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Reducing Older Generations' Apprehension Toward QRIS in Traditional Markets: A Visual Communication Approach

Dian Fitriarni Sari[1]✉, Rizky Alfadly[2], Amy Maulid[3], Yasha Langitta Setiawan[4], Deby Gemysa Faradiba[5]
[1] Visual Communication Design, Faculty of Fine Arts and Design, Institut Seni Indonesia Padangpanjang, Kota Padang Panjang, Indonesia
[2] Fashion Design, Faculty of Fine Arts and Design, Institut Seni Indonesia Padangpanjang, Kota Padang Panjang, Indonesia
[3] Product Design, Faculty of Fine Arts and Design, Institut Seni Indonesia Padangpanjang, Kota Padang Panjang, Indonesia
[4] Media Production, Faculty of Fine Arts and Design, Institut Seni Indonesia Padangpanjang, Kota Padang Panjang, Indonesia
[5] Vocational Makeup Artistry Education, Faculty of Performing Arts, Institut Seni Indonesia Padangpanjang, Kota Padang Panjang, Indonesia
correspond_author_email: dian.fitriarni@isi-padangpanjang.ac.id

Abstract

The adoption of QRIS in traditional markets remains uneven, particularly among older generations who experience low digital literacy and high levels of technology anxiety. These barriers are not solely technical but are strongly influenced by psychological factors such as fear of making transaction errors and lack of trust in digital payment systems. This study aims to develop a visual communication strategy to reduce apprehension and improve QRIS adoption among elderly users in traditional market settings. This research employs a qualitative approach using AIDA (Attention, Interest, Desire, Action) model to identify key issues derived from interviews, observations, and open-ended questionnaires. The findings are then translated into design solutions using the AIDA model as a framework for structuring communication strategies. The results indicate that visual communication design plays a significant role in bridging the gap between technological complexity and user understanding. By applying clear visual hierarchy, simplified information flow, trust-building messages, and step-by-step instructional visuals, the proposed design effectively addresses cognitive and emotional barriers. The study concludes that a behavior-oriented visual communication approach contributes to enhancing perceived ease of use and user confidence, reducing technology anxiety, and strengthening behavioral intention to adopt QRIS.

Keywords: qris, aida, older generation, traditional market, aida

1. Introduction

The transformation of Indonesia's digital payment system has seen rapid development over the past decade, in line with the increasing penetration of information technology, the use of mobile devices, and the public's demand for fast, efficient and secure transactions. The launch of the Quick Response Code Indonesian Standard (QRIS) by Bank Indonesia in 2019 marked a significant milestone in the standardization of QR code-based payment systems at the national level. QRIS enables interoperability between payment service providers, meaning users only need a single code for various digital payment platforms [1].

This development has not only improved transaction efficiency but has also promoted financial inclusion, particularly within the micro, small and medium-sized enterprise (MSME) sector. Data from Bank Indonesia shows that by 2025, QRIS had been adopted by tens of millions of users and merchants, predominantly within the MSME sector. This confirms that QRIS has evolved into a payment infrastructure that is integrated

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into daily economic activities, including within traditional market environments [2].

However, this rapid growth has not automatically been accompanied by an equal level of adoption across all segments of society. The older generation, particularly the elderly, still face various barriers to adopting digital payment technology. Demographically, the percentage of the elderly population in Indonesia continues to rise, including in West Sumatra, where it exceeds 10% [3]. This situation indicates that the elderly constitute a crucial segment that cannot be overlooked in the digital transformation process.

In the context of technology adoption, various studies indicate that the factors of perceived usefulness and perceived ease of use have a significant influence on technology acceptance [4]. However, among older adults, psychological factors such as trust and technology anxiety become more dominant variables [5]. Empirical studies show that older adults tend to have concerns regarding the risk of transaction failure, nominal errors, and potential financial loss, which ultimately reduces their level of trust in digital payment systems.

Furthermore, research on the adoption of mobile payments confirms that limited digital literacy, a lack of experience with technology, and the complexity of user interfaces are the main barriers for older age groups [6] [7] [8]. This suggests that adoption issues do not lie solely in the availability of technology, but also in how that technology is designed and communicated to users.

In the context of QRIS usage, the transaction process involves several visual and procedural stages, such as scanning the code, verifying the merchant, entering the amount, and confirming the payment. For older generations, this workflow can become complex if not presented in an easily understandable format. Therefore, a visual communication approach is crucial in bridging this understanding gap. Effective visual design can simplify information, enhance the clarity of instructions, and build users' trust in the system [9].

Traditional markets, as spaces for everyday economic interaction, offer a relevant context for examining this phenomenon. On the one hand, traditional markets have begun to integrate with digital payment systems, including QRIS. On the other hand, the users involved both traders and buyers are still predominantly adults and the elderly. This situation creates a gap between technological development and user readiness.

Padang Panjang Central Market is a concrete example of these dynamics. Efforts to digitize payments have begun to be implemented through various programs, yet the challenge of adoption among the older generation remains a significant issue. Interestingly, within the context of market spaces, visual communication elements such as signage systems have proven to assist users in navigating the space. This suggests that visual interventions hold great potential for application not only in spatial orientation but also in understanding digital payment systems.

Based on the above, it can be concluded that the main issue regarding the adoption of QRIS by the older generation lies not only in technological aspects, but also in how information is communicated visually and contextually. The gap between the growth of digital payment systems and the readiness of older users presents research opportunities in the field of visual communication design. Therefore, this study aims to examine how visual communication approaches can be used to reduce apprehension, build trust, and facilitate the older generation's understanding of using QRIS, particularly in the context of transactions at traditional markets.

2. Methods

2.1. Data Collection Methods

This study employs a descriptive approach utilizing two types of data: primary and secondary data. Primary data was obtained directly from respondents through questionnaires, observations, and interviews conducted at the research site, namely traditional markets that have implemented QRIS. The respondents consisted of 50 participants, comprising 25 customers aged 50 years and above, and 25 traditional market traders, selected to provide insights from both consumer and merchant perspectives regarding QRIS adoption and utilization in traditional market settings.

Meanwhile, secondary data was used to support the findings and was obtained from various sources of literature, such as academic journals, books and official publications from relevant institutions. The combination of these two types of data is used to obtain a comprehensive overview of the issues under investigation.

Primary data collection was carried out by distributing questionnaires to the general public, specifically targeting adults and the elderly as the focus of the study. The questionnaire was designed to measure levels of understanding, perceptions of ease of use, levels of trust, and anxiety regarding the use of QRIS.

In addition, direct observations were carried out in market environments to observe user behavior during transactions, interactions between buyers and sellers, and visual conditions that support or hinder the use of QRIS. Interviews were also conducted with several informants, both users and traders, to explore their experiences, perceptions, and the challenges faced in using the digital payment system.

Secondary data in this study serves to reinforce the analysis and provide a theoretical foundation for the findings from the fieldwork. Data sources include literature discussing technology adoption, technology anxiety, usability, and the principles of visual communication in interface design. In addition, data on the development of digital payment systems in Indonesia is also used to provide a broader context. By integrating primary and secondary data, this study aims to provide a deeper understanding of how a visual communication approach can help reduce older generations' anxiety when using QRIS in traditional markets.

2.2. Data Analysis Methods

The AIDA model (Attention, Interest, Desire, Action) is used as a conceptual framework for designing visual communication strategies aimed at changing user behavior. The analysis approach was used to identify, organize, and interpret patterns of meaning emerging from data derived from interviews, observations, and open-ended questionnaires. This approach was chosen for its flexibility in accommodating the complexity of qualitative data and its ability to generate contextual and in-depth interpretations of the social phenomena under investigation [10] [11].

In this study, the identification of key issues, such as low procedural understanding and high anxiety regarding the risk of transaction errors, was systematically translated into visual communication strategies at each stage of the AIDA model. At the attention stage, the design approach focused on the use of high-contrast visual elements, clear information hierarchy, and familiar symbols to minimize users' cognitive load (Lidwell, 2010; Sweller, 1988) [12][13]. The interest stage was developed through the presentation of a simple, sequential, and contextual flow of information, enabling users to understand the QRIS usage process gradually without feeling overwhelmed.

The AIDA model consists of four main stages: attention, interest, desire, and action. In this study, each identified theme such as a low level of understanding regarding the use of QRIS or high levels of anxiety regarding transaction errors was translated into appropriate visual communication strategies for each stage of the AIDA model. This study does not stop at the problem identification stage, but also produces systematic and targeted solutions based on visual communication design. This approach enables a clear link between field findings and design strategies, so that the resulting media is expected to improve understanding, reduce anxiety, and encourage the use of QRIS by older people in traditional markets.

More specifically, the attention stage focuses on the design's ability to capture the visual focus of elderly users through the use of contrasting colors, clearly sized elements, and familiar symbols. This is crucial given the visual perception and attention limitations of the older age group. The interest stage is directed towards presenting information in a simple, sequential, and contextual manner, so that users can understand the flow of QRIS usage gradually without experiencing excessive cognitive load. At this stage, information structure and message clarity are key to building user engagement.

Next, the desire stage plays a role in building users' confidence and sense of security by conveying messages that emphasize ease of use, security, and the minimal risk of transaction errors. Visual strategies at this stage are designed to reduce technology anxiety by featuring reassuring elements, such as clear process illustrations, verification symbols, and messages that are persuasive yet simple. The action stage is the final, behavior-oriented stage, where communication design focuses on providing explicit, concise, and easy-to-follow visual instructions, such as step-by-step guidance. Consequently, users not only understand the information presented but are also encouraged to immediately put QRIS into practice in real-life transaction scenarios.

3. Results and Discussions

3.1. Analysis of the AIDA Approach

At the attention stage, the design strategy focuses on optimizing visual attention by reinforcing the information hierarchy and using significant color contrast. This is based on the characteristics of older users, who experience a decline in visual sensitivity and attention-selection capacity. The design utilizes dominant visual elements such as large headlines, figurative illustrations, and the representation of a QR code as a central object. This approach serves as a visual anchor that helps users quickly identify the main focus. Conceptually, this stage plays a role in overcoming the initial barrier to engagement, where

users who previously had no interest in digital technology begin to be encouraged to pay attention to the visual stimuli presented.

The interest stage is developed through the simplification and segmentation of information to align with the cognitive processing capacity of older users. The design adopts a chunking approach and sequential information flow, whereby information is presented in small units that are logically interconnected. The use of a card-based layout and simple language allows users to understand the QRIS concept gradually without experiencing cognitive overload. The visualization of familiar objects, such as a physical QR code on a transaction counter, also reinforces the association with the user's real-life experience. Thus, this stage not only builds interest but also facilitates deeper cognitive engagement with the information presented.

The desire stage in this study serves as a transformative phase from understanding to conviction. The primary focus at this stage is to foster positive perceptions and reduce anxiety regarding the risks associated with technology use. The visual strategies employed emphasize aspects of legitimacy, security and practical benefits. Institutional representations (Bank Indonesia), security symbols, and narratives concerning transaction recording and protection against counterfeit money are key elements in building perceived trust. Furthermore, presenting information in the form of structured bullet points supported by visual icons helps to accelerate intuitive information processing, which is particularly relevant for users with limited digital literacy. This stage demonstrates that visual communication design can function as a trust-building mechanism, rather than merely a medium for conveying information.

The action stage is a critical phase in which the user's intention is transformed into actual behavior. In this context, design acts as a behavioral guide that bridges the gap between understanding and action. The QRIS user guide is designed using a procedural visualization approach, which involves presenting operational steps in a linear and systematic manner. Each stage is accompanied by visual illustrations that serve as cognitive scaffolding, enabling users to follow the process without having to rely on abstract understanding. This approach effectively reduces uncertainty and enhances users' self-efficacy in carrying out digital transactions. In other words, the design not only provides information but also facilitates an applied learning experience.

3.2. Implementation on Design

Figure 1. Introduction of QRIS

Figure 2. Design for give information why we should trust QRIS Payment system

Figure 3. Definition of QRIS

Figure 5. Benefit use QRIS

Figure 4. Step by step to use QRIS Payment

Figure 6. Design Implementation 1

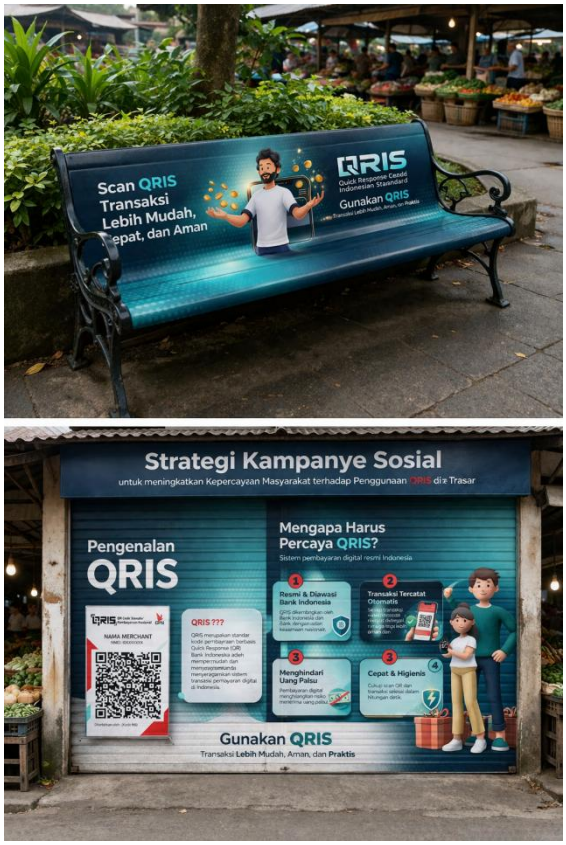

Figure 7. Design Implementation 2

4. Conclusions

This study indicates that the primary challenges in the adoption of QRIS among the elderly do not lie solely in technological aspects, but rather in limited understanding, low digital literacy, and high levels of anxiety regarding the risk of transaction errors. These findings confirm that psychological factors, such as trust and technology anxiety, play a more dominant role than the functional aspects of the technology itself.

Through a visual communication design approach based on the AIDA model (Attention, Interest, Desire, Action), this study successfully developed a systematic and targeted communication strategy to bridge the gap between the complexity of digital payment systems and the characteristics of elderly users. Each stage of the AIDA model was operationally implemented into specific design solutions, ranging from capturing attention through contrasting visual elements, building understanding through the presentation of simple and structured information, reinforcing trust through messages emphasizing security and legitimacy, to encouraging action through practical visual guidance.

The findings of the study indicate that visual communication design plays a strategic role as a tool for behavioural intervention, not only conveying information but also influencing perceptions, reducing anxiety, and increasing users' confidence in digital technology. The media produced is able to accommodate the needs of older users through an adaptive visual approach, such as the use of familiar illustrations, a step-by-step information structure, and easy-to-follow instructions.

Author Contributions Statement *(mandatory)*

C : Conceptualization
M : Methodology
So : Software
Va : Validation
Fo : Formal analysis
I : Investigation
R : Resources
D : Data Curation
W : Writing - Review

Name of Author	C	M	So	Va	Fo	I	R	D	W
Dian Fitriarni Sari	✓	✓		✓	✓	✓		✓	✓
Rizky Alfadly	✓		✓		✓	✓		✓	✓
Amy Maulid	✓		✓	✓			✓		✓
Yasha Langitta Setiawan				✓	✓				✓
Deby Gemysa Faradiba		✓			✓			✓	✓

Data Availability *(mandatory)*

- The authors confirm that the data supporting the findings of this study are available within the article
- The data that support the findings of this study are available from the corresponding author

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