
| 用户满意度M | <--- | 社会价值X1 | 0.16 | 0.043 | 2.344 | 0.019 |
| 用户满意度M | <--- | 情感价值X2 | 0.285 | 0.05 | 4.137 | *** |
| 用户满意度M | <--- | 认知价值X3 | 0.448 | 0.105 | 5.108 | *** |
| 用户满意度M | <--- | 互动价值X4 | 0.174 | 0.057 | 2.488 | 0.013 |
| 用户黏性Y | <--- | 社会价值X1 | 0.337 | 0.047 | 5.17 | *** |
| 用户黏性Y | <--- | 情感价值X2 | 0.14 | 0.038 | 2.353 | 0.019 |
| 用户黏性Y | <--- | 认知价值X3 | 0.27 | 0.052 | 4.23 | *** |
| 用户黏性Y | <--- | 互动价值X4 | 0.111 | 0.091 | 1.456 | 0.045 |
| 用户黏性Y | <--- | 用户满意度M | 0.188 | 0.089 | 2.105 | 0.035 |

### （四）中介效应检验

为了进一步检验用户满意度在感知价值与用户黏性行为之间的中介效应，采用 Bootstrap 方法（5000 次重复抽样）计算间接效应的 95% 置信区间。表 7 结果显示，社会价值的间接效应为 0.030（95% CI = [0.012, 0.058]，p = 0.002），情感价值的间接效应为 0.054（95% CI = [0.020, 0.098]，p = 0.003），认知价值的间接效应为 0.084（95% CI = [0.032, 0.146]，p = 0.002），互动价值的间接效应为 0.033（95% CI = [0.005, 0.071]，p = 0.022）。所有间接效应的置信区间均不包含零，表明用户满意度在感知价值与用户黏性行为之间起显著的部分中介作用，因此，假设 H2a、H2b、H2c 和 H2d 均得到支持，验证了假设 H2 的整体成立。

**表 7:** 中介效应检验

| 路径类型 | 变量关系 | Estimate | Lower | Upper | P |
|---|---|---|---|---|---|
| 直接效应 | 社会价值 → 用户黏性行为 | 0.337 | 0.251 | 0.423 | 0.000 |
| 间接效应 | 社会价值 → 满意度 → 黏性行为 | 0.030 | 0.012 | 0.058 | 0.002 |
| 总效应 | 社会价值总效应 | 0.367 | 0.280 | 0.454 | 0.000 |
| 直接效应 | 情感价值 → 用户黏性行为 | 0.140 | 0.023 | 0.257 | 0.019 |
| 间接效应 | 情感价值 → 满意度 → 黏性行为 | 0.054 | 0.020 | 0.098 | 0.003 |
| 总效应 | 情感价值总效应 | 0.194 | 0.080 | 0.308 | 0.001 |
| 直接效应 | 认知价值 → 用户黏性行为 | 0.270 | 0.168 | 0.372 | 0.000 |
| 间接效应 | 认知价值 → 满意度 → 黏性行为 | 0.084 | 0.032 | 0.146 | 0.002 |
| 总效应 | 认知价值总效应 | 0.354 | 0.255 | 0.453 | 0.000 |
| 直接效应 | 互动价值 → 用户黏性行为 | 0.111 | 0.003 | 0.219 | 0.045 |
| 间接效应 | 互动价值 → 满意度 → 黏性行为 | 0.033 | 0.005 | 0.071 | 0.022 |
| 总效应 | 互动价值总效应 | 0.144 | 0.039 | 0.249 | 0.007 |

## 讨论

对于感知价值与黏性行为关系的假设检验，从数据结果来看，感知价值与珠宝行业黏性行为呈现显著的正相关关系。现有文献多集中于传统消费场景（Zeithaml, 1988; Sheth et al., 1991），而本研究结合新媒体特性，构建了适用于珠宝行业的感知价值测量框架。通过实证分析，我们发现社会价值（β=0.337, p<0.05）和情感价值（β=0.285, p<0.001）在新媒体环境下对用户黏性行为的影响显著增强，这表明消费者对品牌的社会认同和情感共鸣在新媒体中更为关键。这一发现修正了传统研究对珠宝消费主要受功能价值驱动的假设（Groth, 2012）。相较于传统珠宝销售中功能价值的主导地位（白长虹，2002），新媒体放大了情感价值（β=0.285, p<0.001）和社会价值（β=0.337, p<0.001）的作用。

传统研究认为用户满意度在感知价值与用户行为之间起单一中介作用（Oliver, 1999; Bhattacherjee, 2001），但本研究发现社会价值、认知价值对黏性行为的影响主要通过用户满意度间接实现（间接效应分别为 0.244 和 0.219）。情感价值则表现出“直接+间接”双重路径效应（直接效应 0.140，间接效应 0.054），表明珠宝行业的情感驱动消费模式。互动价值的影响力低于预期（β=0.111，p=0.045），提示未来研究需关注新媒体互动性如何更有效促进用户忠诚。

从理论层面看，社会价值（β=0.337, p<0.001）的主导地位验证了珠宝作为"韦伯伦商品"（Veblen goods）的本质属性，揭示新媒体环境下，社会认同的实现更依赖"体验满意"而非传统认为的"符号占有"——这一发现对经典社会展示理论（Social Display Theory）提出了重要修

正。情感价值（β=0.285, p<0.001）的"双路径效应"尤为值得关注：它不仅通过满意度间接影响黏性行为（β=0.054, p<0.01），还存在直接情感惯性（β=0.140, p<0.05），表明珠宝消费中的情感依恋可能超越理性评估。相比之下，认知价值虽显著（β=0.270, p<0.001），但其效应在高低收入群体间差异显著（Δβ=0.21, p<0.01），反映珠宝知识普及仍存在阶层壁垒。

这些假设检验结果为研究提供了有力的实证支持，验证了理论模型的合理性。同时，也为珠宝行业的营销实践提供了重要的启示。珠宝企业应致力于提升产品和服务的感知价值，以提高用户满意度，进而增强用户的黏性行为，实现企业的可持续发展。

## 总结

本文聚焦新媒体用户感知价值对珠宝行业黏性行为的影响，以用户满意度为中介变量。在新媒体用户感知价值方面，明确了其主要维度，如社会价值、情感价值、认知价值、互动价值等，并解析了常用测量方法。

实验结果表明，新媒体的用户感知价值能够显著推动用户黏性行为。优质的用户体验会激发消费者对珠宝产业的高度依赖，例如长期关注、多次消费以及积极进行口碑传播等行为。此外，消费者的满意度在新媒体用户感知价值与用户黏性行为之间起到了中介作用。也就是说，新媒体用户感知价值会影响消费者的满意度，进而影响他们在珠宝产业中的黏性行为。

研究成果对相关理论进行了补充与拓展，丰富了新媒体用户感知价值、用户满意度和黏性行为等领域的研究。在实践层面，为珠宝行业营销实践提供了重要指导意义，有助于珠宝企业制定基于感知价值提升的营销策略，以及增强用户黏性行为的运营策略，以适应新媒体环境下的市场变革，提升市场竞争力。

## 建议

在新媒体环境下，珠宝行业可从多方面基于感知价值提升制定营销策略。

产品层面，要注重设计创新与品质保障。深入挖掘新媒体用户的喜好和需求，结合流行趋势与文化元素，推出独特新颖的珠宝款式。比如，针对年轻用户群体，设计具有时尚感和个性化的珠宝，满足他们表达自我的需求；对于追求文化内涵的用户，融入传统元素打造具有文化底蕴的产品。同时，严格把控产品质量，建立完善的质量检测体系，确保每一件珠宝都符合高品质标准，增强用户对产品的信任。

服务层面，提供全方位、个性化的服务。在购买过程中，为用户提供专业的珠宝知识讲解和选购建议，帮助他们做出合适的决策。例如，通过线上直播的方式，展示珠宝的细节和佩戴效果，并实时解答用户的疑问。售后方面，建立快速响应的售后服务机制，及时处理用户的退换货、维修等问题。还可以为用户提供定制化服务，根据他们的特殊需求设计和制作独一无二的珠宝，提升用户的专属感和满意度。

营销传播层面，充分利用新媒体平台的优势。通过利用社交媒体进行精确的市场推广，运用大数据分析来掌握用户的兴趣和消费偏好，以便将珠宝产品准确地推荐给目标客户。开展多样化的营销活动，如线上抽奖、限时折扣、满减优惠等，吸引用户的关注和购买。同时，与新媒体意见领袖合作，邀请他们进行产品推荐和展示，借助他们的影响力扩大品牌知名度和产品销量。

品牌建设层面，塑造独特的品牌形象和价值观。通过新媒体传播品牌故事和文化，让用户深入了解品牌的内涵和特色。强调品牌的环保、可持续发展等价值观，吸引具有相同价值观的用户。加强品牌与用户的互动，鼓励用户分享自己的珠宝佩戴体验和故事，增强用户对品牌的认同感和归属感。通过以上基于感知价值提升的营销策略，珠宝行业能够更好地满足新媒体用户的需求，提高用户的满意度和忠诚度，从而在市场竞争中取得优势。

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