Utilization of the Taspen Authentication Application for Pension Customer Services at PT. Bank Mandiri Taspen Baturaja Branch Office (KCP)

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Abstract

This study examines the effectiveness of the Taspen Authentication application in improving pension customer satisfaction at PT Bank Mandiri Taspen Baturaja Branch Office (KCP). This application is designed to facilitate the digital pension fund payment process through facial and voice authentication, which is expected to accelerate service and reduce the need for physical customer presence. Descriptive qualitative methods were used to obtain data through in-depth interviews, observations, and documentation studies with key participants, namely employees and pension customers. The results show that the application generally simplifies access and accelerates the fund disbursement process, increasing efficiency and user satisfaction. However, the application's effectiveness is still hampered by technical constraints such as the sensitivity of the biometric system and network disruptions during peak transaction times, as well as external factors such as low technological literacy, physical limitations, and language barriers among elderly users. The study recommends the development of a more adaptive biometric system, increased network capacity, intensive training for users, and the provision of manual services as an alternative for customers who are unable to use digital applications. These findings strengthen the literature on digital technology adaptation in the pension services sector and serve as an important reference for the development of an adaptive and sustainable inclusive digital service strategy at PT Bank Mandiri Taspen.

INTRODUCTION

Current developments in information and communication technology have significantly transformed various aspects of human life (Jahan, 2017). In the context of public services, information technology is key to increasing the efficiency, convenience, and effectiveness of services provided to the public. This progress is particularly evident in the management of payment and authentication systems within government institutions and state-owned enterprises (SOEs), which demand innovation in service processes.

Although information technology has been widely used, several studies indicate a gap between its potential and its effectiveness in practice, particularly in serving pension clients. The provision of digital services that is not fully optimized has the potential to cause dissatisfaction among beneficiaries, especially those still accustomed to conventional systems and with limited access to technology (Lubis, 2018).

The development of a digital authentication application at PT Taspen is part of the government's efforts to promote the digitalization of social services to accelerate and simplify pensioners' access to their rights (Rozali, 2021). The use of this smartphone authentication

application is an innovation aimed at replacing manual procedures, which have been considered slow and prone to error or misuse.

However, in practice, Taspen's authentication application has not been fully effective. Challenges primarily arise from the level of user adoption and comfort, the majority of whom are elderly retirees. This creates challenges in facial and biometric authentication, impacting customer satisfaction with pension fund payment services.

A previous study by Rozali (2021) found that service quality, trust, and the effectiveness of authentication applications significantly increased customer satisfaction with digital pension payment transactions at PT Taspen's Medan Main Branch. Meanwhile, Setiawan (2021) revealed that the quality of Taspen's authentication service at Bank BTPN Bulukumba positively impacted customer satisfaction, underscoring the importance of user-focused service innovation.

Based on these issues, this study focuses on assessing the effectiveness of Taspen's authentication application and its impact on pension customer satisfaction at PT Bank Mandiri Taspen KCP Baturaja, with the hope of identifying solutions to the obstacles encountered and formulating strategies for improving digital services. This study is limited to analyzing the effectiveness of Taspen's authentication application as a medium for implementing digital pension fund payments, particularly in supporting pension customer satisfaction. The study does not cover financial aspects and other operational policies outside the context of the application.

The urgency of this research lies in the need to understand the effectiveness of Taspen's authentication application in supporting pension customer service at PT. Bank Mandiri Taspen Baturaja Branch Office (KCP). This study is scientifically important to fill the gap in the literature regarding the adaptation of digital authentication technology in the pension services sector, as well as practically to provide input in developing service strategies that are responsive to customer needs.

The main objective of this study is to analyze the extent to which Taspen's authentication application can improve pension customer satisfaction in the pension fund payment process and to identify supporting and inhibiting factors for the application's use in the field. With this objective, the study is expected to provide a comprehensive overview of the implementation of authentication technology in the pension financial services environment. Through this review, it is hoped that insights will be obtained that can serve as theoretical and practical references for improving digital services, strengthening the literature on information technology integration in social services, and also serving as a reference for state-owned enterprises (SOEs), especially Bank Mandiri Taspen, in innovating for customer satisfaction.

METHODS

This research method uses a descriptive qualitative approach to gain an in-depth understanding of the phenomena occurring objectively and systematically. This approach was chosen because the research focuses on depicting the subjects' actual activities and experiences in a natural, non-manipulative manner (Sugiono, 2006; Muhajir, 2000). This method allows researchers to obtain rich, contextual data through direct observation and interaction with participants (Sujarwo, 2001).

The research was conducted at Bank Mandiri Taspen KCP Baturaja, located on Jl. Dr. M. Hatta next to the PBB Tax Office in Kemalaraja Village, East Baturaja District, Ogan Komering Ulu Regency, South Sumatra Province. Data collection took place over a specific period according to the schedule and research permit obtained.

The study population consisted of employees and retired customers of Bank Mandiri Taspen KCP Baturaja. The sample was selected purposively, considering the representativeness and representativeness of the phenomenon being studied. Primary data were obtained directly from in-depth interviews with key informants and participatory and non-participatory observations at the research location. Secondary data were obtained through documentation studies in the form of books, journals, and related sources to complement the primary data (Nur Indrianto, 1999; Azwar, 1998).

The research instruments included a semi-structured interview guide referring to the research problem indicators, as well as a systematic observation format to objectively record phenomena. Data validity and reliability were maintained through data triangulation techniques and cross-checking with respondents. The data collection procedure began with a pre-field phase for planning and coordination, followed by intensive field preparation and data collection, and an initial analysis phase throughout the data collection process until completion (Moleong, 2005).

Data analysis was conducted using a qualitative descriptive approach, comprising data collection, reduction, presentation, and conclusion drawing/verification. Data reduction focused on sorting and selecting information relevant to the problem formulation. Data presentation was conducted in narrative form, tables of relationships between categories, and flowcharts to systematically explain the findings. Conclusions were drawn through a verification process that maintained data consistency and accuracy before being presented as the final research results (Bungi, 2008; Sugiono, 2014). Data analysis was assisted by qualitative data management software, when necessary, to improve the order and efficiency of the data coding and categorization process.

RESULTS AND DISCUSSION
Effectiveness of Using the Taspen Authentication Application at PT. Bank Mandiri Taspen Baturaja Branch Office (KCP)

The Taspen Authentication application, developed by PT Taspen, aims to facilitate the digital disbursement of pension funds using facial and voice authentication, thereby minimizing the need for customers, particularly retirees, to visit banks or post offices in person. The application's effectiveness is measured by ease of access, processing speed, and user satisfaction.

Based on an interview with Ms. Ade (Business Service Administrator), the application is generally easy to access anytime and anywhere. However, she also highlighted complaints from customers who experienced authentication failures due to inaccurate facial and voice recognition, particularly when user responses were too fast or too slow. This indicates a deficiency in the application's biometric features, which require adjustments to user capabilities, particularly those of the elderly.

Similarly, Mr. Taufik (Security Officer) observed that the application significantly accelerated the disbursement process. He explained that the application allows customers to complete authentication from home, thereby reducing long queues at bank offices. This observation indicates that the application has achieved its strategic goal of improving service efficiency, in accordance with Kurniawan's (2005) effectiveness criteria, which defines effectiveness as achieving objectives in terms of quality, quantity, and planned time.

Similar support emerged from Ms. Marni, an app user, who expressed satisfaction and assistance with the app, which saves time and simplifies the disbursement process without having to queue at the office. This reinforces the finding that digital services can increase customer satisfaction and loyalty and facilitate access to banking services (Parasuraman et al., 1988).

However, an interview with Mr. Mulyadi (Security Officer) revealed that network disruptions frequently pose a problem during peak usage times, such as at the beginning of the month when pension payments are disbursed. He stated that the application server is often busy, resulting in slow and sometimes failed authentication processes. This situation reflects technical constraints that reduce the application's operational effectiveness, as Heeks (2002) noted regarding the importance of network infrastructure in information technology implementation.

Although the Taspen Authentication application has met most of the effectiveness criteria in terms of speed and ease of access, there is still a gap between technology and user capabilities, especially among the elderly who are less familiar with digital devices. The Technology Acceptance Model (TAM) suggests that perceived ease of use and perceived benefits are key to the successful adoption of a new system (Davis, 1989). Technical constraints and low digital literacy hinder this perceived ease of use, so even though the application is well-designed, its effectiveness is not optimal.

Therefore, there is a need for special training and assistance for users who are less technologically literate, as well as improving system performance to accommodate variations in user responses and network conditions.

Inhibiting Factors in the Use of the Taspen Authentication Application

The results of interviews and observations identified two groups of inhibiting factors: internal (systems and infrastructure) and external (users).

1. Internal Barriers

Ms. Selvi (Teller) revealed that authentication process failures often occur due to the system's high sensitivity to user response speed and the presence of background noise that hinders voice recording. This indicates that the system is still not adaptable to real-world user conditions.

Furthermore, Mr. Mulyadi added that network disruptions are the biggest obstacle, often leading to authentication failures, especially during peak application access periods. These network issues result in decreased service quality and reduced transaction success rates.

2. External Barriers

From a user perspective, Ms. Pariyani admitted to a lack of familiarity with smartphone and digital applications, leading to frequent authentication failures, even with assistance from her children or grandchildren. Mr. Ahmadin also stated that the application process was too complicated compared to the previous manual method, leading to confusion.

Additionally, Ms. Mislaini and Mr. Nurka stated that physical limitations such as vision and hearing impairment also make it difficult to use the app, while some retirees are not fluent in Indonesian, making it difficult to follow the app's instructions. These conditions pose serious barriers to app use, particularly for vulnerable groups.

3. Analysis

This barrier is consistent with literature findings showing that low levels of technological literacy and physical limitations are key factors in resistance to technology adoption among older adults (Czaja et al., 2006). This requires a multifaceted intervention approach, encompassing not only technology development but also education, mentoring, and inclusive application design.

Network constraints which are an internal factor are also in line with Heeks' (2002) study regarding the importance of network infrastructure readiness as one of the main determinants of the success of digital service applications in the public sector.

Implications and Recommendations

The findings show that although the Taspen Authentication application has in principle increased service efficiency, there are still many aspects that need to be improved to meet the needs of elderly users.

1. It is necessary to develop authentication systems that are more responsive and tolerant to variations in user responses and to improve the system's ability to recognize faces and voices in various lighting and environmental noise conditions.
2. Training and guidance programs for using the application must be intensified, especially for retirees who are less familiar with technology, by involving assistance from family and bank officers.
3. Increasing network and server capacity at branch offices should be a priority to avoid system failures during peak transaction periods.
4. There needs to be an alternative manual service mechanism for retirees who are truly unable to use digital applications, for example, home visit services by bank officers as is currently being done.

This is in accordance with the principles of public service policy which prioritizes justice and ease of access for all levels of society, including vulnerable groups (Kurniawan, 2005).

DISCUSSION

The use of the Taspen Authentication application at PT. Bank Mandiri Taspen Baturaja Branch Office (KCP) shows significant progress in the digitization of pension services, especially in terms of time efficiency and ease of access for customers. In general, this application has succeeded in reducing the need for customers to physically come to the office, speeding up the authentication process, and reducing long queues, as expressed by various related parties (Ade, Taufik, Marni). This indicates that the application has achieved the strategic objectives set in accordance with the public service effectiveness framework that emphasizes the achievement of quality, quantity, and service time (Kurniawan, 2005).

However, the application's effectiveness remains limited by serious internal and external challenges. Internal barriers primarily stem from the limitations of biometric systems, which are sensitive to variations in user responses and environmental disturbances such as lighting and background noise. Frequent network disruptions during peak usage periods also hamper the smooth authentication process (Selvi, Mulyadi). Technically, this indicates the need for increased system adaptability to user profiles and a reliable network infrastructure, in line with the principle of technological readiness for digital services (Heeks, 2002).

The dominant external barrier is low technological literacy among retirees, the majority of whom are older and less familiar with smartphones and digital applications (Pariyani, Ahmadin, Mislaini). Furthermore, declining physical abilities such as vision and hearing impairments, as well as language barriers, also complicate application use. This phenomenon is consistent with literature findings related to technology adoption among vulnerable groups, which require inclusive approaches and educational interventions (Czaja et al., 2006; Venkatesh et al., 2012).

Authentication systems that rely on facial and voice biometrics must be engineered to be more flexible and user-friendly for seniors, for example, with algorithms that are tolerant of variations in expression and voice recording conditions. Personal mentoring and training programs for retirees and their families need to be developed to improve digital skills and enhance perceived ease of use (Davis, 1989).

Network infrastructure improvements are crucial to maintaining service stability, particularly during the peak pension disbursement period. Furthermore, manual services and home visits must be maintained as a humane alternative for users who are technically or physically unable to use digital applications.

The overall findings confirm that the implementation of digital innovation in pension services must apply the principles of inclusive, adaptive, and sustainable public service design. The key to success lies not only in technology development but also in understanding user characteristics and providing appropriate support to ensure digital transformation has maximum impact without leaving vulnerable segments behind.

CONCLUSION

Based on the results and discussion, it can be concluded that the Taspen Authentication application developed to facilitate digital pension fund payments has successfully increased the efficiency and ease of access to services at PT Bank Mandiri Taspen KCP Baturaja. This application is able to accelerate the authentication process and reduce the need for pension customers to come directly to the office, thereby increasing user satisfaction in terms of time and convenience. However, the application's effectiveness is still limited by several significant obstacles, especially related to technical glitches such as the sensitivity of the biometric system and network problems during peak usage, as well as external factors such as low technological literacy, physical limitations, and language experienced by the majority of elderly pensioners.

This study emphasizes the need for a multifaceted approach to address these barriers, including enhancing technology to be more responsive and adaptive to elderly users, strengthening network infrastructure, and providing training and mentoring programs for retirees and their families. Furthermore, manual services should be maintained as an alternative for retirees unable to use digital applications. Therefore, the application of digital innovation in pension services must prioritize the principles of inclusivity, adaptability, and sustainability so that digital transformation can maximize benefits without neglecting vulnerable groups. This study provides an important scientific contribution to the literature on digital technology adaptation in the pension sector and provides a practical reference for strategies to develop digital services that are responsive to user characteristics.

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