

# Development of E-Culture Framework for Ethnic West Papua Using Soft Systems Methodology (SSM)

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## Abstract

West Papua is a province located in the eastern region of Indonesia and is a division of the Papua Province. The diversity of cultures and ethnicities in the West Papua region is an aspect that needs to be protected due to the influence of the times. The threat of cultural extinction in West Papua is a problem that needs to be resolved at this time. The purpose of this study is to identify and model plans for cultural preservation in the West Papua region. This study aims to build a framework for developing an e-Culture Ethnic West Papua system using the Soft System Methodology (SSM) to produce a model of cultural preservation. Data collection techniques by conducting observations and interviews with related parties. The conceptual model produced in this study can broaden the perspective with a world view so that all levels in society and all existing organizations are involved in preserving the existing culture.

**Keywords:** Electronic Culture, Framework, Interpretative Structural Modeling, West Papuan People's Assembly, Soft System Methodology.

## 1. INTRODUCTION

West Papua is a province located in the eastern region of Indonesia and is a division of the Papua Province. The people of West Papua live from different ethnic backgrounds and live in scattered places. West Papua itself has hundreds of tribes with several major ethnic groups including the Arfak, Doreri, Moi, Maibrat and so on. The tribes in West Papua have different customs and traditions. Cultural degradation in Indonesia which is quite worrying, both tangible (physical) and intangible (in human memory) also affects the culture of the tribes in Papua which is increasingly on the verge of extinction [1]. The noble and sacred cultural values belonging to the indigenous Papuan community, which were passed down and brought to life by their ancestors, have gradually changed along with the development of science and information technology.

These impacts affect the behavior of the indigenous people of West Papua today, so that Culture which is the identity of the Indigenous Papuans (OAP) is increasingly being abandoned and begins to follow the influence of outside cultures (westernization).

Culture is the identity of a nation which can also be used as evidence that the nation has a long history. In addition, the culture of a nation can also be used as a measure of whether the nation is advanced or still lagging behind [2].

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The development of national culture has so far been quite rapid due to the efforts of all components of the nation, especially the existence of constructive policies from the central government to the regions, but lately we have also witnessed a number of our cultures being degraded by the currents of globalization and modernization [3]. The threat of cultural extinction is a problem that needs to be solved today. This research is useful for building a strategy model for the preservation of the ethnic culture of West Papua using the Soft System Methodology (SSM) approach to be able to answer the problem of the threat of cultural extinction in West Papua Province. The basic idea of soft systems thinking is that the system concept is used as a way to probe into the perceived world [4]. SSM is considered very suitable to be applied to model knowledge management in an organization [5]. Soft System Methodology is a systematic method of developing information systems using a structured approach to understand a problem, build a conceptual model, obtain feasibility and desired changes [6]. SSM is a useful way to capture user needs. SSM concentrates on stakeholder perspectives and thus facilitates user engagement [6]. Soft System Methodology initially emerged due to the existence of a thinking system that formed a conceptual framework [7].

Several previous studies have been carried out using the Soft System Methodology approach and have become a reference in this study. Application of Knowledge Extraction in Tuition Fees Using the Soft System Methodology (SSM) by Munifah [8]. The study explained the problem of paying tuition at College X and using the Soft System Methodology (SSM) method, it succeeded in building a Knowledge Extraction model in the lecture payment process and improving the steps according to the case study. Another study entitled Model designs of Indonesian tuna fishery management in the Indian Ocean (FMA 573) using a soft system methodology approach [9]. The research was conducted using the SSM methodological approach to evaluate biological aspects, tuna fishing technology in FMA 573, and design a management model for resource and technology aspects. The research conducted this time will produce a model that is expected to be applied by the West Papua regional government, the West Papuan People's Assembly (MRPB) and the Papuan Customary Council (DAP) of the Domberai region as an effort to protect and preserve ethnic culture in West Papua Province.

## 2. RESEARCH METHODS

This research was conducted on cultural organizations, including the Papuan Customary Council (DAP) and the West Papuan People's Council (MRPB) using qualitative methods. The data obtained from this study were conducted by interviewing the MRPB chairperson and the DAP region III Domberai chairman, while the research phase used the Soft System Methodology (SSM). Soft System Methodology is an evaluation method that not only compares the model with other models but also compares

the conceptual model with reality [10]. Soft System Methodology (SSM) is considered capable of providing real and effective modeling of human activities and relationships with related organizations. The stages carried out in this research include:

1. Description of the problem, in the early stages of extracting information about the problem of the threat of cultural extinction including the people or organizations involved in this problem. The first stage is understanding unstructured problems, namely understanding system problems that are unstructured, complex, and require a broad perspective. Understanding the problem is done through literature study, statistical data analysis, field observations and discussions with stakeholders at the research site [11].
2. Describe the problems that have been compiled into a rich picture diagram or describe the current situation related to the problems at hand.
3. Defining keywords (root definition), which collects key words that must be defined into a textual and concise form of business process path, then from this Root Definition mapped into CATWOE elements (Client, Actor, Transformation, World view, environment).
4. System modeling based on stage 3 (root definitions). This stage is the result of the analysis of the conceptual model which is a graphical representation of the perspective on the root definitions [12].
5. Comparing the model that has been made with the real situation.
6. Make changes or adjustments to the model that has been designed.
7. Carry out repair solutions for the recommended system.

The stages described above are described in the research flow as shown in Figure 1.

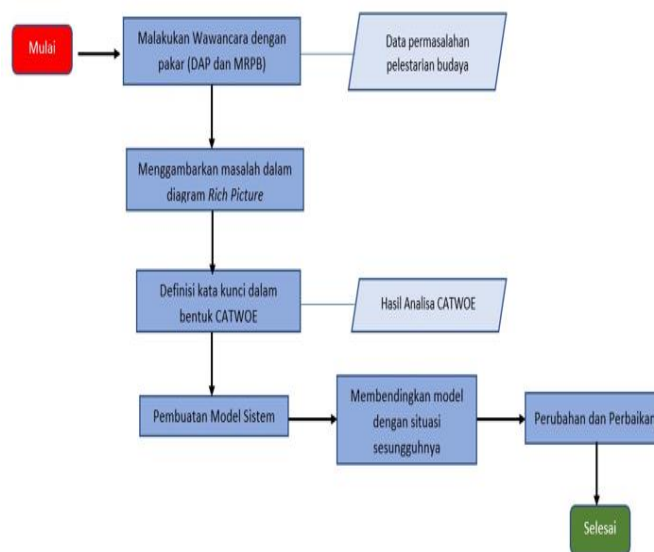


Figure 1. Research Flow

### 3. RESULTS AND ANALYSIS

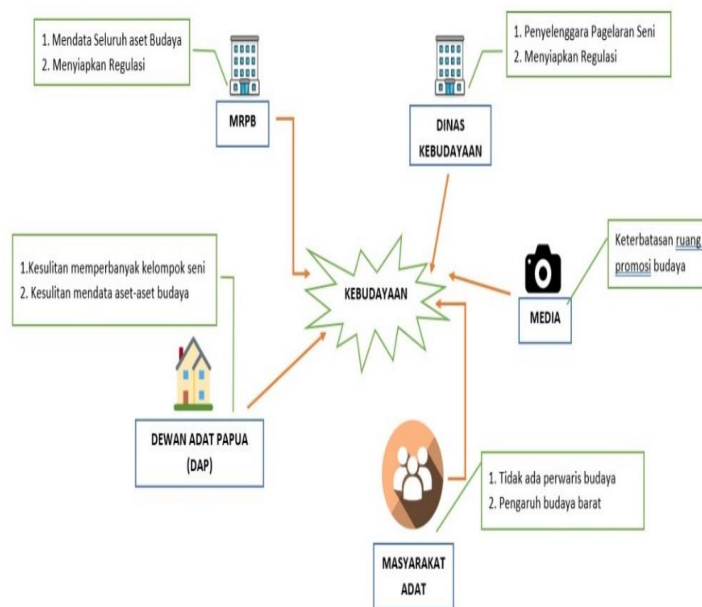
#### 3.1. Identification of problems

Based on the results of data collection through interviews with MRPB (West Papuan People's Assembly), Chairman of the Papuan Customary Council (DAP), why the culture in the Papuan Customary Council (DAP) Region 3 Domberai began to fade, including:

1. The influence of western culture (westernization) is one of the reasons the culture in West Papua Province is starting to erode. Information technology plays an important role in this process, because all levels can access various information from the internet and easily start adopting foreign culture which is considered attractive in today's society.
2. Cultural heirs in the West Papua region are also considered an obstacle to cultural preservation. The lack of people's intention to learn and inherit the existing culture is a problem in the field.
3. The lack of cultural performances or cultural exhibitions organized by the Regional Government makes it difficult for culturalists in the regions to promote and even display regional cultural works.
4. Difficulty in recording cultural assets in the Domberai area.
5. There are not many art groups (art studios) in the Domberai area.
6. The role of the media (print and online media) in the regions has not fully facilitated cultural observers.

#### 3.2. Rich Picture

The material obtained in the first stage is then used to build a rich picture (real world map depiction) or also called a representation of the current state [13]. In general, there are several obstacles faced by the Cultural Service of West Papua Province, the West Papuan People's Assembly, the Papuan Customary Council Region 3 Domberai which has caused the culture in the West Papua region, especially the 3 Domberai region to begin to erode and on the verge of extinction. The role of the media and the contribution of indigenous peoples in the 3 domberai region itself is considered less so that it affects the problem of cultural preservation in the West Papua region today. Rich Picture generated from the initial process can be seen in Figure 2.



Picture 2. Rich Picture

#### 3.3. Root Definition

At this stage, the identification of situation elements and parties involved in the system according to the relevant situation will be carried out using CATWOE analysis (Customers, Actor, Transformation, World-view, Owner, Environment).

Table 1. CATWOE Analysis

Description	Result Definition
<i>Customers :</i>	
Declare the parties affected by the activities carried out	Papuan People/Indigenous People (OAP) who are the subject of identity, namely culture itself
<i>Actors :</i>	
Declare the parties involved in the activity	West Papuan People's Council (MRPB), Culture Service, Papuan Customary Council (DAP), and other parties outside the community
<i>Transformation :</i>	
Activities aimed at converting inputs into outputs	To help the process of cultural preservation in the West Papua region
<i>World View :</i>	
Overall view	All parties in West Papua Province who can help preserve culture
<i>Owners:</i>	
The party that can stop the activity	Papuan people/indigenous people who have a cultural identity

*Environments :*

Constraints that occur in the environment      The influence of outside culture through the development of Information Technology

3.4. Conceptual Model

The stage of preparing the conceptual model is done by developing a system according to the definition that has been built. The conceptual model is a graphical representation of the perspective on the root definition [14]. The aim is to identify activities that need to be added to the system so that the culture in West Papua can continue to be preserved, where the conceptual model is considered as an ideal form that provides inspiration, not as a criticism or threat [15]. The added activities in question will be described as follows: .

1. The West Papuan People's Council (MRPB) and the Papuan Customary Council (DAP) need to make regulations (regional regulations) to protect cultural assets in West Papua Province, in addition to being able to apply them to all levels of education. This needs to be done to introduce the existing culture to the community from an early age.
2. The West Papua Provincial Government needs to check the availability of facilities and infrastructure used to

protect cultural assets in the Papuan Customary Council (DAP).

3. The West Papuan People's Assembly (MRPB) needs to encourage the inventory process of all cultural assets in West Papua Province by utilizing village officials or RT/RW to minimize the scope of data collection.
4. Providing teaching staff who are ready to be deployed to the community to provide education to the community regarding existing cultural assets. The teacher can be from the Papuan Customary Council (DAP) or from the community itself.
5. It is necessary to involve existing religious institutions to participate in helping to protect existing cultural assets. The role of religious institutions, for example, makes worship using the local language of the local community.
6. The West Papua Provincial Government (Department of Culture and Tourism) needs to evaluate the programs that have been carried out at the agency, whether the programs carried out annually have contributed to the preservation of community culture in West Papua.

The activities that have been added can be seen in Figure 3.

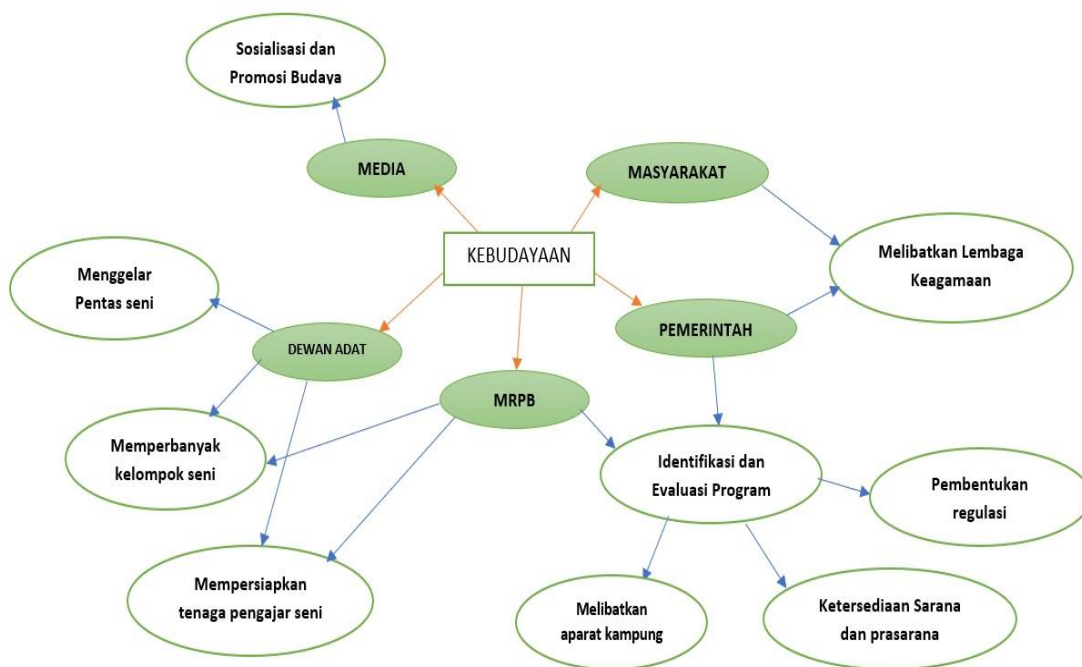


Figure 3. Conceptual Model

3.5. Comparison of Model and Reality

This process is generated by comparing all the agenda of activities that will be carried out in the real field with the conceptual model that was previously designed [16]. The comparison between the model and reality will result in recommendations from existing activities, resulting in

improvements to the system that has been implemented by the West Papua Provincial Government, the West Papuan People's Assembly (MRPB) as a cultural institution, as well as other elements involved in preservation of culture in the West Papua region. A few things to recommend:

Table 2. Comparison of Model and Reality

Activities	reality	Recommendation
Program Identification and Evaluation	The Tourism Office of West Papua Province has carried out various programs and activities that are believed to preserve the culture in the West Papua region, such as holding cultural performances which are held every year by involving several art groups in the community.	The activities carried out should involve all elements of society and also involve other institutions outside the institution, the Government also needs to improve the existing cultural infrastructure, prepare regulations through Regional Regulations (Perda) where at all levels of education both elementary, junior high, and high school must include local language subjects.
Expand art groups	There are only 7 groups of art groups in the Manokwari Regency area, and on average they are dance studios.	The West Papuan People's Council (MRPB) and the Papuan Customary Council (DAP) need to increase art groups in the community so that all indigenous peoples in the Manokwari Regency area participate as cultural heirs and need to develop the formation of art groups other than dance studios so that their assets other cultural assets are also touched.
Preparing art teachers	Art teachers in Manokwari Regency are traditional leaders who directly provide education to the community, so the number is small.	The West Papuan People's Council (MRPB) and the Papuan Customary Council (DAP) need to prepare and increase the number of art teachers, so that they can support educational needs at all levels of society.
Involving religious institutions	Religious institutions in the Manokwari Regency area have not been much involved in cultural preservation	The government really needs to involve religious institutions such as the Church to contribute to cultural preservation, this can be done by scheduling the worship process using the local language so that there is a function of cultural education to the community because the level of public trust in the Church is greater than that of the Government.
Cultural Outreach and Promotion	Print media, the Public Broadcasting Institution (LPP) in Manokwari Regency have not played much role in cultural preservation	The media plays an important role in the process of education and outreach to the public about culture, so it is deemed necessary to intensively conduct socialization and education through the media, either through songs, folklore, or programs related to cultural preservation in West Papua Province.

### 3.6. Corrective action

Based on the analysis stages that have been carried out previously, the following corrective actions can be proposed:

1. Programs or activities carried out by the Provincial Government of West Papua through the Department of Tourism and Culture need to involve various elements, so that there is involvement of all levels of society in cultural activities.
2. The West Papuan People's Council (MRPB) and the Papuan Customary Council (DAP) need to work together in identifying art groups that exist in the community through schools or other organizations, and need to encourage the formation of cultural groups to the smallest scope in society so that all assets existing culture can be saved.
3. The West Papua Provincial Government, the West Papuan People's Council (MRPB) and the Papuan Customary Council (DAP) need to prepare and increase the number of art teachers so that they can be distributed to all existing art groups.
4. It is necessary to involve religious organizations in the West Papua region because the community has good social relations with religious organizations.
5. The formation of good regulations needs to be carried out by the Provincial Government of West Papua and the West Papuan People's Assembly (MRPB) to add all existing cultural potentials into the education curriculum at the Elementary School (SD) and Junior High School (SMP) levels.
6. Culture in West Papua needs to continue to be published and socialized through existing media such as print media, the Public Broadcasting Institution (LPP RRI) as well as through local and national television stations in Indonesia.
7. MRPB, DAP and the Provincial Government of West Papua need to take an inventory of existing cultural assets so that they can be recorded and registered as regional intellectual property so that these assets are legally protected.

## 4. CONCLUSION

The West Papuan People's Assembly (MRPB), the Provincial Government and the Papuan Customary Council (DAP) need to act quickly to draft regulations so that they can implement local language learning at the elementary, junior high and high school levels. The government and related organizations also need to increase the number of art teachers who are used as heirs to support the current regulations. Cultural assets in West Papua Province need to be recorded and recorded so that they can be registered as intellectual property so that they are legally protected. Programs and activities that have been carried out by the Provincial Government of West Papua and the MRPB will later need to be evaluated so that there are improvements to

the programs being implemented. The conceptual model and recommendations that have been produced in this research are reference materials for the West Papua Provincial Government, the West Papuan People's Council (MRPB) and the Papuan Customary Council (DAP) Region III Domberay to build a complex cultural preservation system such as the Knowledge Management System, or further research was conducted to build an intellectual property database so that all cultural assets in the West Papua region can be saved from the threat of extinction.

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