

## **Design of an interactive digital encyclopedia of Palembang urban culture on a web-based HTML5 platform as an implication for BIPA learning**

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**Abstract:** The need for BIPA (Indonesian Language for Foreign Speakers) learning facilities, particularly in the form of materials and audio-visual learning media, is critical. This can also serve as an attraction for tourists interested in learning the Indonesian language. An interactive digital encyclopaedia is an application that provides access to knowledge in a digital format. This medium facilitates users in accessing information, following links, watching videos, listening to audio, and participating in quizzes and educational games digitally. The aim of this research is to design an interactive digital encyclopaedia of Palembang urban culture on a web-based HTML5 platform as a communicative learning support medium for Indonesian language learners who are non-native speakers. Qualitative case study approach combined with the 4D development model was employed. The case study helps researchers identify language, culture, and arts that could have implications for BIPA learning. The 4D development model was used to design the interactive digital encyclopaedia application on a web-based HTML5 platform. The design themes include language, art, and culture in Palembang, which are further broken down into several topics based on the BIPA syllabus: Introduction, Geography and Demography of Palembang, Language and Literature, Palembang Culture, Architecture Heritage, Social and Religious, Economy and Daily Activities, Interactive, Glossary, References, and Team. The novelty of this research lies in the design of an interactive digital encyclopedia of Palembang's urban culture on a web-based HTML5 platform. The content not only describes Palembang's culture but also aligns with the BIPA program's policies, syllabus, and learning outcomes.

**Keywords:** BIPA, Culture, Digital-Interaktif, Encyclopedia, South Sumatra, Web.

### **1. Introduction**

BIPA is a program under the auspices of the Language Development and Cultivation Agency of the Republic of Indonesia, operating within the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek), aimed at internationalizing the Indonesian language. Through Fundamental Research organized by Kemendikbudristek RI, the researchers aim to support the BIPA program by designing an Interactive Digital Encyclopedia of Culture on a web-based HTML5 platform as a communicative learning medium for Indonesian language learners who are non-native speakers. A digital encyclopedia is a dictionary that provides in-depth information and explanations, supplemented with visual information [1]. The information contained in the digital encyclopedia encompasses language, art, and culture in the city of Palembang, linked to Indonesian language proficiency materials. This initiative also aims to support tourism in South Sumatra, particularly in Palembang, by introducing South Sumatra to the world through the BIPA program.

The research problem is how to design an Interactive Digital Encyclopaedia of Palembang Urban Culture on a web-based HTML5 platform so that it can have implications for BIPA (Indonesian

Language for Foreign Speakers) learning. The novelty of this research lies in producing a research product that can serve as a medium to introduce the culture of South Sumatra, particularly Palembang, to the international community through BIPA. The research was conducted over approximately six months, with a focus on designing the Interactive Digital Encyclopaedia of Culture on a Web-Based HTML5 platform. The research problem and objectives align with the strategic plan of Universitas Bina Darma, which includes a program to enhance capacity building. Universitas Bina Darma is one of the private universities in Palembang that offers a BIPA course and is the only private university in South Sumatra that runs the *Darmasiswa* Program (a scholarship program by the Ministry of National Education for foreign students who want to learn the Indonesian language in Indonesia). The research activities undertaken by the researchers are encouraged by the university to exploit advances in information and communication technology (ICT) in addressing societal challenges [34], [35], [36], [37] and to assist the government in the economic and tourism sectors.

The research results are expected to contribute to enhancing the quality of education by advancing toward an Education 4.0 system [37], [38], [39]. The research employs a qualitative method, utilizing a case study approach and the 4D development model. The case study approach helps researchers identify language, culture, and art that can have implications for teaching non-native speakers, aiming to equip them with communication skills in Indonesian and introduce them to South Sumatra through BIPA. For the design of the Interactive Digital Encyclopedia application on a web-based HTML5 platform, the researchers will utilize the 4D development model.

The novelty of this research lies in the development of a design for the Interactive Digital Encyclopedia of Palembang Urban Culture on a web-based HTML5 platform. This application contains information on "language, culture, and art in the city of Palembang." The information included in this digital encyclopedia is linked to Indonesian language skills for non-native speakers, which not only impacts BIPA learning but also serves to introduce Palembang's culture and tourism to an international audience. Additionally, the content of this digital encyclopedia aligns with the Specific Learning Outcomes for Indonesian Language for Foreign Speakers [2].

## 2. Literature Review

### 2.1. HTML5 Technology

The choice of HTML5 as the technology used in this research indicates that the study adheres to the latest advancements in web technology [3], [4]. Over the past decade, prior to the release of HTML5, HTML underwent numerous changes that created challenges in developing standards due to the emergence of various protocols, platforms, devices, and increasingly complex systems. HTML5 offers support for rich media such as audio, video, and animation, which greatly enhances the interactive elements of the digital encyclopedia. The use of HTML5 also suggests that this research project has the potential for further development or adaptation to other platforms in the future. [5] states that the selection of HTML5 as the technological basis demonstrates that the research is up-to-date. According to [3], the advancements in technology before HTML5's release included many changes to HTML, making this research an example of current technological trends.

The adoption of HTML5-based web technology has opened up new opportunities in multimedia application development, including digital encyclopedias. Following [6] HTML5 enables the creation of web pages that support various technological elements such as multimedia, animation, and improved interaction. In this context, [7] explains that HTML5 web-based platforms display multimedia technology elements, animation, and interactive navigation interfaces through web media. The use of HTML5 enhances the functionality of digital encyclopedia applications, aligning with [7]'s research findings, which show that interactive presentations can be effectively delivered through digital encyclopedias on HTML5 web platforms. Digital technology is highly beneficial in education [40], [41]. [8] asserts that digital technology plays a crucial role in achieving goals to improve efficiency and reduce environmental impact. Digital technology has brought significant changes to education by facilitating the learning process through the use of digital devices and

applications [42]. It not only provides information but also serves as a tool for creation, mentorship, and assessment, while enhancing user engagement. One such digital technology that can be utilized in learning is the digital encyclopedia.

## 2.2. *Interactive Digital Encyclopedia*

An Interactive Digital Encyclopaedia is a modern version of the traditional encyclopaedia that utilizes digital technology to present information in a dynamic and engaging manner [9], [10]. [11] has provided important insights for e-encyclopedia designers in selecting and optimizing input devices to enhance user experience and information access efficiency. Additionally, [8] has explained that, besides text, these encyclopaedias include multimedia elements such as images, videos, and audio, as well as interactive features that allow users to engage with the content. As times have progressed, encyclopaedias have evolved from e-encyclopaedias to more advanced forms, including interactive digital encyclopaedias. Interactive digital encyclopaedias according to [12] offer advantages in providing more flexible and dynamic access to information. These applications not only allow users to access information from various devices such as computers, tablets, or smartphones but also offer interactive features such as information search, links, videos, audio, quizzes, and educational games [9,10]. This capability enhances the user experience in learning and information retrieval and facilitates communication among users within online communities. Research has shown that visual systems enable individuals to acquire more information [13].

An Interactive Digital Encyclopedia is an evolution of the traditional encyclopedia that leverages technology to provide information in a more engaging and accessible manner [14], [15]. With the various benefits it offers, this type of encyclopedia holds significant potential for use in education, research, and general knowledge. However, challenges in development, accessibility, and maintenance must be addressed with appropriate strategies to ensure that the interactive digital encyclopedia effectively achieves its primary goal of disseminating knowledge.

## 2.3. *BIPA Learning*

In the field of Indonesian Language for Foreign Speakers (BIPA) education, information technology offers significant opportunities to develop more effective learning media. The primary focus of BIPA learning is to teach Indonesian to non-native speakers, and the teaching standards for this language often refer to the Common European Framework of Reference for Languages (CEFR) curriculum widely used in Europe. This curriculum encompasses three main aspects: learning, teaching, and assessment [16]. In Indonesia, BIPA teaching is also based on the levels of the Indonesian Language Proficiency Test (UKBI), which consists of seven levels [17].

Research into the development of technology-based learning media shows great potential in enhancing the effectiveness of BIPA teaching. The Indonesian government, through the Language Development and Cultivation Agency of the Ministry of Education and Culture, has leveraged this potential by launching the BIPA Daring web portal [18]. Research conducted by [19] supports the development of web-based tools for BIPA learning, demonstrating that web-based media can be a valuable tool in supporting language learning processes. Therefore, the integration of HTML5 web technology in developing digital encyclopedia applications and BIPA learning media not only enhances accessibility and interactivity but also improves the overall quality of teaching and learning.

## 2.4. *Local Context*

In this research, the local context focuses on the culture of Palembang. As one of Indonesia's major cities with a rich cultural heritage, Palembang is an intriguing subject for exploration and presentation in the form of a digital encyclopaedia. This is beneficial not only for BIPA learners but also for the broader public interested in gaining a deeper understanding of Palembang's culture. The local context refers to the application or relevance of a concept, idea, or technology within a specific environment or community, taking into account the conditions, culture, customs, needs, and

challenges unique to that region. Digital technology applications in education can be tailored to be more effective and beneficial for particular communities.

In the context of Palembang, this may include aspects such as local wisdom, traditional clothing, regional languages, infrastructure, and arts. Palembang's local wisdom is reflected in its rich cultural heritage, including traditional foods (e.g., *pemppek*), customs, arts, and the history of the Palembang Sultanate. These elements can serve as engaging learning materials in BIPA classes to introduce Indonesian culture, particularly the culture of South Sumatra, to foreign learners.

Local Wisdom in Palembang Batik. Palembang batik is distinguished by its vibrant motifs and colours, reflecting the local culture. Some notable types of Palembang batik include:

- a. *Batik Jumputan*: Characterized by bright dot patterns.
- b. *Batik Blongsong*: Features simple linear designs.
- c. *Batik Lasem*: Showcases motifs influenced by local culture.
- d. *Batik Kawung*: Known for its symmetrical circular patterns.
- e. *Batik Songket*: Incorporates gold thread.

Each type of batik is used for various occasions, from daily wear to ceremonial events, and serves as a symbol of identity and pride for the people of Palembang. The use of Palembang batik, such as *songket*, extends beyond traditional garments like *karadong*, *kemben libar*, or *rumpak*, to include decorative items like cushion covers, partition decorations, souvenirs, women's handbags, and even office suits or reception attire [20]. Additionally, Palembang batik has symbolic and functional meanings; for example, *tanjak*, *kain batik*, *geribik*, *kain/kemben semage*, *selendang*, and *batik jepri*, as well as silk *batik kemben* [21].

Heritage of Rumah Limas. The Rumah Limas is a traditional wooden stilt house from Palembang, South Sumatra, known for its pyramid-shaped roof. This house is constructed from wood and designed to reflect the social status of its occupants through varying floor levels. Rumah Limas is adorned with traditional carvings rich in meaning and serves both as a residence and a centre for cultural and ceremonial activities. It symbolizes the identity and cultural heritage of the Palembang community. According to studies [22], the Rumah Limas is a modular house that can be relocated, built with a unique, flexible construction method that does not use nails, and has non-load-bearing walls. It functions both as a home and a venue for celebrations [25], [22].

The traditional wedding attire of Palembang, particularly *Aesan Gede* and *Aesan Paksangko*, represents the elegance and grandeur of Palembang's culture. Dominated by colors like red and gold, and featuring beautiful songket fabrics, these outfits reflect the social status and the rich traditions passed down through generations. The study by [20] highlights that Palembang's traditional wedding attire is renowned for its beauty and opulence, mirroring the cultural and historical wealth of the city. The wedding garments, including *Aesan Gede* and *Aesan Paksangko*, are complemented by songket fabric and intricate accessories. Palembang is a city rich in history and culture, with a diverse population. The city's economy is supported by trade, industry, and services, while Islam is the predominant religion influencing daily life. The strong kinship system and culture of mutual cooperation reflect the high social solidarity within the Palembang community [25].

### 2.5. Innovation in BIPA Learning

Integrating local culture into BIPA (Indonesian Language for Foreign Speakers) education through digital media represents an innovative approach that can enhance learning by making it more engaging and contextually relevant [26]. The success of this project depends significantly on the effective implementation of interactive design and the effective presentation of cultural content in a manner that is engaging for foreign learners. This initiative embodies a comprehensive and relevant effort to merge technology, culture, and language learning. Despite its substantial potential, the project's success will be contingent upon addressing challenges related to accessibility, cultural authenticity, and the effectiveness of learning outcomes to ensure it makes a meaningful contribution to BIPA education and the preservation of local culture through digital media.

### 3. Methodology

#### 3.1. Methods

The research employs a qualitative case study approach combined with the 4D development model. The qualitative design is chosen to explore and identify phenomena related to language, culture, and art in South Sumatra for foreign language learners, which will be incorporated into the teaching materials to be developed. This research will involve the collection and analysis of data pertaining to the studied issues or subjects.

To depict phenomena and analyse needs, the research uses qualitative methods with a case study approach, guided by the framework of Lincoln and Guba, as detailed in [27]. The process includes:

1. Defining the Focus: Providing a detailed explanation of the focus of the issue, including a thorough description of the context or setting and the observed processes.
2. Describing the Setting: Offering a detailed account of the setting and the chronological sequence of events.
3. Data Collection: Gathering data relevant to the research.
4. Contextualizing: Relating the context to a broader theoretical framework.
5. Verification: Validating the case through peer debriefing and conducting focus group discussions (FGDs) to ensure the reliability of the research data.

This methodology ensures a comprehensive analysis and accurate representation of the cultural and educational phenomena under study.

#### 3.2. Data Collection Procedure

[27] explains that case studies involve extensive data collection as researchers aim to build a comprehensive picture of a case. Therefore, thorough analysis is required to construct a detailed description of the emerging case. Qualitative methods focus on a specific problem, providing detailed descriptions and chronologies of events [28], [29]. Data for this research is collected through documents and observations. In relation to documents, [30] argues that documents are physical objects that can be stored and may include various types of analysis such as photographs, films, videos, slides, or other non-written sources. The stages of data collection carried out by the researchers are as follows: 1) determining the research focus, 2) assessing the alignment of the paradigm with the focus, 3) evaluating the alignment of the paradigm with substantive theory, 4) determining where and from whom the data will be collected, 5) outlining the research phases sequentially, 6) utilizing research instruments, 7) collecting data, 8) analyzing data, 9) preparing logistics, and 10) checking the level of trustworthiness.

The 4D development model according to [31] consists of four stages. The first stage, Define, often referred to as the needs analysis stage. The second stage, Design, involves preparing the conceptual framework of the model and learning materials. The third stage, Develop, involves testing the validation or assessing the feasibility of the media. The final stage is Disseminate, which refers to the implementation on the actual subjects of the study. This research will be conducted only at the Define and Design stages.

#### 3.3. Data Analysis Procedures

Data analysis utilized the Interactive Model of Miles and Huberman. The stages of analysis for this decentralization research were as follows: 1) Data reduction stage, where sources from written documents, electronic documents, and other sources were selected and summarized. 2) Data summarization was used to compile materials or information to be included in the interactive digital encyclopedia. During the data reduction process, the author selected core data and focused on important data, identifying themes and patterns. 3) The summarized data provided an overview of the research objects, facilitating easier subsequent data collection. 4) The next stage was data presentation. Information and data were presented to support the conclusion-drawing process.

The data obtained were analyzed based on an understanding aligned with the facts and without manipulation or experimentation. All collected information was integrated until the phenomenon or research object could be examined in depth, leading to the formation of conclusions. 5) The final stage in the Interactive Model of Miles and Huberman was conclusion drawing or verification. For verification purposes to ensure the validity of the research data, the researcher conducted Focus Group Discussions (FGDs) with experts and peers relevant to the field of study. Finally, 6) Upon completion of all stages, the researcher designed a digital interactive encyclopedia product on South Sumatra culture that could be applied in BIPA (Indonesian for Foreign Speakers) learning.

#### *3.4. Research Trustworthiness*

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## **4. Results**

### *4.1. Flowchart of Digital Interactive Encyclopedia of Palembang Culture for BIPA Learning*

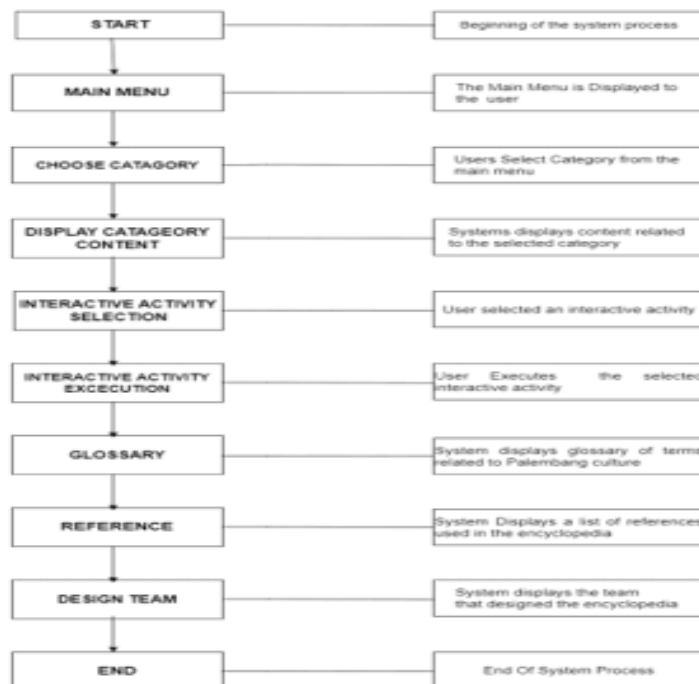
The researchers developed a flowchart for designing the Interactive Digital Encyclopedia of Palembang Culture using Web-Based HTML5, which can have implications for BIPA (Indonesian Language for Foreign Speakers) learning. The flowchart was created by following several steps that the researchers had carefully designed. The following are the steps involved in the process of creating the flowchart for designing the interactive digital encyclopedia in this study.

The flowchart above represents the design flowchart of the "Interactive Digital Encyclopedia of Palembang Culture for BIPA (Indonesian Language for Foreign Speakers) Learning," which has been developed by the researchers. Below is an explanation of the steps in the flowchart:

1. Start: This marks the beginning of the digital encyclopedia system process.
2. Main Menu: After a successful login, the main menu is displayed to the user.
3. Choose Category: The user selects a category they wish to explore from the main menu.
4. Display Category Content: The system displays the content related to the category selected by the user.
5. Interactive Activity Selection: The user can choose an interactive activity available within the selected category.

6. Interactive Activity Execution: The system executes the interactive activity chosen by the user.
7. Glossary: The system displays a glossary of terms related to Palembang culture, which users can access.
8. References: The system displays a list of references used in the encyclopedia.
9. Logout: After completing their session, the user can log out of the system.
10. End: This marks the end of the digital encyclopedia system process.

This flowchart effectively illustrates the user flow when using the digital encyclopedia, from logging in to logging out, as well as the interactive steps that users can take while using the application.



**Figure 1.**  
Interactive digital encyclopedia flowchart.

#### 4.2. Design of The Interactive Digital Encyclopedia of Palembang Culture Based on Web Based HTML5

This research has resulted in the design of an interactive digital encyclopedia of Palembang culture, focused on the learning of Indonesian Language for Foreign Speakers (BIPA). This encyclopedia is designed to provide educational and engaging information about various aspects of Palembang culture, with the aim of supporting Indonesian language learning for users from diverse backgrounds, particularly those from abroad. The results of the design developed by the researchers in this study are as follows.

##### 4.2.1. Introduction to the Encyclopedia

The design of this Digital Encyclopedia begins with an explanation of the brief history of the city of Palembang, covering its development from the kingdom era to the modern era. Additionally, the researchers designed the objectives of compiling the encyclopedia and the scope of the encyclopedia's content by referring to the BIPA (Indonesian Language for Foreign Speakers) policy and syllabus. The design also includes subsections for inputting BIPA learning policies and syllabi. The Introduction

menu is divided into two parts: the history of Palembang city and the Scope of the Encyclopedia.



**Figure 2.**  
Introduction menu interface of the interactive digital encyclopedia.

#### 4.2.2. Geography and Demographics of Palembang

This section describes the geographical location, the city map of Palembang, as well as information on demographics and population, including the population, ethnic groups, languages, and religions practiced in Palembang. It is divided into two menus: the first is "Geographical Location and City Map of Palembang," and the second is "Demographics and Population of Palembang."



**Figure 3.**  
Geography and demographics menu interface of Palembang.

#### 4.2.3. Language and Literature of Palembang

In this section, the researchers designed features to facilitate users in learning the Palembang language used in daily conversations, including dialects, vocabulary, translations into Indonesian and English, and pronunciation guides. Additionally, this section includes information about Palembang literature, such as folklore, rhymes, and poetry. This menu contains two submenus: the first is "Palembang Language" and the second is "Palembang Literature."





**Figure 4.**  
Language and Literature Menu Interface of Palembang.

#### 4.2.4. Culture and Traditions of Palembang Encyclopedia

In this section, the researchers designed features to include information about traditional ceremonies, arts, traditional music, traditional clothing, and typical cuisine of Palembang. This section provides a detailed overview of the traditions that are still preserved in Palembang, including traditional wedding ceremonies, folk dances, and local dishes such as Pempek and Laksan. This menu contains four submenus: "Traditional Ceremonies and Rituals," "Traditional Arts and Music," "Traditional Clothing," and "Palembang Cuisine."



**Figure 5.**  
Culture and traditions menu interface of Palembang.

#### 4.2.5. Architecture and Historical Heritage

The researchers designed this section to describe historical buildings and archaeological sites in Palembang, such as the Great Mosque, Benteng Kuto Besak, and the Karanganyar site. Users can understand the historical significance of these buildings and sites as part of Palembang's cultural heritage. This menu has two submenus: "Historical Buildings" and "Archaeological Sites in Palembang."

#### 4.2.6. Social Life and Religion

The researchers designed this section to include information about the kinship system and social structure in Palembang, as well as the dominant religions and beliefs, including various religious

activities in the Palembang community. This menu has two submenus:



**Figure 6.** Architecture and cultural heritage menu interface of Palembang Gambar.



**Figure 7.** Social life and religion menu interface of Palembang.

#### 4.2.7. Economy and Daily Activities

This design aims to provide an overview of traditional livelihoods in Palembang, such as the weaving of songket and jumpatan fabrics, as well as the role of traditional markets and other economic activities in Palembang. This menu contains two submenus: "Livelihoods" and "Markets and Trade in Palembang."

#### 4.2.8. Interactive Activities of the Encyclopaedia

The design includes interactive activities intended to engage users in exploring or browsing through the digital encyclopaedia. This design provides a platform for integrating digital maps and a multimedia gallery featuring videos, audio, and images related to the culture and life in Palembang. Users can also access various tasks, such as quizzes and games related to the culture. This menu contains five submenus: "Interactive Videos," "Interactive Quizzes," "Word Guessing," "Visual Dictionary," and "Social Collaboration."

#### 4.2.9. Glossary of the Encyclopaedia

This design also includes a section for a glossary that explains the specialized terms used within the encyclopaedia.



Figure 8.  
Glossary Menu Interface.

#### 4.2.10. References

This design also includes a section for inputting all the information used in the creation of the encyclopedia. The references are supported by a range of sources, including literature, links, photographs, respondents, and other relevant documents.



Figure 9.  
References menu interface.

#### 4.2.11. Design Team

The final section of the encyclopedia lists the names of the research team members and other parties involved in its development.

## 5. Discussions

### 5.1. Flowchart for The Interactive Digital Encyclopedia

The flowchart produced in this research outlines the steps users must follow when interacting with the encyclopedia application [9], [10]. [32] The flowchart begins with the login or registration process and continues through various stages where users access different content, interactive activities, glossaries, references, and finally log out of the system. This flowchart guides the entire user interaction process with the system, ensuring that each step in the application's use is logically structured and easy to follow. The researchers have also ensured that all critical aspects of BIPA learning, such as category selection, interactive activities, and access to the glossary, are well integrated into the flow. This makes the flowchart a solid foundation for

developing an application that is user-friendly, particularly for those who are not native Indonesian speakers.



**Figure 10.**  
Design team menu interface.

After developing the flowchart, the researchers conducted a Focus Group Discussion (FGD) to complement the research data regarding the material needs for the interactive digital encyclopaedia, before proceeding with the design of the interactive digital encyclopaedia.

### 5.2. Design of The Interactive Digital Encyclopedia of Palembang Culture

The design produced by this research encompasses various crucial aspects of Palembang's culture relevant to BIPA (Indonesian Language for Foreign Speakers) learning. This encyclopaedia is structured with multiple integrated sections to provide a comprehensive and in-depth overview of Palembang's culture, incorporating technological elements [7], [32], [33]. In the design phase, the researcher undertook both defining and designing stages. In the defining stage, the researcher identified the needs of BIPA learners through BIPA policy documents, Learning Outcomes, and BIPA Learning Syllabi. Additionally, within the defining stage, the researcher supplemented the obtained data with observations to explore literature and data utilized for cultural content in this digital encyclopedia. Subsequently, the researcher conducted Focus Group Discussions (FGD) to complete any missing data. Based on the data collection results, the researcher then designed the sections to be included. These sections are content tailored to meet the needs of BIPA learning [17], [19]. The resulting design is as follows.

1. **Introduction:** This section provides a brief history of Palembang, including its development from the royal era to the modern age, and an explanation of the scope and objectives of the encyclopaedia. It offers crucial context for users to understand the cultural background of Palembang. Additionally, this section includes a repository for documents related to BIPA Program policies.
2. **Geography and Demographics:** This section describes the geographical location, maps, and demographic information of Palembang, such as population, ethnic groups, languages, and religions.
3. **Language and Literature:** This section focuses on the introduction to the Palembang language used in daily conversation, including dialects, vocabulary, and Palembang literature such as folklore and poetry. This design is essential for facilitating the understanding of local language and literature for foreign speakers.
4. **Culture and Traditions:** This design includes information about traditional ceremonies, performing arts, traditional music, customary clothing, and distinctive Palembang cuisine.

Each cultural element is detailed to provide users with a rich understanding of Palembang's traditions.

5. **Architecture and Historical Heritage:** This section contains descriptions of historical buildings and archaeological sites that are silent witnesses to Palembang's extensive history. This design aims to assist users in understanding the importance of preserving cultural heritage.
6. **Social Life and Religion:** This section explains the kinship system, social structure, and predominant religions and beliefs in Palembang. The information provides insights into the social and religious dynamics present in Palembang society.
7. **Economy and Daily Activities:** This design provides information on traditional livelihoods and the role of traditional markets in Palembang's economy. It helps users understand the interconnections between culture and economy.
8. **Interactive Activities:** This design incorporates interactive elements such as digital maps, multimedia galleries, quizzes, and games. The goal is to make learning more engaging and immersive through direct interaction with the content.
9. **Glossary:** The encyclopaedia also includes a glossary to help users understand specific terms used in the content.
10. **References:** This section lists the sources used in the development of the encyclopaedia, ensuring that the presented information is reliable and verifiable.
11. **Design Team:** The final section lists the names of the team members involved in the development of the encyclopaedia, demonstrating the credibility and collaborative effort in the development process.

The innovation in this digital encyclopaedia research is the design of an interactive digital encyclopaedia of Palembang's cultural heritage based on HTML5 web technology. The information presented not only describes Palembang's culture but also refers to BIPA program policies, syllabi, and learning outcomes, designed in a digital and interactive format. This encyclopaedia can serve as a comprehensive and interactive learning resource for anyone interested in learning Indonesian through the introduction to Palembang's culture, and it can also promote tourism to Palembang.

## 6. Conclusion

The results of this research indicate that the flowchart developed effectively serves as a guide for designing interactive digital encyclopedias. The resulting design not only focuses on rich cultural content but also considers user experience, ensuring ease of use and educational value. Thus, this encyclopedia is expected to be an effective tool for teaching Indonesian to foreign speakers through an introduction to Palembang's culture.

The limitation of this study is that the research has only reached the defining and designing stages of the 4D development model by Addie (define, design, develop, and disseminate). This study is a fundamental research project funded by the Ministry of Education, Culture, and Research of the Republic of Indonesia and has not yet progressed to the applied research stage, which includes development and testing. Therefore, this research focuses on the define and design stages. The novelty of this research is the creation of an interactive digital encyclopaedia of Palembang's cultural heritage based on HTML5 web technology. The information presented not only describes Palembang's culture but also aligns with BIPA program policies, syllabi, and learning outcomes, designed in a digital and interactive format.

## Funding:

This research is supported by The Ministry of Education, Culture, Research, and Technology (*Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi*), <https://bima.kemdikbud.go.id>, is acknowledged by the researchers for providing the research grant that enabled this study to be conducted. The researchers also thank Universitas Bina Darma, DRPM Universitas Bina Darma, the

Faculty of Science and Technology UBD, the Faculty of Social Humanities UBD, and all other individuals and organizations that helped with this research.

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