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Google Play review analysis of digital mobile applications of Islamic microfinance institutions

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ABSTRACT

The study aims to analyze user reviews of Islamic microfinance mobile applications to evaluate their effectiveness for micro, small, and medium-sized enterprises (MSMEs). Using the netnography method, this study collected and analyzed 4,131 reviews from the Google Play Store, focusing on applications with ratings above 4.5. The data was categorized into positive and negative reviews. Key findings indicate that users appreciate 50.42% of positive reviews expressed satisfaction and motivation to advance, 28.90% praised the ease of transactions via the application, and 20.68% appreciated the practical benefits in any payment, while with frequent errors (25.53%), issues with activation codes (21.28%), and transaction failures (17.02%) being the most common complaints. The study recommends improving technical reliability to enhance user satisfaction. Future research should explore user experiences in more diverse digital environments. This research contributes to understanding user perceptions and strengthening the development of Islamic microfinance applications.

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1. INTRODUCTION

Indonesia has the largest Muslim population in the world. Islam influences community behavior, economic activity, business sector, and microfinance in Indonesia. Some micro-small entrepreneurs prefer to deal with microfinance institutions (MFIs) based on their Islamic beliefs, which is generally the reason for the emergence of Islamic MFIs. Islamic MFIs arise because of the public need for microfinance services based on Islamic sharia principles [1], [2]. In practice, Islamic MFIs not only focus on the rules of Islamic law (sharia) in economic activity but must also accommodate Islamic moral values inherent in economic activity [3]. Some Islamic values are an attitude of concern, sensitivity to poverty conditions, and a willingness to share and look for creative ideas in solving poverty problems [4]–[6]. These values align with the spirit underlying the birth of sharia-based MFIs [7]. With high enthusiasm based on Islamic values, MFIs both at the global level and in Indonesia have distinctive characteristics, namely emotional closeness and social sensitivity to the conditions of poor people in the area of origin of the MFI [8].

The growth of technology is developing and significantly impacts all sectors of life in society [9]. Technology is an essential need in society, one of which is in the economic field. Along with the development of the technological era in the financial system, one of which is using application-based services in banking and financial institutions that are increasingly innovations to provide the best service to make it easier for customers to carry out transactions without having to come to the bank office or other financial

institutions [10]. Technological developments present an excellent opportunity for companies to offer new and exciting innovations, especially by combining existing competencies with current digital capabilities [11]–[13]. Financial transaction services in the internet of thing (IoT) era are easily accessed from home and work [14].

Financial technology leads to digitized internal processes, customer interaction with financial institutions, and digital financial products such as credit or digital deposits [15]. New organizations have the advantage of being digitally native organizations capable of creating an environment for digital business where digital information is at the core. In contrast, older organizations must digitize content and reorganize old processes using digital solutions [16]. In the context of financial inclusion, fintech presents many opportunities [17]. Adopting financial technology to financially include those that traditional methods fail to reach [18]. More and more conventional banks, MFIs, and development organizations use financial technology to deliver services. Equipping MFIs with technology enables institutions to work more efficiently and cost-effectively and be more agile and responsive to customer needs [19].

Islamic financial institutions exist as a manifestation of people's aspirations to pursue economic activities based on Sharia principles, in addition to conventional financial institutions established so far. These Islamic financial institutions include Islamic banks, Baitul Maal Wa Tamwil (BMT), or Islamic MFIs [20]. Unlike conventional banking, Islamic financial institutions use principles that can be tailored to customer needs, namely the principle of profit sharing, the principle of buying and selling, the principle of rent, and the principle of service [21].

The Islamic micro-financial institution that has had an essential role in the development of the Islamic economy must be able to adapt to existing changes, transforming all systems that were initially manual into digital systems. This industrial revolution can empower individuals and communities because this phase creates new opportunities for economic, social, and personal development [22]. The right technology can optimize BMT's performance in serving the community [23]; funds can be optimized by creating a link to the network. Financial technology requires additional funds and capital.

Although academics and practitioners stress the critical role of Islamic financial technology in Islamic microfinance, no previous studies generally highlight how their users perceive Islamic microfinance mobile applications. Earlier studies examined the positive effect of using Islamic microfinance mobile applications. However, there has been no attempt to study perceptions of these applications. Therefore, this study tries to cover a gap that researchers have not studied before, namely, the users' perception through the reviews they do on applications. This study has contributed as a reference and evaluation material for Islamic microfinance application developers and managers of Islamic MFIs.

This study aims to explore and analyze Google Play reviews of digital mobile applications in Islamic MFIs. This study will map the results of the analysis of the collected reviews into positive and negative descriptions as a reference for future mobile application makers of Islamic MFIs and evaluation of existing applications. The study is expected to provide valuable input from managers of Islamic MFIs in managing their mobile application services.

2. LITERATURE REVIEW

Fintech or financial services technology is defined as any technological innovation in financial services that leads to digital technology that changes business models to generate new revenue and value-added opportunities. These digital tools often disrupt established business models by creating new and efficient service delivery methods [24]. Financial technology leads to digitized internal processes, customer interaction with financial institutions, and digital financial products such as credit or deposits [17]. New organizations have the advantage of being native digital users. They can create an environment for digital business where digital information is at its core. In contrast, older organizations must digitize content and reorganize old processes using digital solutions [25].

In the context of financial inclusion, fintech presents many opportunities. Adopting financial technology has excellent potential to financially include people whom traditional methods fail to reach [26]. Financial institutions, including conventional banks, MFIs, and development organizations, use financial technology to deliver services. Fintech opens channels to include large numbers of excluded individuals and small companies, offering solutions that can be applied at scale [17].

Digital solutions enable fast credit decisions and loan disbursements, freeing up loan officers' time to serve more clients in more places than ever before [27]. MFIs equipped with technology enable institutions to work more efficiently and cost-effectively and be agile and responsive to customer needs [28]. Fintech or digital services have the potential to impact the entire financial value chain, with part or all of the value chain digitally transformed [29]. According to Pytkowska and Korynski [17], the most beneficial digital services have to do with the automation of loan applications and the management of documentation, and MFIs must

be careful to maintain the competitive advantage of personal relationships with clients. Fintech and digitalization solutions should be implemented based on a rational calculation of costs and benefits in line with the organization's mission, client needs, and capabilities [30].

The role of Islamic MFIs is needed by small and medium entrepreneurs, especially in financing services [31]. Small and medium enterprises (SMEs) provide valuable input to the community regarding their contribution to gross domestic product (GDP), create jobs, provide goods for local demand, and adjust the quality of goods and services according to regional demand. The contribution of SMEs to the world economy is precious and explained [32].

Islamic financial institutions have a solid foundation on which to build and even compete with the ever-growing traditional banking [33]. The majority of Muslims in Indonesia directly point to an up-and-coming market for BMT and other sharia-based goods. Islamic financial institutions have the opportunity to inform the public about the importance of sharia financial institution operations through the Indonesian Ulama Council (MUI) Fatwa, which prohibits bank interest [34]. This fatwa can provide legal guarantees for the prerequisites of operating Islamic financial institutions, ensuring the bank interest crisis has passed. In Islamic financial institutions, the relationship between the client and the institution is referred to as a partnership rather than one of debtors and creditors [35]. The partnership is between fund managers and funders. As a result, the institution's income affects the profit-sharing rate for shareholders and the revenue share offered to consumers or depository members [36].

Financial technology (fintech) is one of the fields of research studies that has quite a lot of studies using the technology acceptance model (TAM) [37]–[39]. Financial services have become essential to modern people's lives in line with increasingly advanced information technology. From a corporate perspective, fintech is an economic industry consisting of companies that use technology to make financial services more efficient [40]. It can be said that fintech is an essential key in industry/business competition. Through mobile phones and banking services, financial transactions, usually carried out by visiting the bank, can now be replaced without visiting the bank; just by using a mobile phone, the customer can save time and costs [41]. Mobile banking services make it easy for customers to conduct financial transactions such as balance inquiries, inter-account transfers, bill payments, credit top-ups, and other financial transaction services integrated with banking financial services [41], [42].

A study by Usman *et al.* [37], found the presence of perceived ease of use and perceived usability in using fintech in the context of Islamic philanthropy. Meanwhile, Shaikh [43] found that the ease of use of a mobile application from Islamic MFIs greatly influences the activeness of members or customers. However, the use of mobile applications for Islamic MFIs still needs to be improved due to limited knowledge. A study by Afwa and Sulistyowati [36], explained that using digital applications in the services of Islamic MFIs is one of the efforts to compete with other financial institutions. A study by Purwanto *et al.* [44] also shows that an application system in Islamic MFIs can run well and help with cash transactions, savings, and financing.

This study contrasts previous studies that focused on factors that affect Islamic MFIs' use of digital application services [43], [45]. This study thoroughly analyses reviews of many service applications offered on the Google Play Store. This study also has broader data affordability than studies in a small scope [36], [44] and involved data review from 37 applications of Islamic MFIs. This study wants to analyze the review results on the service application of Islamic MFIs as an evaluation and suggestion for future application development.

3. RESEARCH METHOD

This research helps develop Islamic MFIs or BMT in Indonesia and manage its applications. This research uses netnography or ethnography. The early literacy of ethnography centered on "community" and "culture" aligns with current understandings of online sociality. Although other forms of sociality are becoming increasingly dominant on the internet today, communities still exist, but perhaps more commonly, the widespread mass media channels offered by social media giants [46]. The idea of sociality emerged as better suited to today's dispersed social media environment. Consociality refers to "the physical and virtual shared presence of social actors in a network, providing opportunities for social interaction between them" [47].

The passive approach in netnography is conducted to enable researchers to understand community-based dynamics. The researchers of this study will be more able to choose the digital communities they already consider members without spending longer exploring new communities. This social media could be a Facebook group, an online forum, or any other place where people gather based on shared interests [48]. The study in ethnography of this study uses reviews of application confectioners in positive and negative groupings through comments on application services. Also, it analyses existing behavior and responses for the development of the application.

The object of research on BMT applications for MSMEs is to look at reviews of experiences that have used the BMT application, especially in helping MSMEs positively and negatively. Reviews used by telling or answering according to experience using the BMT application are recorded in the BMT application comment column found in the Play Store. The steps for netnographic studies in this article are described in Figure 1.

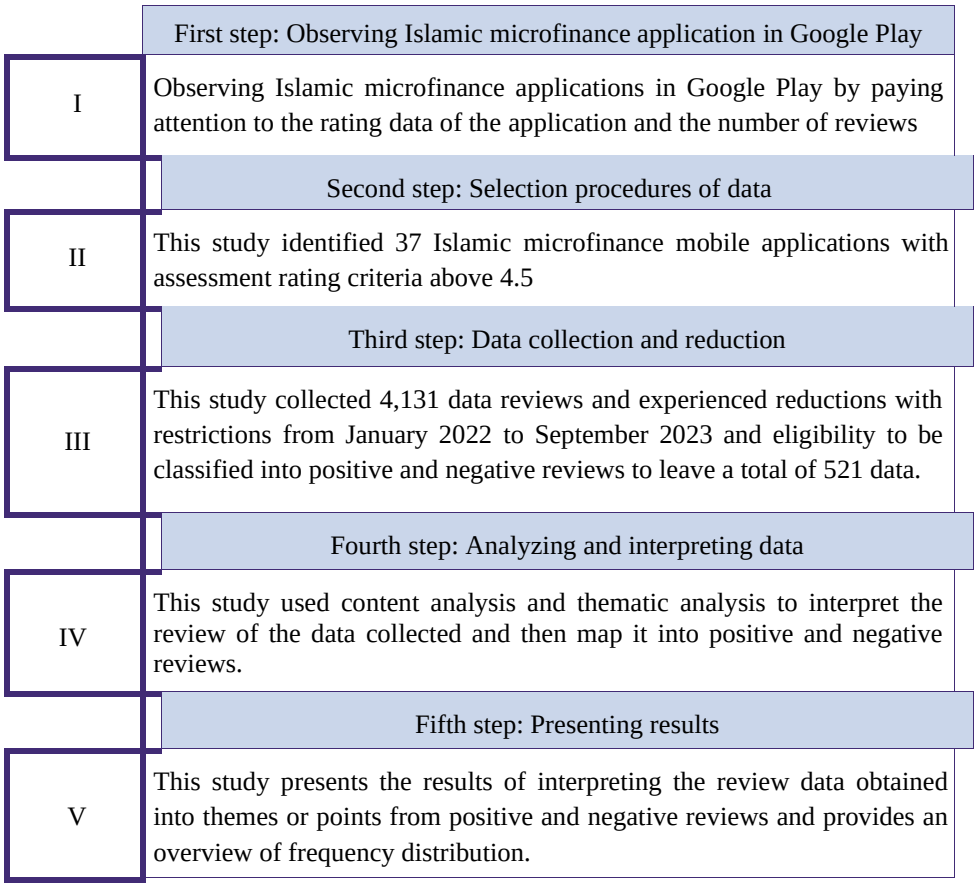

Figure 1. Steps for data analysis with the netnography method adopted and modified model from [49]

Table 1 depicts the total of 37 BMTs collected data. There were 4,131 review data consisting of positive and negative reviews. To deepen the data collection limitation in the results from January 2022 to September 2023 so that the overall data classification is 474 positive reviews and 47 negative reviews and is not included in the 3,610 categories because this study limits the time for data collection so that reviews outside January 2022 are considered not to meet the criteria. Then, the rating in data collection is limited from 4.5-5.0 ratings, which are used as samples.

Table 1. BMT review data

Types of reviews	Number reviews	Percentage (%)
Positive reviews	474	11.47
Negative reviews	47	1.14
Not in category	3,610	87.39
Total collected data	4,131	100

Table 2 shows that this study collected all the comments columns in the online Google Play Store about reviews about Islamic microfinance mobile applications. This researcher uses the ethnographic research method, which is similar to ethnography but in the virtual realm of the internet. This netnography is a research method to understand society and culture formed from human interaction through the internet network. It seeks to reveal the cultural vision of society and social groups built from human interaction in the virtual world of the internet [50].

Table 2. Application data, research reviewer from Google Play Store

No	Application	Rating	Reviews
1	Al-Hijrah mobile	4.9	1
2	AUM Mobile	4.9	2
3	BIM Mobile Members	5.0	106
4	BMD Sharia Mobile System	4.7	9
5	BMT Al-Hidayah	4.7	14
6	BMT Al Bahjah Online	4.9	14
7	BMT Al Hijrah Online	5.0	26
8	BMT Al Hikmah Mobile	5.0	11
9	BMT Ar-Roudloh	5.0	4
10	BMt Fajar Mobile	4.8	6
11	BMT Halaqoh Mobile	5.0	2
12	BMT Mitra Mandiri Mobile	4.5	3
13	BMT Manbaul Ulum Mobile	4.7	4
14	BMT NU Ngasem	4.8	16
15	BMT NU Pringsewu Mobile	4.9	5
16	BMT NU Sidayu Mobile	5.0	3
17	BMT MAP Mobile	4.9	76
18	BMT Pilar Mobile	5.0	3
19	BMT Sunan Drajat Mobile	4.8	4
20	BMT Sejahtera Mandiri	4.9	5
21	BMTNU Jombang Mobile	5.0	16
22	Kopsyah BMI Mobile	4.6	85
23	M-BMT Al Anfa Tarbiyatul Ulum	5.0	12
24	M-BMT Al Mahbub	4.9	14
25	M-BMT Al Yemen Brasan	5.0	7
26	M-BMT Rizqona Ikabu Tambakbera	4.7	9
27	Mobile BMT As Greetings	5.0	4
28	Mobile BMT ATT	4.8	7
29	BMT Khoiru Ummah East Java Car	4.8	5
30	Mobile BMT NU Balen	4.9	4
31	Mobile BMT QS (Ki Slamet JATIM)	4.9	4
32	Mobile BMT-MS (Mandiri Sejahtera)	4.8	7
33	My UGT	4.7	12
34	NU Smart	5.0	4
35	NUKAS Mobile (BMT NU Kasiman)	4.6	6
36	NUT Mobile	5.0	2
37	U-Mobile (BMT UGT Sidogiri)	4.7	12
	Total reviews		521

The netnography method invites researchers to be fully involved with the research subject. Researchers use computers and international internet networks to collect data in netnography [51]. In other words, the data is limited to interactions on research virtual social networks, mailing lists, forums, and chat rooms on the internet. There is neither physical presence nor face-to-face communication; instead. Everything is mediated by the representation of text, images, video, and audio on a computer screen [52], [53]. This study conducted observations when not physically present [54]. Netnography researchers use text and content analysis to analyze the data [55].

4. RESULTS AND DISCUSSION

4.1. Research results

This research is taken from reviews from the comments column on the Google Play Store in the intended BMT application. BMT application selection is limited by the app rating of 4.5 and above. The application reviews used for this study are obtained. There are 37 BMT applications available, with a thorough review of 4,131 reviews. An analysis with several categories was conducted. Table 3 shows that 11.47% of the total had positive reviews, 1.14% produced negative reviews, and 87.39% of reviews did not fall into that category. However, this study categorized the BMT application reviews into two reviews, namely negative and positive.

Table 3. Positive reviews of BMT application use in MSMEs

No	Points of review	Percentage (%)
1	Expressions of satisfaction and motivation to be more advanced and good	50.42
2	Ease of transaction via application	28.90
3	Practical benefits in any payment	20.68

The results of negative reviews on the BMT application are a form of disappointment customers feel in using the BMT application because it does not follow the customers' expectations. This study identified nine core negative reviews that appeared in BMT app comments. Out of 37 BMT applications with overall negative reviews, as many as 47.

The results of the review identification are described in Table 4. Table 4 shows that the highest negative review code is often erroneous, with 25.53%. Then the activation code does not appear/old verification/registration as much as 21.28%; Transactions often fail/long/double transactions/deducted without being sent as much as 17.02%. Transfer no other bank menu and cannot transaction in any form/must come to the office to up as much as 17.02%; Wrong password that causes log-in failure as much as 14.89%; and prioritizing the community over students and open downloaded applications instead of BMT products without permission and notification as much as 2.13%.

This negative review needs to be considered because it dramatically impacts BMT. These negative aspects cause its users not to use the application and will not even become BMT customers, where customers are assets for BMT to make profits and make good money turnover. So, fewer negative and more positive reviews will make prospective customers pay more attention and have higher expectations for using the BMT application.

Table 4. Negative reviews of using BMT applications for MSMEs

No	Points of review	Percentage (%)
1	Frequent errors	25.53
2	The activation code does not appear. or the old verification or registration continues	21.28
3	Frequently Failed/Old Double/Truncated Transactions without being sent	17.02
4	Transfer No other Bank Menu/Cannot transaction in any form / must come to the office to overcome the problem	17.02
5	Failure to log in	14.89
6	Prioritizing the community over students	2.13
7	Open the downloaded application ga BMT product without permission and notification	2.13

4.2. Discussion

The results of the overall review analysis are seen from the Google Play Store and can be identified in coding against lean negative and positive reviews. The basis is seen from the rating on the Google Play Store. Then, there are also 1-5 stars, which show the level of user satisfaction and the comments in it. However, it is necessary to identify these reviews in more detail. All review data are classified into both positive and negative reviews. This study intended to analyze positive and negative reviews in detail, which will contribute to evaluations for future development.

This study categorized the results into positive and negative reviews. The study provides insight into the preferences of app users. The analysis found that more complex apps had higher ratings than others [56]. An application tracking review using the BMT application found that components related to positive feedback will increase application usage, which is very important. Receiving positive feedback and visualizing success in using the BMT app will provide positive reinforcement to the user and thus will increase motivation. Users emphasize the importance of ease when making any transaction. Such as loans not being difficult. Features of Islamic microfinance apps that are easy to understand also play a role in user trust. Other exciting features are an e-wallet payments service, cheap admin fees, and good service. Users press that all payments can be made online so that no sacrifices are needed.

Users emphasize that the smooth functioning of the application is essential. When technical problems arise, users stop using applications such as applications often errors; transactions cannot all be done. Registration is difficult. Transactions take a long time, must come directly, and frequently fail. This condition will make users who are MSME actors stop using because technical obstacles make it untrustworthy. Dealing with all application problems becomes very crucial.

This finding is in line with the results of the analysis of the BMT application. The components that received the most positive comments are analyzed in more detail. Independent monitoring and feedback were generated to make progress toward this goal. Researchers [57] and [58] found that positive feedback and visualization would be helpful and motivating for users on the app's device is consistent with the research findings. Monitoring independently with feedback to help users achieve results as expected will result in more positive reviews than when monitoring only independently [59]. Feedback provides guidance and accountability to users, regardless of the valence of that feedback. However, the study sample users did not state that they felt responsible for their devices. The feedback kept them on track with the app's benefits. Users love to receive as many details as possible about the progress of the application to get the maximum

reward of satisfactory results. Qualitative studies reveal concerns that it is possible to perceive corrective feedback and lack of success as very scary and deterrent in growing applications [57].

Users emphasize the ease and speed of transactions, which is very important for the BMT application. In the era of digitalization, all online applications can be accessed and used without needing to come directly to the office. This finding aligns with [60], which shows that users of the finance technology app value the cost of the transaction, speedy verification, transfer fees, and security positively. This study provided important insights for service providers in improving performance and innovating the services offered. The most complained about technical issues that hindered the running of the application [61]. Content factors alone are not enough to provide satisfaction to customers. It is necessary to consider other factors, including technical matters, subscription fees, flexible packages, ease of navigation, and customer service.

5. CONCLUSION

This study aims to explore and understand user experiences and feedback on Islamic microfinance applications, particularly BMT applications, to provide insights for future development and improvement. The study analyzed 4,131 user reviews of Islamic microfinance mobile applications from the Google Play Store, focusing on applications with ratings between 4.5 and 5.0. Key findings indicate that 11.47% of the reviews were positive, with users appreciating the ease of transactions (28.90%), practical benefits in payments (20.68%), and motivational aspects (50.42%). Conversely, 1.14% of the reviews were negative, with frequent errors (25.53%), issues with activation codes (21.28%), and transaction failures (17.02%) being the most common complaints. The study recommends improving technical reliability to enhance user satisfaction and suggests that future research should explore user experiences in more diverse digital environments. This research contributes to understanding user perceptions and improving the development of Islamic microfinance applications. The study is limited to reviews from the Google Play Store, which may not represent the entire user base. Data collection was restricted to a specific period (January 2022 to September 2023), potentially missing out on more recent feedback. Additionally, the netnographic method does not capture offline interactions, which could provide additional context to user experiences. Future studies should consider including data from other platforms and extending the data collection period to capture more comprehensive user feedback. Combining netnography with different qualitative and quantitative methods, such as surveys and interviews, could provide a more holistic understanding of user experiences. Developers should prioritize addressing technical issues and enhancing app features based on user feedback to improve overall user satisfaction and trust in the applications.

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