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Development of a Website-Based Information System for the Sumedang TBM Forum

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ABSTRACT: Community Reading Centers (Taman Bacaan Masyarakat/TBM) play a strategic role in promoting a culture of literacy at the community level. However, in the digital era, most TBMs, including those located in Sumedang Regency, have not optimally utilized information technology, particularly in terms of documenting and publishing their activities. Limited digital literacy among TBM managers has become one of the main factors hindering the effective use of digital platforms as a means of communication, information dissemination, and activity reporting.

This study aims to develop a website-based information system for the Sumedang TBM Forum, with a focus on the development of an online press release feature that enables each TBM to independently and systematically publish its activities. This study employs a qualitative approach, with data collected through interviews, observations, and documentation studies to obtain a comprehensive understanding of user needs.

Theoretically, this study is expected to contribute to the development of participatory information system studies within non-formal education institutions. Practically, it offers an applicable digital solution to strengthen the institutional capacity of TBMs in managing information and publishing activities. The scope of the study includes user needs analysis, system design, web-based feature development, and limited system testing in the Sumedang Regency area.

The expected outcome of this study is the development of an information system prototype that can enhance transparency, management efficiency, and the reach of TBM activity publications, while also supporting the digital transformation of local literacy communities.

KEYWORDS: Community Reading Centers (TBM); Web-Based Information Systems; Digital Literacy; Press Releases; Digital Transformation

I. INTRODUCTION

Community Reading Centers (Taman Bacaan Masyarakat/TBM) represent a strategic instrument in efforts to enhance literacy at the community level. As community-based literacy hubs, TBMs play a significant role in providing access to reading materials, learning spaces, and various educational activities that contribute to the development of a knowledgeable society. The existence of TBMs has become increasingly relevant in supporting human resource development, particularly in areas with limited access to formal educational facilities.

However, in the context of rapid advancements in information technology, most Community Reading Centers (TBMs) in Indonesia have not yet been able to optimize the use of digital technologies in managing and publishing their activities. This limitation is attributed to constraints in infrastructure, managerial capacity, and digital literacy (Munir & Hidayatullah, 2019; Wulandari et al., 2025). Consequently, this condition affects the low visibility of TBM activities in the public sphere and limits the dissemination of information to a broader audience (Nuryanto et al., 2025).

These challenges are largely influenced by the low level of digital literacy among TBM managers. Several studies indicate that limited skills in utilizing digital media, including social media and web-based platforms, constitute one of the primary barriers to effective activity publication and reporting (Wulandari et al., 2025). Furthermore, limited management capacity and supporting infrastructure further exacerbate the constraints in optimizing the functions of TBMs in the digital era (Munir & Hidayatullah, 2019). In fact, the principles of transparency and accountability are crucial aspects in managing community-based institutions, especially in the context of a digital society that demands fast, broad, and easily accessible information (Nuryanto et al., 2025).

Development of a Website-Based Information System for the Sumedang TBM Forum

In this context, the development of a web-based information system represents a strategic solution that can be implemented. Such a system enables the integration of various TBM activities, ranging from documentation and data management to real-time and professional publication of activities. Therefore, TBMs can function not only as conventional literacy centers but also as digital entities that are adaptive to technological advancements.

Initial efforts toward the digitalization of Community Reading Centers (Taman Bacaan Masyarakat/TBM) have, in fact, begun through the utilization of web-based platforms as information media. However, existing implementations remain limited in terms of functionality, particularly in supporting the independent publication of activities by individual TBMs. The absence of features that enable managers to conduct autonomous digital publishing—such as the preparation and dissemination of press releases—constitutes one of the primary constraints in optimizing the role of digital media. This condition aligns with findings indicating that limited managerial capacity and the underutilization of digital technologies continue to hinder the management and dissemination of TBM activity information (Wulandari et al., 2025; Munir & Hidayatullah, 2019). In fact, the optimal use of digital media plays a strategic role in enhancing institutional visibility and expanding the reach of information to the public and stakeholders (Nuryanto et al., 2025).

In addition, shifts in public information consumption patterns in the digital era present further challenges to the sustainability of Community Reading Centers (TBMs). Advances in information technology have encouraged communities to increasingly access digital content, thereby requiring TBMs to adapt by delivering services that are relevant and engaging. Nevertheless, limited managerial capacity and low levels of digital literacy remain significant barriers to the development of technology-based service innovations (Wulandari et al., 2025). On the other hand, TBMs hold a strategic role in fostering reading interest and strengthening literacy culture within society, thus necessitating the development of more adaptive and contextually relevant services (Munir & Hidayatullah, 2019). Therefore, the utilization of digital platforms that integrate informative and communicative content—such as website-based publications—can serve as an alternative strategy to broaden information dissemination and enhance community engagement in literacy activities (Nuryanto et al., 2025).

Based on the foregoing discussion, the development of a web-based information system for the Sumedang TBM Forum—particularly through the addition of an online press release feature that can be accessed and managed independently by each TBM—constitutes an urgent necessity. This development is expected to improve the efficiency of information management, strengthen inter-TBM networks, and build a positive public image of literacy-related activities. Furthermore, this initiative represents an initial step toward promoting the digital transformation of TBMs at the regional level, ensuring that they remain relevant, adaptive, and competitive in addressing the challenges of the digital era.

II. METHODS

II.1 Research Approach and Research Design

This study employs a qualitative approach using the Research and Development (R&D) method, aimed at developing a web-based information system for the Sumedang Community Reading Center Forum (Taman Bacaan Masyarakat/TBM), particularly through the addition of a press release feature that can be independently accessed and managed by each TBM. The qualitative approach is utilized to explore user needs, the social context of technology use, and TBM managers' perceptions of the developed system.

The R&D method is selected as it is appropriate for producing a product in the form of a system or application that can be directly implemented in a real-world context (Sugiyono, 2017). In this study, the product developed is the Sumedang TBM Forum website, which is equipped with a press release feature to document community activities in a more structured manner and make them accessible to the public. The development of the information system is carried out iteratively based on user needs, applying user-centered design (UCD) principles, and validated through functionality testing as well as feedback from end users. Therefore, this study is categorized as applied development research, which not only aims to generate new knowledge but also to produce practical, information technology–based solutions to strengthen the governance of local literacy communities.

II.2 Population and Sample

Population

The population in this study consists of all managers and active members of the Sumedang Community Reading Center Forum (Taman Bacaan Masyarakat/TBM), which are distributed across various subdistricts. The forum comprises dozens of TBMs with diverse characteristics and capacities, including variations in digital literacy, organizational experience, and the intensity of literacy-related activities. This population was selected because its members represent the potential users and direct beneficiaries of the web-based information system to be developed.

Sample

The sample was selected using a purposive sampling technique, which involves the deliberate selection of informants based on specific criteria relevant to the research objectives (Sugiyono, 2017). The criteria used in determining the sample include:

1. TBMs that are actively affiliated with the Sumedang TBM Forum
2. Having conducted regular literacy activities for at least the past six months
3. Willingness to participate in system testing and provide feedback

The sample size was determined to be limited yet representative, involving:

1. Five to seven TBM managers as primary informants for interviews and system testing (user testing)
2. One to two forum administrators at the district level as users of the system in a coordinative capacity

The selection of this sample is aligned with the qualitative approach and the R&D method, which prioritize data depth over the number of respondents, as well as emphasize the involvement of key users in the system development process (Creswell, 2014).

II.3 Data Collection Techniques

The data collection techniques in this study are aligned with the qualitative approach and the Research and Development (R&D) method, which emphasize an in-depth exploration of user needs and the evaluation of the developed system. Data were collected through the following techniques:

1. **Participatory Observation**
   Observations were conducted during activities of the TBM Forum and several member TBMs in Sumedang Regency to identify information needs, communication patterns, and the technological capabilities of TBM managers. This observation aimed to explore the context of system use and to identify the challenges faced by TBMs in documenting and publishing their activities.
2. **Semi-Structured Interviews**
   Interviews were conducted with TBM managers and TBM Forum administrators using a flexible interview guide. This technique was employed to explore users' perceptions regarding system feature requirements, digital readiness, and expectations toward the press release feature. In addition, interviews were used to evaluate the system during the user testing phase and to collect feedback for further improvement.
3. **Documentation Study**
   Documentation was used to obtain supporting data related to the organizational structure of the TBM Forum, TBM activity reports, as well as social media archives that have been utilized as publication media. These data were used to identify system requirements and to design the workflow of the press release feature.
4. **System Testing (User Testing)**
   After the information system was developed, limited testing was conducted with TBM managers to evaluate its functionality, usability, and ease of use. This technique enabled the researchers to obtain direct feedback from end users and to perform iterative improvements to the system.

II.4 Data Analysis Techniques

Data analysis in this study was conducted using a descriptive qualitative approach, aimed at gaining an in-depth understanding of user needs, the social context of system use, and the effectiveness of the web-based information system for the Sumedang TBM Forum. The analysis was carried out iteratively, in line with the stages of Research and Development (R&D), particularly during the system design and refinement processes.

1. **Data Reduction**
   Data obtained from observations, interviews, and documentation were reduced by selecting, focusing, simplifying, and abstracting essential information directly related to system requirements, the design of the press release feature, and challenges in the use of technology by TBMs. This process aimed to filter relevant and meaningful data.
2. **Data Display**
   The reduced data were then presented in the form of descriptive narratives, functional requirements tables, system flow diagrams, and interview excerpts representing user perceptions. This data display supported the decision-making process in system development and revision.
3. **Conclusion Drawing and Verification**
   Conclusions were drawn through the interpretation of emerging patterns, similarities in informants' perspectives, and trends in system use. Verification was conducted through member checking (confirmation with informants), data triangulation from multiple sources (observations, interviews, and documentation), and discussions with information system experts to assess the consistency of system design and functionality.

During the system testing (user testing) phase, the analysis also included usability evaluation, reflecting perceived ease of use and perceived usefulness, as described in the Technology Acceptance Model. This assessment supported the final validation of the system's suitability to meet the needs of TBM users.

II.5 System Development Procedure

The system development procedure in this study follows the Research and Development (R&D) methodology, adapted from the model proposed by Borg & Gall (1983), which originally consists of ten main steps. However, for efficiency and contextualization in developing a community-based web system, these steps were simplified into seven main stages as follows:

1. **Potential and Problems**
   This initial stage aimed to identify needs and problems in the field through observations and discussions with TBM managers and administrators of the Sumedang TBM Forum. The primary focus was on the gap in literacy activity publication and the absence of an integrated digital-based documentation system.
2. **Data Collection**
   Data were collected through interviews, observations, and documentation to understand user needs, available technological capacities, and expectations regarding the information system to be developed. These data served as the basis for system design using a User-Centered Design (UCD) approach.
3. **Product Design**
   The information system was designed based on the results of user needs analysis. At this stage, the user interface (UI/UX), the structure of key features (including the press release feature), and the information architecture were developed to facilitate content management by each TBM.
4. **Design Validation**
   The initial system prototype was reviewed by experts in the fields of information systems and community digital communication. Validation was conducted to ensure the appropriateness of functionality, usability, and system navigation.
5. **Design Revision**
   Based on feedback from expert validation and initial users, revisions were made to the system design, both technically and in terms of content. These revisions ensured that the system could operate effectively within the TBM community, which has varying levels of digital capability.
6. **Limited Field Testing**
   The developed system was tested on a limited scale with several TBMs that are members of the Sumedang TBM Forum. The testing focused on core system functions such as TBM user login, press release content input, and public access to published press releases.
7. **Final Product Revision and Implementation**
   Following the testing phase, final revisions were made based on user feedback. The system was then prepared for broader implementation across all members of the Sumedang TBM Forum and made publicly accessible via the domain: https://forumtbmsumedang.org/

III. RESULTS AND FINDINGS ANALYSIS

III.1 Data Collection Results

Based on interviews and observations conducted with five to seven TBM managers and two administrators of the TBM Forum, several key findings were identified:

1. **User Needs**
   - TBMs require a user-friendly platform to publish completed activities in the form of press releases so that they can be accessed by the public, particularly the community of Sumedang Regency.
   - The required activity categories include recreational and educational activities, literacy, knowledge sharing, competitions, skills development, and Sustainable Development Goals (SDGs). However, as these categories may evolve over time, the system should provide flexibility by allowing the addition of new categories through a category input form.
   - Press releases submitted and published by each TBM should be displayed on the main page, sorted by the most recent publication date, and searchable through data filters.
2. **Identified Problems**
   - Some TBM managers are not yet familiar with using content management systems.

- Activity documentation has primarily been conducted through social media, especially Instagram.
- Coordination among TBMs is still carried out manually via WhatsApp groups.
- Technological infrastructure, particularly internet connectivity, remains inadequate.

3. **User Expectations**
   - The system should be user-friendly and easily accessible via smartphones.
   - A login feature should be provided for each TBM, allowing them to manage their own content independently.
   - A main page should display the latest news and featured activities.
   - Data security should be ensured, and system loading performance should be fast.

These findings served as the basis for designing the system's functional features, which were subsequently implemented using a User-Centered Design (UCD) approach.

III.2 System Development Process

The system development was carried out through seven stages. The results and analysis at each stage are described as follows:

1. Identification of Potentials and Problems

The findings reveal a significant gap in the publication of activities among TBMs within the Sumedang TBM Forum. Numerous positive activities—such as literacy training, book donation programs, and community engagement initiatives—are not systematically documented or widely disseminated. This limitation reduces opportunities for collaboration, public support, and institutional recognition.

Furthermore, TBM managers generally require a digital documentation platform that is easy to use, enabling them to write activity reports, upload images, and share information without requiring advanced technical skills. This indicates that usability and accessibility are critical factors in system design.

To address these issues, the press release feature integrated into the forumtbmsumedang.org platform was developed as a direct solution. This feature provides several key functions:

a. **Activity Publication Medium**
   Each TBM can publish its activities in the form of news articles, thereby expanding information dissemination and strengthening the public image of literacy movements in Sumedang. This reflects the need for structured and formal communication channels beyond social media.

b. **Centralized Digital Documentation**
   The system functions as a centralized digital archive, enabling systematic storage and retrieval of TBM activities. This enhances transparency and institutional memory, which are essential for sustainable community-based organizations.

c. **User-Friendly Interface**
   The web-based writing system allows TBM managers without technical backgrounds to independently create, edit, and publish content. This aligns with the principles of user-centered system design, emphasizing ease of use as a determinant of technology adoption.

d. **Improved Visibility and Collaboration Networks**
   Regular publication through press releases increases the visibility of TBM activities among stakeholders, including other TBMs, communities, and educational institutions. This creates opportunities for collaboration and strengthens the overall literacy ecosystem.

Overall, this stage highlights that the primary challenge is not merely technological but also related to user capability and access. Therefore, the system must prioritize simplicity, accessibility, and relevance to user needs.

2. Data Collection and Needs Analysis

Based on the analysis of user needs within the Sumedang TBM Forum, the system is required to incorporate several essential features, particularly a multi-user login system.

- **Multi-User Login Feature**
  This feature enables role-based access control, including:
  - **Forum Administrators**, responsible for managing, verifying, and publishing content from various TBMs
  - **TBM Managers**, who can create and submit press releases independently
  - **Public Users**, who can access published information openly

The implementation of a multi-user login system reflects the need for decentralization in content management. By allowing each TBM to independently publish its activities, the system reduces dependency on central administrators and accelerates the publication process.

From an analytical perspective, this feature supports participatory governance and enhances user engagement. It also aligns with the principles of distributed information systems, where multiple actors contribute to content generation and management. Moreover, this finding emphasizes that system design must accommodate different user roles and levels of digital literacy. Therefore, the interface and workflow must remain intuitive while maintaining clear access control mechanisms.

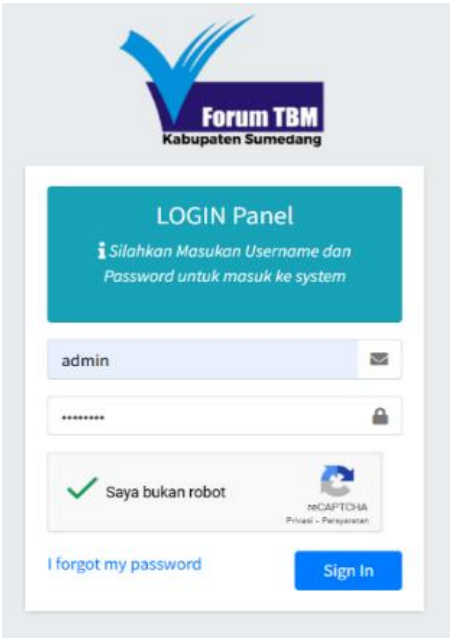


Figure 1. Login Feature with CAPTCHA

b. Press Release Input Form (Text, Images, and YouTube Video)

This input form is designed to enable users to compose comprehensive and engaging activity reports, including the following components:

- **Text content or activity narrative**, serving as the primary source of information.
- **Documentation images**, which enhance the visual representation of the activities.
- **YouTube video links**, allowing for more interactive publications and the inclusion of video coverage of activities.

This feature constitutes the core functionality of the press release system. With multimedia support (text, images, and video), the system functions not only as a news portal but also as a digital documentation platform that presents the dynamics of literacy activities across TBMs in a more vivid and engaging manner for readers.

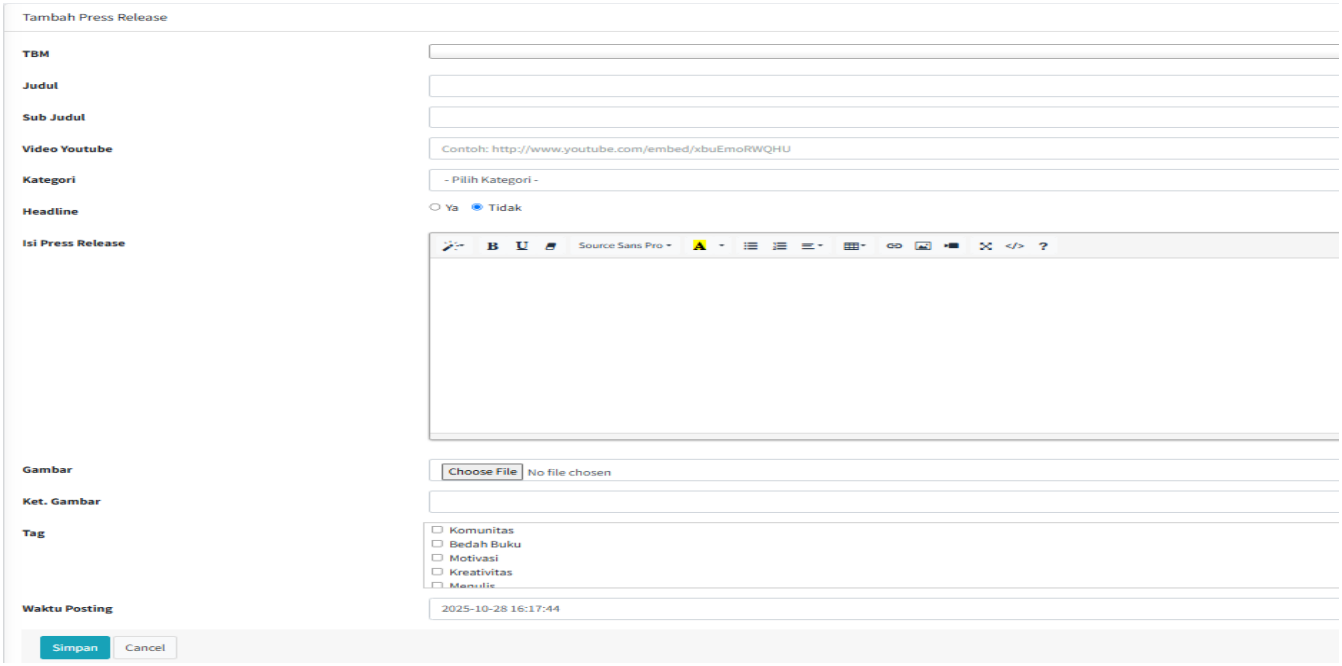


Figure 2. Press Release Input Feature

c. TBM Forum Admin Dashboard

The admin dashboard functions as the central hub for content and user management, encompassing the following features:

- **Verification and moderation of press release content** prior to publication.
- **Monitoring of upload activities** from each TBM.
- **Management of user data, visitor statistics, and publication performance.**

Through this dashboard, TBM Forum administrators can ensure that each published press release meets established standards of quality and informational relevance. In addition, the dashboard supports the maintenance of site credibility and promotes consistency and organization in publication practices across TBMs.

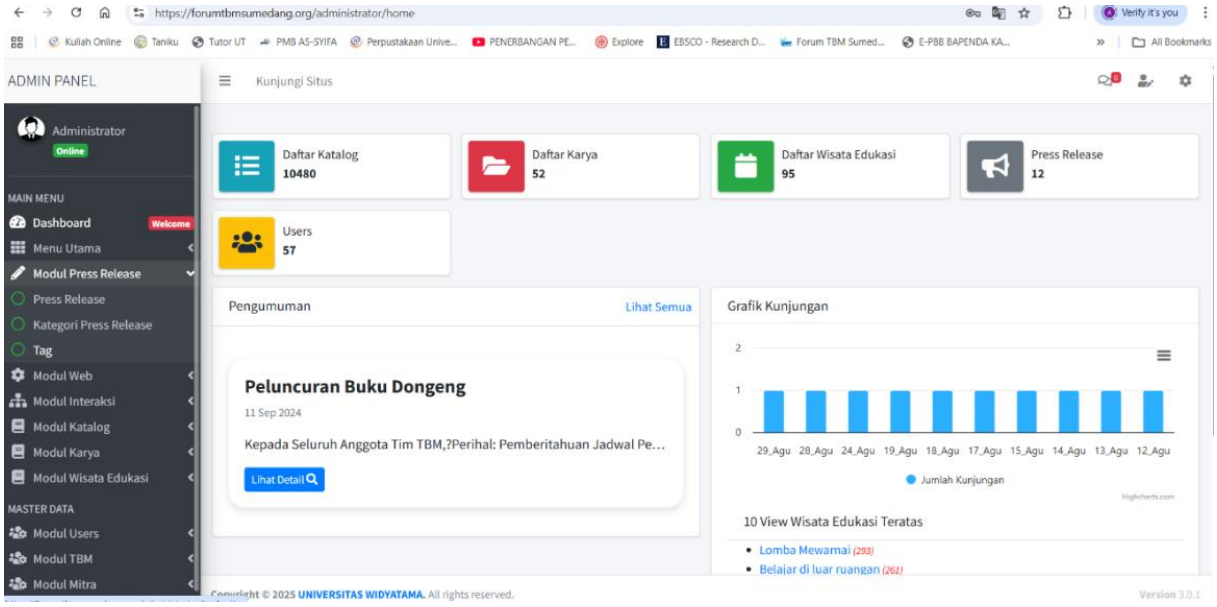


Figure 3. TBM Forum Admin Dashboard

The three components described above are designed to support the effective management and publication of TBM activity news.

3. System Design (Product Design)

The interface of the website https://forumtbmsumedang.org/ is designed to be simple, intuitive, and accessible to all users, including TBM managers and the general public. The menu structure includes the following sections:

- **Home**: Displays key information and a summary of recent activities.
- **TBM Profile**: Contains a list of TBMs affiliated with the Sumedang TBM Forum along with their descriptions.
- **Activities**: Presents various literacy and educational activities conducted by TBMs.
- **Gallery**: Showcases visual documentation of TBM activities in the form of photographs.
- **Contact**: Facilitates communication between visitors and the TBM Forum administrators.

This simplified interface design enables users to easily locate and access the Press Release feature as the central hub for news and documentation of TBM activities. Users can navigate from the homepage to the news section with a single click, making the publication workflow fast and efficient.

The Press Release feature is positioned as the core component of the digital publication system for the Sumedang TBM Forum. It plays a crucial role in collecting, displaying, and disseminating news related to TBM activities across the Sumedang region.

- **Upload articles** related to completed activities.
- **Add documentation images and YouTube video links** to enhance the attractiveness and informativeness of publications.
- **Strengthen inter-TBM networks** through the sharing of activity information within an integrated platform.

The placement and interface of the press release feature are designed to be easily accessible from the main menu, such as the *Activities* or *Home* sections. This ensures that visitors can immediately view the latest TBM activities, positioning the press release feature as the primary front-facing component of the Sumedang TBM Forum's digital publication system.

4. Design Validation

a. Validation Process by Experts

The design validation stage was conducted by two information system experts and one digital communication expert. The objective of this stage was to ensure that the interface design and key features, including the Press Release feature, were aligned with the principles of User-Centered Design (UCD), which emphasize user needs, capabilities, and usability.

The information system experts evaluated the system in terms of:

- **Navigation structure and user flow**
- **Consistency of interface elements and ease of feature access**
- **System efficiency in presenting multimedia content** (text, images, and video)

Meanwhile, the digital communication expert assessed the system in terms of:

- **Clarity of language and communication messages in the publication interface**
- **The ability of the Press Release feature to convey activity information in an engaging, credible, and communicative manner to the public**
- **The published content demonstrates good readability across multiple devices** (e.g., desktops, tablets, and smartphones).

b. Validation Results

The validation results indicate that the system design is aligned with User-Centered Design (UCD) principles and is easily understood by general users, including TBM managers without a background in information technology.

Several key findings from the validation include:

- The menu structure and buttons are intuitive and can be understood without requiring specific technical guidance.
- The process of entering news content within the Press Release feature (text, images, and YouTube videos) is perceived as intuitive and efficient.
- The published output demonstrates good readability across various devices, including desktop computers, tablets, and smartphones.

5. Design Revision

Following user testing and expert validation, several important inputs were obtained regarding the system's interface and functionality. Based on this feedback, improvements were made in two main aspects:

a. **Website layout**, to enhance clarity, consistency, and ease of understanding for users.
b. **Image upload system**, to improve usability and reliability in adding visual documentation to activity publications.

The primary objective of these improvements was to enhance user comfort and effectiveness, particularly for TBM managers who frequently utilize the Press Release feature to publish activity reports.

6. Limited Field Testing

The system testing phase was conducted with five Community Reading Centers (Taman Bacaan Masyarakat/TBM) representing varying levels of digital literacy, ranging from users who are already familiar with technology to those with minimal experience in digital media usage. This approach was intended to evaluate the extent to which the system—particularly the Press Release feature—can be effectively utilized across diverse user profiles within the Sumedang TBM Forum.

During the testing phase, each TBM was required to perform a series of tasks, including logging into the system, completing the press release form (text, images, and video links), reviewing the published output on the homepage, and providing feedback on usability, interface clarity, and overall satisfaction.

The results indicate that the system demonstrates a high level of usability, as reflected in an average user satisfaction score of **87%**. This finding suggests that the system has successfully met key usability criteria, particularly in terms of ease of use and functional accessibility.

From an analytical perspective, several important insights can be identified. First, users with low levels of digital literacy were still able to operate the system without significant difficulty. This indicates that the system design effectively accommodates novice users, which is a critical success factor in community-based digital platforms. Second, the content input and media upload processes were perceived as intuitive and efficient, suggesting that the interface design minimizes cognitive load and supports task completion with minimal effort. Third, the presentation of published content was considered visually appealing and professional, which contributes to increased user motivation to consistently publish activities.

These findings align with the Technology Acceptance Model, which emphasizes perceived ease of use and perceived usefulness as primary determinants of user acceptance. The high usability score and positive user feedback indicate that the system has strong potential for sustained adoption within the TBM community.

Furthermore, the results imply that the implementation of a user-centered and multimedia-supported system can effectively bridge the gap between limited digital literacy and the need for structured digital publication. This demonstrates that appropriately designed technology can empower community-based organizations to participate more actively in digital ecosystems.

7. Final Product Implementation

Following the stages of analysis, system design, expert validation, user testing, and iterative refinement, the Sumedang TBM Forum website has been successfully implemented and is publicly accessible at https://forumtbmsumedang.org/.

The developed website functions as an integrated information portal and digital documentation platform for literacy activities conducted by Community Reading Centers (Taman Bacaan Masyarakat/TBM) in Sumedang Regency. A key feature fully implemented in the system is the Press Release module, which serves as the central mechanism for publishing TBM activities online.

From an analytical perspective, the implementation of this system represents a transition from fragmented and informal documentation practices—previously dominated by social media—to a more structured, centralized, and accessible digital information system. This transformation enhances not only the organization of information but also its long-term accessibility and institutional value.

As part of the implementation process, each TBM affiliated with the Sumedang TBM Forum is assigned a dedicated user account (one account per TBM). This approach enables decentralized content management, allowing each TBM manager to directly access the press release module and independently manage their activity publications. Such a model reduces dependency on central administrators and increases user participation across the network.

Moreover, this implementation supports improved transparency, accountability, and visibility of literacy activities at the community level. By providing a unified platform for documentation and publication, the system facilitates broader information dissemination to the public and stakeholders, while also strengthening collaboration among TBMs.

In line with the Technology Acceptance Model, the successful implementation and positive user engagement indicate that the system fulfills key determinants of technology adoption, particularly perceived usefulness and ease of use. This suggests that the system has strong potential for sustainable utilization and scalability in similar community-based literacy initiatives.

III.3 Analysis of System Testing Results

Based on the results of the limited field testing, the findings are presented in the following table:

Table 1: System Testing Results

No	Evaluation Criteria	Indicator	Result (%)	Category
1	Easy of USe	Navigation And Menu Access	90	Excellent
2	User Interface	Design and Content Clarity	85	Good
3	Functionality	Data Input, Image Upload, and Login	90	Excellent
4	System Benefits	Enhancing TBM Activity Publication	87	Excellent
5	Access Speed	Page Load Time	85	Good

Interpretation

Based on the evaluation results following system implementation and field testing, it can be concluded that the developed system aligns well with user needs, both in terms of functionality and ease of use. TBM managers perceive the system as easy to understand, efficient, and relevant to their literacy-related activities.

Moreover, users consider the system to be an effective digital medium for documentation, publication, and collaboration among TBMs. With its simple interface and clear workflow, the website successfully fulfills the principles of user-friendliness as anticipated during the analysis and design stages.

The Press Release feature received the highest evaluation scores from users. TBM managers indicated that this feature:

- **Significantly supports the documentation of literacy activities**, as it enables them to systematically store digital records of each activity in an organized and easily accessible manner.
- **Expands the reach of publication**, as published news can be accessed by a broader audience through the forumtbmsumedang.org portal.
- **Enhances the visibility of TBM activities**, both at the district level and beyond, through the dissemination of news and integration with social media links.

From an analytical perspective, these findings reinforce the importance of perceived usefulness and ease of use, as emphasized in the Technology Acceptance Model. The high user acceptance of the press release feature indicates that the system effectively

addresses the gap between traditional documentation practices and the need for structured digital publication in community-based literacy organizations.

IV. DISCUSSION

The development of a web-based information system for the Sumedang Community Reading Center Forum (Taman Bacaan Masyarakat/TBM) demonstrates a significant contribution to addressing the challenges of digital transformation in community-based literacy organizations. The findings indicate that prior to the implementation of the system, TBM activities were predominantly documented through informal and fragmented channels, such as social media and manual communication platforms. This condition limited the accessibility, organization, and long-term preservation of information.

The introduction of a centralized web-based system, particularly through the Press Release feature, has transformed these practices into a more structured and systematic form of digital documentation and publication. This transformation not only enhances information management but also strengthens institutional visibility and accountability. The ability of each TBM to independently publish its activities reflects a shift toward decentralized content management, which promotes active participation and ownership among users.

From a usability perspective, the system demonstrates a high level of acceptance among users with varying levels of digital literacy. This finding suggests that the application of a User-Centered Design (UCD) approach has been effective in ensuring that the system is accessible, intuitive, and relevant to user needs. The positive evaluation results, particularly the high user satisfaction score, indicate that the system successfully minimizes technical barriers and supports efficient task completion.

Furthermore, the effectiveness of the system can be understood through the lens of the Technology Acceptance Model, which highlights perceived ease of use and perceived usefulness as key determinants of technology adoption. The strong user acceptance of the Press Release feature confirms that the system meets these criteria, thereby increasing the likelihood of sustained use and long-term impact.

In addition, the system contributes to improving collaboration and communication among TBMs. By providing a shared platform for publishing and accessing information, the system facilitates knowledge exchange and strengthens the network of literacy communities. This aligns with previous studies emphasizing the role of digital platforms in enhancing community engagement and information dissemination.

However, despite these positive outcomes, several challenges remain. Variations in digital literacy levels and limitations in technological infrastructure, particularly internet connectivity, may affect the consistency of system utilization across different TBMs. Therefore, future development should consider integrating training programs, offline-compatible features, and system optimization for low-bandwidth environments.

Overall, the development and implementation of this system highlight the importance of aligning technological solutions with user needs and contextual conditions. The system not only functions as a technical tool but also as an enabler of digital transformation within community-based literacy ecosystems.

V. CONCLUSIONS

1. The study successfully developed a web-based information system with a press release feature for the Sumedang TBM Forum, accessible at https://forumtbmsumedang.org/.
2. The development process employed the Research and Development (R&D) method based on a User-Centered Design (UCD) approach, which effectively identified user needs.
3. The results of system testing indicate that the system demonstrates a high level of usability and usefulness and is well accepted by TBM managers.
4. The implementation of the system has a positive impact on improving documentation, transparency, and the publication of literacy activities at the community level.

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