



Understanding Consumer Perceptions Of Pinedrama Through Sentiment Analysis Of Google Play Store Reviews

¹Chairunnisaa M Z Huzaen

¹Universitas Negeri Makassar, Indonesia.

chairunnisaa@unm.ac.id

*Correspondence Email: chairunnisaa@unm.ac.id

Abstract: The rapid growth of digital entertainment platforms has increased consumer interest in mobile applications that provide short-drama content. PineDrama is one of the emerging digital entertainment applications that offers short-form video content combined with reward-based engagement features. This study aims to explore consumer perceptions toward PineDrama through online reviews collected from the Google Play Store. A quantitative descriptive approach was employed using sentiment analysis and keyword exploration methods. The study utilized a large-scale dataset consisting of 40,059 user reviews collected through a web scraping process, providing comprehensive insights into consumer perceptions toward the application. Data preprocessing included text cleaning and normalization to improve textual quality before analysis. Sentiment classification was conducted using a rating-based labeling approach, where ratings of 4–5 stars were categorized as positive, 3-star ratings as neutral, and ratings of 1–2 stars as negative. The findings revealed that positive sentiment dominated the dataset, accounting for 84.49% of reviews, followed by negative sentiment (12.22%) and neutral sentiment (3.29%). Positive reviews were primarily associated with entertainment value, drama content, and reward opportunities, while negative reviews mainly concerned login difficulties, account accessibility, and application performance issues. Furthermore, user satisfaction, content consumption, and reward mechanisms emerged as the most frequently discussed topics in user reviews. These findings indicate that the combination of engaging content and attractive reward features plays an important role in shaping positive consumer perceptions and encouraging continued user engagement. The study contributes practical insights for digital entertainment platform management by highlighting the importance of maintaining content quality, optimizing reward mechanisms, improving system reliability, and enhancing account accessibility. However, the findings should be interpreted with caution because the rating-based sentiment classification approach may not always fully reflect the sentiment expressed in review texts. Despite this limitation, the study provides valuable insights into consumer perceptions and user experiences within digital entertainment platforms.

Keywords: Consumer Perception, Sentiment Analysis, User Generated Content, Digital Entertainment Platforms, User Satisfaction.

INTRODUCTION

The development of digital technology has transformed the entertainment industry and significantly changed consumer behavior in accessing media content. Mobile applications have become one of the most popular channels for consuming digital entertainment due to their accessibility, convenience, and flexibility. Among various forms of digital entertainment, short-drama applications have recently attracted considerable consumer attention because they offer



concise storytelling formats that can be consumed within a relatively short period of time (Chan-Olmsted & Park, 2022; H. Li et al., 2022)

The increasing popularity of short-drama applications has intensified competition among digital entertainment providers. To maintain user engagement, application developers continuously introduce various features, including personalized content recommendations, interactive interfaces, and reward-based systems. These features are designed not only to attract new users but also to improve user satisfaction and encourage continued application usage. Previous studies suggest that perceived value and user satisfaction are important determinants of consumers' continued engagement with digital services (Garcia-Fornieles et al., 2022; Tandon et al., 2021).

In digital environments, online reviews have become an important source of information for understanding consumer perceptions and experiences. User-generated reviews provide direct insights into consumer satisfaction, complaints, expectations, and evaluations regarding products or services. Furthermore, online reviews play a crucial role in shaping consumer decision-making processes and influencing the reputation of digital platforms (Alam et al., 2021; Mirzaei et al., 2024).

PineDrama is one of the emerging short-drama applications available on Google Play Store. The application combines entertainment content with reward-based mechanisms that allow users to obtain coins and other incentives while consuming content. This combination distinguishes PineDrama from many conventional streaming applications that primarily focus on content delivery without integrating incentive-based engagement features. As a result, user evaluations of PineDrama may be influenced not only by the quality of its content but also by the perceived benefits derived from its reward system. In addition, the large volume of user-generated reviews available on Google Play Store provides a valuable opportunity to examine consumer perceptions, experiences, and satisfaction toward an emerging digital entertainment platform.

Although studies examining online reviews and sentiment analysis have become increasingly common in digital marketing and consumer behavior research, including studies that utilize Google Play Store reviews to investigate consumer responses toward digital applications (Azmi et al., 2026), empirical studies focusing specifically on short-drama entertainment applications remain limited. Existing studies have predominantly focused on streaming services, social media platforms, and mobile applications in general, leaving a gap in understanding



consumer perceptions toward reward-based short-drama platforms. Previous research has demonstrated the usefulness of online review analysis and sentiment analysis in understanding consumer opinions and digital consumer behavior (Hussain et al., 2021; Leong et al., 2021).

Therefore, this study aims to explore consumer perceptions toward PineDrama through online reviews collected from Google Play Store using sentiment analysis and keyword exploration techniques. The findings are expected to contribute to the literature on digital consumer behavior and provide practical implications for digital entertainment platform management.

Theoretical Foundation

This study is grounded in several theoretical perspectives that help explain consumer perceptions toward digital entertainment applications. Uses and Gratifications Theory (UGT) suggests that individuals actively select media platforms to satisfy specific needs such as entertainment, enjoyment, information seeking, and personal gratification. In the context of short-drama applications, users may consume content to fulfill entertainment needs and obtain enjoyable viewing experiences. Therefore, positive evaluations toward PineDrama may reflect the extent to which the platform satisfies users' entertainment-related motivations (Chan-Olmsted & Park, 2022).

Perceived Value Theory explains that consumers evaluate products or services by comparing the benefits they receive with the costs or efforts required to obtain those benefits. In digital applications, perceived value may originate from content quality, functional benefits, convenience, and reward mechanisms. Applications that provide valuable experiences and meaningful incentives are more likely to generate favorable consumer perceptions and satisfaction (H. Li et al., 2022; Tandon et al., 2021). In the context of PineDrama, entertainment content and reward-based features may jointly contribute to positive user evaluations.

The Technology Acceptance Model (TAM) emphasizes the importance of perceived usefulness and ease of use in shaping user attitudes toward technology. Features related to accessibility, system performance, and application usability influence how users perceive and evaluate digital platforms. Technical problems, login difficulties, and accessibility issues may reduce user satisfaction and negatively affect consumer perceptions (Alshurideh et al., 2023). Therefore, TAM provides a useful perspective for understanding negative evaluations expressed in PineDrama reviews.



Based on these theoretical perspectives, consumer perceptions toward PineDrama can be understood as the result of interactions among entertainment gratification, perceived value derived from content and rewards, and users' experiences with application usability and accessibility.

METHOD

Research Design

This study employed a quantitative descriptive research approach to explore consumer perceptions toward PineDrama based on online reviews collected from Google Play Store. A quantitative descriptive approach was considered appropriate because the study aimed to identify, describe, and interpret consumer responses reflected in user-generated reviews without manipulating any variables. The research focused on understanding the overall sentiment distribution and the dominant themes discussed by users regarding their experiences with the PineDrama application.

Online reviews represent an important source of consumer-generated content that reflects users' opinions, evaluations, experiences, and expectations toward digital products and services. Therefore, analyzing online reviews provides valuable insights into consumer perceptions and behavioral responses within digital entertainment environments. Through sentiment analysis and keyword exploration, this study sought to identify the dominant perceptions expressed by users and the factors influencing their satisfaction and dissatisfaction with the application (Saafi et al., 2023).

Data Collection

The research subjects consisted of user reviews submitted by PineDrama users through the Google Play Store. The dataset was collected using a Python-based web scraping procedure implemented in Google Colab on May 29, 2026. Web scraping was utilized because it allows researchers to systematically retrieve large volumes of publicly available user-generated content from online platforms. The data collection process resulted in a total of 40,059 user reviews, which were subsequently used as the primary dataset for analysis. The collected data included review text, review ratings, and review dates. These attributes provided valuable information for understanding consumer experiences and identifying sentiment patterns reflected in user feedback (Nurian, 2023).



Google Play Store reviews were selected as the data source because they represent authentic evaluations submitted voluntarily by users after interacting with the application. Such reviews provide direct insights into user experiences, satisfaction levels, complaints, and expectations. Furthermore, the large volume of available reviews enables researchers to obtain a broader understanding of consumer perceptions and behavioral tendencies within digital entertainment platforms.

Prior to analysis, the dataset underwent a preprocessing stage to ensure data quality and consistency. Duplicate reviews were identified and removed when detected to avoid repeated observations that could influence the analysis results. The dataset consisted predominantly of Indonesian-language reviews, although reviews written in other languages were retained when relevant to the analysis. This approach allowed the study to capture a broader range of user experiences while maintaining the overall representativeness of consumer feedback toward the PineDrama application.

Data Preprocessing

Before conducting sentiment analysis and keyword exploration, the collected review data underwent several preprocessing procedures to improve textual quality and eliminate irrelevant information. Data preprocessing is an essential stage in text mining research because raw textual data often contain noise, inconsistencies, typographical errors, and non-standard language usage that may affect analysis accuracy and the reliability of research findings.

Prior to text preprocessing, the dataset was examined to identify duplicate entries and ensure data consistency. Duplicate reviews were removed when detected to prevent repeated observations from influencing the analysis results. The dataset consisted predominantly of Indonesian-language reviews. Reviews written in other languages were retained when relevant and processed using the same preprocessing procedures to preserve the diversity of user feedback represented in the dataset.

The preprocessing procedures included case folding, text cleaning, punctuation removal, text normalization, stopword removal, and stemming. These procedures were applied to transform the review texts into a cleaner and more standardized format suitable for sentiment analysis and keyword exploration. Previous studies have shown that preprocessing techniques contribute



significantly to improving text quality and enhancing the performance of sentiment analysis and text mining applications (Manalu & Siahaan, 2021).

Index	review	clean_review
0	gaada iklan dramanya juga seru tapi masalahnya cara uang masuk ke apk dananya dimana susah bgt dah ada yg tau caranya gimana gaess? pliss tutor 🙏	gaada iklan dramanya juga seru tapi masalahnya cara uang masuk ke apk dananya dimana susah bgt dah ada yg tau caranya gimana gaess pliss tutor
1	paling bagus pinedrama dari semua drama yang pernah di download. penarikan setelah menonton itu memang kecil tapi tidak mempersulit penonton saat penarikan dana nya. uang yang dihasilkan juga stabil gak pernah langsung naik sehingga penonton jadi malas untuk nonton drama lagi. yang paling bagus adalah gak pernah ada iklan. mantap kan.... the best lah pinedrama.....	paling bagus pinedrama dari semua drama yang pernah di download penarikan setelah menonton itu memang kecil tapi tidak mempersulit penonton saat penarikan dana nya uang yang dihasilkan juga stabil gak pernah langsung naik sehingga penonton jadi malas untuk nonton drama lagi yang paling bagus adalah gak pernah ada iklan mantap kan the best lah pinedrama
2	bneran bisa tarik uang nya, gak ada iklan 🙌🙌🙌 sukses sll untuk aplikasi pinedrama ni.. ini aplikasi yg bnr2 membayar Lo..	bneran bisa tarik uang nya gak ada iklan sukses sll untuk aplikasi pinedrama ni ini aplikasi yg bnr membayar lo
3	lumayan udah bisa narik ke tiktok cuma akunya nyambung ke tiktok jd suka kena pembatasan kalo komen	lumayan udah bisa narik ke tiktok cuma akunya nyambung ke tiktok jd suka kena pembatasan kalo komen
4	pokonya pine drama mantap	pokonya pine drama mantap

Figure 1. Comparison Between Original and Cleaned Reviews

Figure 1 shows a comparison between original reviews and cleaned reviews after the preprocessing stage. The cleaning process was performed to improve text quality and prepare the dataset for further sentiment analysis.

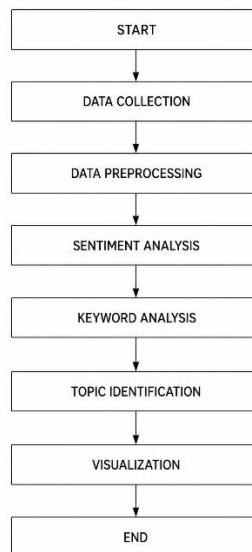


Figure 2. Research Process



Figure 2 presents the overall research process, including data collection, preprocessing, sentiment analysis, keyword analysis, topic identification, and visualization of PineDrama user reviews.

Sentiment Analysis

Sentiment analysis was conducted to classify PineDrama user reviews into positive, neutral, and negative categories. Reviews with ratings of 4–5 stars were categorized as positive sentiment, reviews with a rating of 3 stars were classified as neutral sentiment, and reviews with ratings of 1–2 stars were categorized as negative sentiment. The percentage of each sentiment category was calculated using Equation (1). Similar rating-based sentiment categorization approaches have been widely applied in studies analyzing user reviews from the Google Play Store to identify consumer perceptions and evaluate application performance (Rahman et al., 2024).

A rating-based sentiment labeling approach was employed because user ratings represent explicit evaluations of user experiences and provide a practical method for classifying large-scale review datasets. Compared with machine-learning-based sentiment classification, rating-based labeling enables efficient categorization without requiring model training, validation, or manually labeled training data. In addition, star ratings are directly associated with users' overall evaluations of an application, making them suitable indicators of general consumer sentiment in large review datasets.

$$SP = \frac{N_s}{N_t} \times 100\%$$

where SP represents the sentiment percentage, N_s is the number of reviews in a particular sentiment category, and N_t is the total number of reviews analyzed. The classified sentiment data were subsequently used to identify the overall tendency of consumer perceptions toward the PineDrama application.

Despite its practicality, rating-based sentiment classification may introduce potential bias because numerical ratings do not always correspond perfectly to the sentiment expressed in review texts. For example, some users may assign high ratings while expressing specific complaints, whereas others may provide low ratings despite reporting positive experiences in certain aspects of the application. Therefore, the sentiment categories in this study should be interpreted as indicators of users' overall evaluations rather than purely text-based emotional expressions.



Nevertheless, this approach remains appropriate for large-scale exploratory studies aimed at identifying general patterns of consumer perceptions.

Keyword Analysis

Keyword analysis was conducted to identify frequently occurring words and expressions in user reviews. The analysis aimed to reveal the main issues, experiences, and opinions discussed by PineDrama users. Word frequency analysis was employed to determine the most dominant keywords appearing in the review dataset and to support the identification of recurring discussion topics reflected in user-generated content (Mutawalli & Zaen, 2024). The identified keywords were subsequently examined to understand the aspects of the application that most strongly influenced user evaluations and consumer perceptions.

Topic Identification

To obtain a deeper understanding of consumer perceptions, frequently occurring keywords were grouped into several thematic categories based on their contextual meanings. This process enabled the identification of major discussion topics reflected in user reviews, including content consumption, reward mechanisms, advertising exposure, account accessibility, application performance, and user satisfaction. These themes were used as analytical categories to facilitate the interpretation of consumer perceptions and experiences toward the PineDrama application.

Visualization

The results of sentiment and keyword analyses were visualized using sentiment distribution charts and word clouds. These visualizations were utilized to facilitate the interpretation of user opinions and to identify dominant themes discussed within the review dataset, as visualization techniques can effectively summarize textual information and enhance the interpretation of sentiment analysis results (Kabir et al., 2021).

Data Analysis

The findings obtained from sentiment analysis, keyword analysis, and topic identification were interpreted descriptively to understand consumer perceptions toward PineDrama. The analysis focused on identifying dominant sentiment patterns and major discussion themes reflected in user reviews to provide insights into user experiences and satisfaction with the application. The identified themes were further interpreted in relation to the theoretical framework of the study, including Uses and Gratifications Theory, Perceived Value Theory, Technology Acceptance



Model, and Expectation-Confirmation Theory, to explain the factors influencing consumer perceptions and evaluations of the application.

RESULT AND DISCUSSION

Sentiment Distribution of User Reviews

Sentiment analysis was conducted to examine the overall tendency of consumer perceptions toward the PineDrama application. By classifying user reviews into positive, negative, and neutral categories, the analysis provides an overview of how users evaluate their experiences with the platform.

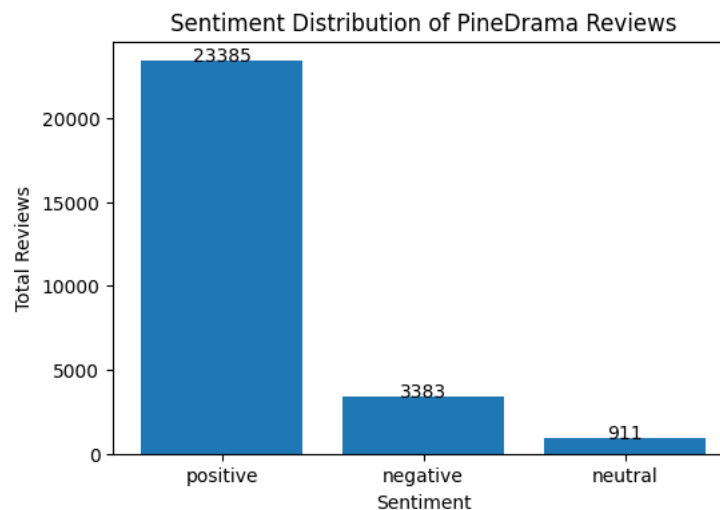


Figure 3. Sentiment Distribution of PineDrama Reviews

The results show that positive sentiment dominated the dataset, accounting for 84.49% (23,385 reviews) of all reviews, followed by negative sentiment at 12.22% (3,383 reviews) and neutral sentiment at 3.29% (911 reviews). The predominance of positive sentiment suggests that users generally hold favorable perceptions toward the PineDrama application.

The predominance of positive sentiment in PineDrama reviews is consistent with previous studies examining user perceptions of digital applications. For example, Azmi et al., (2026) reported that positive reviews dominated user evaluations of the Stimuler AI application, indicating that users tend to express favorable opinions when applications successfully deliver expected benefits and user experiences. Similarly, Rahman et al., (2024) found that positive sentiment was more prevalent than negative sentiment in Google Play Store reviews of the Gojek



highly appreciate the reward mechanism offered by the application. Many reviews indicate positive experiences related to earning and withdrawing rewards, which contribute significantly to user satisfaction.

In addition, the frequent appearance of words such as *drama*, *nonton*, *bagus*, *suka*, and *keren* indicates that users generally enjoy the content available on the platform. These findings suggest that users perceive PineDrama as an enjoyable source of entertainment that successfully fulfills their need for convenient and engaging short-drama content. This observation is consistent with previous studies indicating that users are more likely to evaluate digital entertainment applications positively when the content provides enjoyment, engagement, and gratification (Chan-Olmsted & Park, 2022; H. Li et al., 2022).

Interestingly, the prominence of reward-related keywords suggests that users are not solely attracted to PineDrama for its entertainment content. Many users appear to download and use the application because it provides opportunities to earn coins and obtain rewards while watching dramas. This finding indicates that user evaluations of PineDrama are influenced by both entertainment value and reward-based benefits. From a perceived value perspective, consumers tend to evaluate digital applications more positively when the benefits received exceed the effort or cost associated with usage (Y. Li et al., 2021; Tandon et al., 2021). Furthermore, reward mechanisms can strengthen user engagement and encourage continued platform usage by providing additional incentives beyond content consumption (Paschmann et al., 2025). Similar patterns have also been observed in previous studies of mobile applications, where reward-related features contributed to favorable user evaluations and higher levels of engagement.

However, the strong emphasis on reward-related discussions also suggests that user satisfaction may depend partly on the effectiveness and reliability of the reward system. While rewards enhance positive perceptions, users may become dissatisfied if they encounter difficulties in earning, claiming, or withdrawing rewards. Therefore, maintaining transparent and consistent reward mechanisms is essential for sustaining positive consumer perceptions. Furthermore, several positive reviews indicate appreciation for the viewing experience due to the relatively low level of advertising interruptions, allowing users to enjoy content more comfortably.

Overall, these findings suggest that positive consumer perceptions toward PineDrama are primarily influenced by the combination of engaging drama content, attractive reward



mechanisms, and a convenient viewing experience. Together, these factors create a positive user experience and encourage continued engagement with the application. The findings further support the view that consumer perceptions of digital entertainment applications are shaped not only by content quality but also by the perceived value generated through additional platform features and incentives.

Negative Review Keywords

Word cloud analysis was employed to examine the dominant terms appearing in reviews classified as negative sentiment. The visualization provides an overview of the issues most frequently mentioned by users and helps identify factors contributing to unfavorable evaluations of the PineDrama application.



Figure 5. Word Cloud of Negative Reviews

The word cloud reveals several dominant keywords, including *masuk*, *login*, *buka*, *akun*, *susah*, *tidak*, and *aplikasi*. The prominence of the words *masuk*, *login*, *buka*, and *akun* indicates that many users experienced difficulties related to account access and authentication. These issues suggest that login functionality and account management remain important concerns affecting user satisfaction and overall user experience.

Furthermore, the frequent occurrence of words such as *susah* and *tidak* reflects various obstacles encountered by users while accessing and using the application. Many negative reviews were associated with difficulties opening the application, accessing accounts, claiming rewards, or utilizing certain features. These findings indicate that technical performance and account accessibility are among the primary factors contributing to negative consumer perceptions toward PineDrama, as system efficiency and ease of access play important roles in influencing user satisfaction and evaluations of mobile applications (Alshurideh et al., 2023).



Main Discussion Topics

To obtain a deeper understanding of the issues discussed by users, the identified keywords were grouped into several thematic categories. This categorization was performed based on the contextual meanings of frequently occurring keywords appearing in the review dataset. The resulting topics represent the major dimensions of consumer experiences and perceptions toward the PineDrama application.

Topic	Description	Representative Keywords
Content Consumption	User discussions related to watching short-drama content, storylines, and entertainment experiences provided by the platform.	drama, nonton, film, cerita, episode
Reward Mechanism	Discussions regarding the reward system, including coins, earnings, withdrawals, and incentives obtained through platform activities.	koin, uang, dana, tarik, penarikan, hadiah, cuan
Advertising Exposure	User opinions regarding advertisements, including positive perceptions of limited ads and complaints about excessive advertising.	iklan, iklannya
Account Accessibility	Discussions related to account access, login processes, registration, and difficulties accessing user accounts.	login, akun, masuk, daftar
Application Performance	Technical issues affecting the user experience, including application loading, opening, downloading, and system errors.	buka, download, error, loading, lambat
User Satisfaction	Expressions of user satisfaction, enjoyment, and positive evaluations of the application and its services.	seru, suka, bagus, keren, mantap

Table 1. Topic Categories and Representative Keywords

As presented in Table 1, six major topics were identified from PineDrama user reviews, namely Content Consumption, Reward Mechanism, Advertising Exposure, Account Accessibility, Application Performance, and User Satisfaction. The categorization shows that user discussions encompass both positive and negative aspects of their experiences with the application. While some topics reflect satisfaction and enjoyment, others highlight technical issues and usability concerns encountered during application usage. Similar studies have shown that topic analysis of online reviews can reveal key dimensions of customer experiences and provide insights into factors



shaping consumer evaluations of digital services (Bacile et al., 2021). The identified topics can also be interpreted through the theoretical framework adopted in this study. Content Consumption reflects the entertainment and enjoyment motives emphasized in Uses and Gratifications Theory (UGT), while Reward Mechanism represents the additional benefits and value perceived by users as explained by Perceived Value Theory. Furthermore, Account Accessibility and Application Performance correspond to the usability and ease-of-use considerations highlighted in the Technology Acceptance Model (TAM), suggesting that both hedonic and functional aspects contribute to consumer evaluations of digital entertainment applications.

Visualization

To further examine the prominence of each identified topic, a frequency-based visualization was developed. The visualization provides an overview of how frequently each topic appeared within the review dataset and highlights the aspects that received the greatest attention from users.

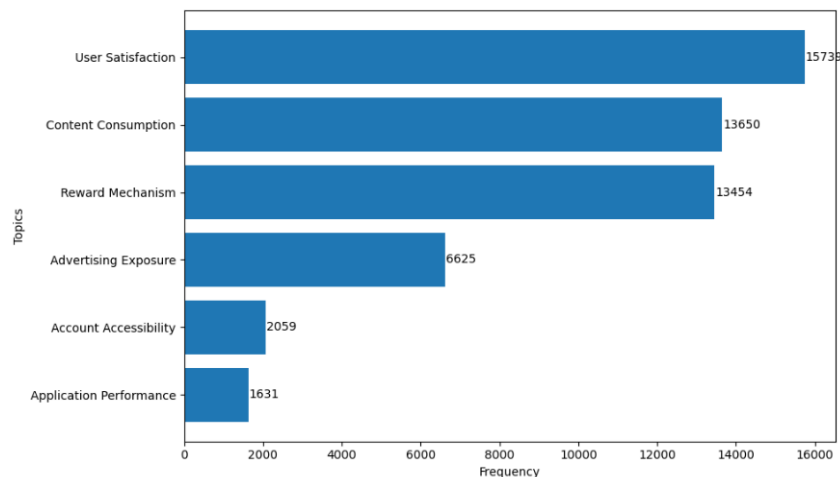


Figure 6. Main Topics Discussed in PineDrama Reviews

The visualization shows that User Satisfaction was the most frequently discussed topic, with 15,739 mentions, followed by Content Consumption (13,650) and Reward Mechanism (13,454). These findings indicate that users primarily focused on their overall satisfaction with the application, their experiences consuming drama content, and the benefits obtained through the reward system. The high frequency of these topics suggests that they play a central role in shaping consumer perceptions toward PineDrama, consistent with previous studies showing that the analysis of user-generated reviews can reveal key dimensions of customer experiences and factors influencing user evaluations of mobile applications. The prominence of User Satisfaction, Content



Consumption, and Reward Mechanism is also consistent with previous studies on digital and mobile applications, which frequently identify satisfaction, content-related experiences, and value-generating features as central dimensions of user engagement and platform evaluation (Azmi et al., 2026; Bacile et al., 2021).

In contrast, Advertising Exposure recorded 6,625 mentions, while Account Accessibility and Application Performance appeared less frequently, with 2,059 and 1,631 mentions, respectively. Although less dominant, these topics highlight important challenges experienced by users, particularly regarding advertisements, login accessibility, and technical issues. Addressing these concerns may contribute to improving the overall user experience and strengthening consumer satisfaction with the application.

Consumer Perception Insights

The analysis of PineDrama user reviews provides valuable insights into consumer perceptions toward the application. The findings indicate that user perceptions are primarily influenced by user satisfaction, content consumption, and reward mechanisms, which emerged as the most frequently discussed topics. The prominence of keywords such as seru, suka, bagus, keren, drama, nonton, koin, and tarik suggests that consumers perceive PineDrama as an entertaining platform that not only offers engaging drama content but also provides attractive reward opportunities. From the perspective of perceived value, consumers tend to evaluate digital applications positively when the benefits and value obtained from the application meet or exceed their expectations. In the case of PineDrama, entertainment value and reward-related benefits appear to contribute significantly to favorable consumer perceptions and positive evaluations of the application (Y. Li et al., 2021).

These findings also support Uses and Gratifications Theory, which suggests that users actively engage with media platforms to satisfy entertainment and enjoyment needs. The prominence of content-related discussions indicates that PineDrama successfully fulfills these motivations through its short-drama offerings. At the same time, the importance of reward-related discussions suggests that consumers evaluate the platform not only based on entertainment outcomes but also on the additional value generated through incentive-based features.

Despite the predominance of positive perceptions, several concerns were identified, particularly regarding account accessibility and application performance. Complaints related to



login difficulties, account access, application loading, and other technical issues were frequently observed in negative reviews. These findings indicate that while consumers generally perceive PineDrama positively, improvements in system reliability and accessibility remain important for strengthening consumer perceptions and enhancing overall satisfaction with the application.

More broadly, these findings reflect emerging trends in digital consumer behavior, where users increasingly expect digital platforms to provide not only functional services but also engaging experiences and additional value through rewards, incentives, and personalized features. The coexistence of entertainment-related and reward-related discussions in PineDrama reviews suggests that contemporary consumers evaluate digital applications holistically, considering both experiential and value-based benefits when forming perceptions and satisfaction judgments. Consequently, digital platform providers must balance content quality, user experience, and incentive mechanisms to remain competitive in increasingly crowded digital entertainment markets.

Managerial Implications

The findings indicate that consumer perceptions toward PineDrama are primarily shaped by content consumption, user satisfaction, and reward mechanisms. The dominance of positive sentiment and the frequent appearance of keywords related to drama content and rewards suggest that users perceive value not only from entertainment experiences but also from the incentives provided by the platform. Therefore, PineDrama management should continue investing in high-quality short-drama content, personalized content recommendations, and transparent reward mechanisms. Maintaining an effective balance between engaging content and attractive rewards may strengthen perceived value, sustain user engagement, and encourage long-term platform loyalty.

At the same time, negative reviews highlight several areas requiring managerial attention, particularly account accessibility, login difficulties, and application performance. These findings suggest the need to improve system reliability, strengthen authentication and account recovery processes, and minimize technical disruptions that may negatively affect user experiences. In addition, responsive customer support and effective complaint-handling mechanisms are essential for reducing user frustration and maintaining consumer trust. Addressing these issues while



preserving content quality and reward effectiveness may contribute to higher user satisfaction and more favorable consumer perceptions of the platform.

Limitations and Future Research

This study has several limitations that should be acknowledged. First, the analysis was based solely on user reviews collected from the Google Play Store, which may not fully capture consumer opinions expressed through other digital channels such as the Apple App Store, social media platforms, online forums, or community discussion groups. Second, sentiment classification was conducted using a rating-based approach, which provides an efficient method for large-scale sentiment analysis but may not always accurately reflect the emotional tone expressed in review texts. Third, the study relied on cross-sectional data collected during a specific period, limiting the ability to examine changes in consumer perceptions over time.

Future research may extend the present study by incorporating review data from multiple platforms to obtain a more comprehensive understanding of consumer perceptions toward digital entertainment applications. The application of machine learning and deep learning techniques may also improve sentiment classification accuracy and provide deeper insights into user opinions. In addition, longitudinal studies could be conducted to investigate how consumer perceptions evolve in response to platform updates, content changes, and reward-system modifications. Comparative analyses involving PineDrama and competing short-drama applications may further enhance understanding of the factors influencing user preferences and competitive positioning within the digital entertainment market. Finally, future studies may explore cultural differences in digital entertainment consumption to examine whether user perceptions, motivations, and engagement patterns vary across different cultural and geographic contexts.

CONCLUSION

This study explored consumer perceptions toward the PineDrama application through sentiment analysis, keyword exploration, and topic identification based on Google Play Store reviews. The findings reveal that consumer perceptions are predominantly positive, with user satisfaction, content consumption, and reward mechanisms emerging as the most frequently discussed aspects. Positive evaluations were primarily associated with engaging drama content,



enjoyable viewing experiences, and opportunities to earn rewards, while negative perceptions were largely related to account accessibility, login difficulties, and application performance issues.

From a theoretical perspective, the findings contribute to the digital consumer behavior literature by demonstrating how consumer perceptions of digital entertainment applications are shaped by both entertainment-related and value-based factors. The results support Uses and Gratifications Theory by showing that users actively engage with PineDrama to satisfy entertainment needs, while Perceived Value Theory helps explain the importance of reward mechanisms in generating favorable evaluations. The study further highlights that user perceptions are influenced not only by content quality but also by the additional value created through incentive-based features, suggesting that reward mechanisms have become an important component of consumer engagement in digital entertainment platforms.

From a managerial perspective, the findings indicate that sustaining user engagement requires a balanced strategy that combines high-quality content, reliable system performance, and effective reward mechanisms. The results suggest that entertainment platforms should continuously improve account accessibility, application reliability, and customer support while maintaining attractive content offerings and transparent reward systems. Furthermore, the growing importance of personalized user experiences presents opportunities for the adoption of AI-driven recommendation systems that can deliver more relevant content and strengthen user engagement. By integrating entertainment value, reward-based incentives, and personalization strategies, digital entertainment platforms may enhance consumer satisfaction and support long-term platform growth.

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