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ANALYSIS TO DETERMINE THE ACCEPTANCE AND USE READINESS OF RURAL COMMUNITIES TO ADOPT SYSTEM PADU

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ABSTRACT

This research investigates the acceptance and use readiness of rural communities towards the system PADU, focusing on technology readiness as a critical determinant. The system PADU serves as Malaysia's latest digital transformation initiative, aiming to streamline government service delivery and bridge socioeconomic gaps. Employing a qualitative approach, data was collected from Linggi, Negeri Sembilan, through semi-structured interviews with community members, particularly village heads. Thematic analysis revealed key insights into the factors influencing acceptance and readiness for PADU adoption. Findings underscored the importance of assistance, community training, and communication strategies in facilitating acceptance, particularly among elderly populations with limited technological skills. Additionally, peer support networks and tailored outreach initiatives emerged as effective mechanisms for promoting technology adoption in rural settings. This study adds to the current literature by bringing light on the subtle processes of acceptance and use readiness for digital systems in rural areas, with implications for policymakers and stakeholders involved in digital inclusion efforts.

ARTICLE INFO

1.0 INTRODUCTION

PADU is Malaysia's new digital database, bringing detailed and reliable data for policymaking. It stores utility information and more, aiming to be a central system combining data from different government agencies. Registering ensures eligible citizens get targeted benefits like subsidies and assistance. PADU aims to improve government services, optimize resources, empower society economically, and bridge socioeconomic gaps.

Several systems like MySejahtera and eKasih have benefited Malaysians, especially in rural areas, showing ICT's crucial role in various aspects of life. However, rural communities face challenges like limited communication networks and access to services. Understanding their readiness for PADU implementation is crucial, especially for developing nations. This research focuses on assessing rural community readiness in Linggi, Negeri Sembilan, Malaysia, using data analysis tools like a Word cloud generator and Microsoft Excel.

Rural communities, like Linggi, often struggle with adapting to new government systems. This research investigates Linggi's readiness to implement PADU, focusing on their readiness and acceptance to adopt the system. Understanding Linggi's readiness is crucial for identifying barriers and facilitators to successful implementation. Investigating the acceptance of PADU in Linggi will reveal community attitudes towards the system, addressing concerns like data privacy and security. This research aims to inform policymakers and implementers to develop effective strategies for equitable access and positive outcomes, contributing to inclusive governance and citizen engagement.

This study investigates the readiness of rural communities, like Linggi, to adopt System Padu, addressing a pressing issue in society. By exploring how these communities accept information technology, the study aims to fill gaps in existing literature. It takes a qualitative approach, using standardized assessments and longitudinal data collection to provide robust evidence.

2.0 LITERATURE REVIEW

2.1 Acceptance and Use Readiness

Acceptance and use readiness evaluate an organization's readiness to deploy and employ a new technology or system. The researchers examined how optimism, innovativeness, discomfort, and insecurity affect user perceptions of information system advantages and ease of use and their desire to utilize them. The research offers useful insights into the elements that affect user acceptance and desire to utilize information technology inside Sharia microfinance organizations. This indicates that it is important to consider psychological aspects like optimism, innovativeness, and discomfort while creating and introducing information systems to enhance acceptance and effective use in the workplace (Yahya et al., 2024).

The research indicates that technology readiness significantly influences nurses' acceptance of electronic health record (EHR) systems. Nurses who are more technologically ready, in terms of their skills, knowledge, and comfort with technology, are more likely to accept and use EHR systems effectively. Additionally, the study highlights the importance of perceived usefulness and ease of use in influencing nurses' acceptance of EHR systems. Nurses who perceive EHR systems as useful and easy to use are more inclined to adopt the technology in their daily practice (Alsyouf & Ishak, 2017).

Through evaluating the abilities of employees in utilizing digital technology and their perspectives on information systems, healthcare organizations can gauge their readiness for implementing electronic health records or other digital solutions. Understanding staff perceptions, confidence levels, and potential barriers can help in designing

targeted training programs, providing necessary support, and addressing concerns to enhance acceptance and use readiness (Kuek & Hakkennes, 2019).

Understanding and assessing acceptance and use readiness within an organization is essential for successful IS adoption. It involves evaluating the willingness, attitudes, beliefs, and intentions of individuals towards the new system. Factors such as training, support, communication, and leadership are critical in ensuring that users are prepared and motivated to embrace the change brought about by the new technology (Doolan, 2003). The study extended the framework of organizational readiness in IS adoption by incorporating additional measures such as technical support and user training (Yusof & Aziz, 2015).

2.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology It combines eight prominent technology acceptance and usage study paradigms into a theoretical framework. Eight theories of technological acceptance inform the UTAUT model (Venkatesh et al., 2003). UTAUT is used in research to analyze and predict technology uptake and use in organizational and non-organizational settings. In the hypothesis, performance expectation, effort expectancy, social influence, and conducive factors affect technology usage and behavior. By adding additional exogenous, endogenous, moderation, and outcome processes, UTAUT extensions have improved the basic model. These advancements need greater research into contextual factors that affect technology uptake and usage, which improves user behavior understanding. UTAUT's strong and adaptable framework for studying technology acceptance and use, versatility in various contexts, and potential for integration and extension to better understand individual technology adoption and usage behavior are its main advantages (Venkatesh et al., 2016).

3.0 METHODOLOGY

3.1 Research Design

This study used a qualitative approach to explore the technology readiness of rural communities toward the PADU system in Linggi, Negeri Sembilan. Ruslin et al. (2022) stated that semi-structured interviews were conducted to gather in-depth insights from participants. These interviews allow for flexibility in questioning, overcoming language barriers, and ensuring the accuracy and comprehensiveness of the data through audio recordings. Researchers also addressed biases, maintained respondent motivation, and considered various factors affecting data accuracy and consistency. Previous research highlights the benefits of semi-structured interviews for collecting comprehensive and relevant data in qualitative research. Overall, this study provides valuable insights into the perceptions of rural communities regarding PADU system readiness.

3.2 Research Sampling

For this study, village heads with good connections to residents in the Linggi area were chosen as respondents. This area was selected for practical and cost-effective reasons. The study employed a diversity sampling strategy, recommended for conducting semi-structured interviews. Kirchherr and Charles (2018) suggest that snowball sampling is a method used in qualitative social research. It involves recruiting participants through recommendations from current participants. This method helps access hard-to-reach groups, such as those spread out over large areas or facing social stigma. Participants may need to feel confident to participate. Snowball sampling is valued for its simplicity and adaptability, making it suitable for communities with low numbers, mobility, or transience.

3.3   Method of Conducting Qualitative Research

3.3.1 Research Participant

The interview questions were prepared on the basis of the research goals and existing literature on readiness for new systems. These questions focused on understanding the roles, challenges, and future suggestions related to exploring technology readiness in rural communities for the PADU system. All materials were prepared in English, as village heads serve as vital links between the Linggi communities and the government. Additionally, they are trusted representatives who are aware of their communities' behavior. Village heads from four different villages were included such as Kampung Tampin Linggi, Kampung Sawah Sunggala, Kampung Sungai Raya, and Kampung Pengkalan Durian.

3.3.2 Data Analysis Approach

Thematic analysis is a popular method in qualitative research for identifying patterns (themes) in data. Researchers start by thoroughly reviewing and analyzing the data to understand its content. They then create initial codes by identifying important keywords or phrases related to their research goals. These codes are grouped into potential themes based on similar ideas or concepts. Researchers refine these themes to accurately represent the data. Next, they identify and label themes, which form the basis for analysis and interpretation. Finally, researchers write up their findings, providing explanations for each theme along with quotes or examples from the data. Thematic analysis is a flexible and structured approach for uncovering insights in qualitative data, offering detailed descriptions of participants' experiences.

Figure 1.0 Process of Thematic Analysis for this Study

4.0 FINDINGS AND DISCUSSION

In terms of the acceptance and use readiness among rural communities towards system PADU this theme focuses on factors such as skills, ease of use, skills, supports, and attitudes surrounding technology adoption within rural communities toward accepting and utilizing the PADU system.
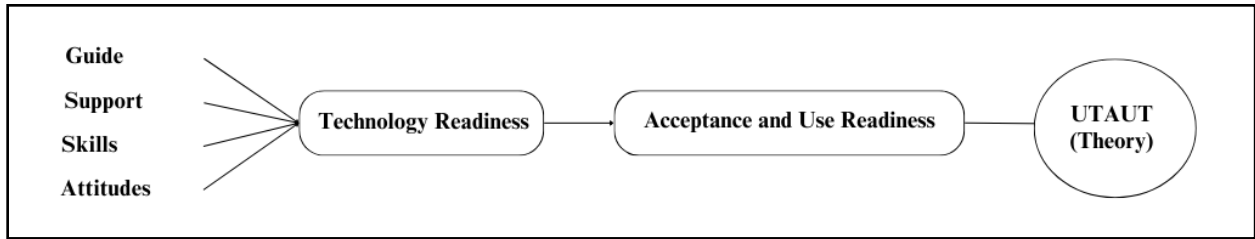
Figure 2: Framework of this study

The data framework as in Figure 2 in this research consists of four criteria: code, categories, theme, and theory. This investigation obtained four distinct codes, including one for coding details, one for categories, one for themes, and one for theory. This research investigates the impact of attitudes, skills, support, and guidance on the technical preparedness of rural communities for adopting the PADU system. To do this, the study will incorporate UTAUT concepts into the analytical process.

Research Objectives	Findings & Discussion
To understand the challenges in exploring the technology readiness of rural communities towards system PADU.	- Skills - Attitudes - Support
To investigate future suggestions in exploring the technology readiness of rural communities towards system PADU.	Awareness program

Table 1: Summary of findings and discussions

According to the findings presented in Table 1, the community in this area faces challenges related to technology acceptance and use readiness, particularly in adopting new systems. Most residents lack proficiency in using mobile phones beyond basic functions like calling and texting. Their limited technological skills suggest that the primary hurdle lies in understanding rather than capability. This lack of familiarity with technology poses a barrier to adopting or adapting to new systems. To address this, efforts should focus on providing education and training tailored to the community's level of technological proficiency. By improving their understanding and confidence in using technology, residents can be better prepared to embrace new systems effectively.

Furthermore, the data shows that the community responded positively to the PADU system, both in understanding its benefits and agreeing to register for it. The interviewee expressed support for embracing technology, particularly the PADU system, due to its perceived benefits. Additionally, it was noted that most elderly individuals were willing to follow online registration instructions without complaint. This indicates a favorable attitude towards adopting new technology, aligning with technology readiness and acceptance and use readiness principles.

Hence, the data indicates that the interviewee organized assistance for village residents to register for the PADU system over a week at the community computer center. This was done to accommodate the older population who may need help with online registration due to their limited familiarity with technology. It was noted that assistance isn't limited to government officials or village heads; family members, more tech-savvy children, also help with registration. Many elderly individuals rely on their children or external assistance, such as state government and village heads, to facilitate the registration process. This underscores the importance of support and assistance in

fostering acceptance and adoption of the new system, reflecting technology readiness and acceptance and use readiness principles.

Addressing identified difficulties in the Linggi area regarding the acceptance and adoption of the PADU system, several recommendations can be made. Firstly, there is a need to expand assistance programs, including establishing dedicated support centers or hotlines where community members, particularly the elderly, can receive guidance and assistance with the registration process. Additionally, community-wide training initiatives should be implemented to improve digital literacy skills, with a focus on basic technology usage and online registration processes. Promoting peer support networks within the community can also be beneficial, fostering mutual assistance and mentorship among individuals with varying levels of technological proficiency. Moreover, enhancing communication and awareness about the PADU system through various channels, such as community meetings and social media platforms, can help increase participation and acceptance. Tailored outreach strategies should be developed to reach marginalized groups, including deploying mobile registration units to provide on-site assistance to those unable to access centralized facilities. By implementing these recommendations, stakeholders can work towards overcoming barriers to technology adoption in the Linggi area, promoting greater inclusivity and participation in digital initiatives within the community.

5.0 CONCLUSION

In conclusion, this study sheds light on the acceptance and use readiness of rural communities towards the PADU system, emphasizing the pivotal role of technology readiness. Through qualitative analysis, key insights were gleaned regarding the factors influencing the acceptance and adoption of the PADU system in Linggi, Negeri Sembilan. The findings underscored the significance of assistance programs, community training initiatives, and effective communication strategies in facilitating technology adoption, particularly among elderly populations with limited digital literacy. Moreover, peer support networks and tailored outreach efforts emerged as effective mechanisms for promoting acceptance and use readiness in rural settings.

By addressing these challenges and leveraging community strengths, stakeholders can enhance the inclusivity and effectiveness of digital initiatives like PADU, ultimately contributing to socio-economic development and bridging the digital divide. Moving forward, policymakers and practitioners must prioritize targeted interventions and sustained support to ensure equitable access and meaningful participation in the digital ecosystem. This research makes a valuable contribution to the ongoing discussion on the acceptance of technology in rural areas. It provides useful insights and ideas for promoting technological inclusion initiatives in Malaysia and other similar contexts.

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