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Language Dynamics in the ExxonMobil Mining Industrialization Area: Resisting Language Shift and Promoting Preservation

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Abstract

Objectives: This research investigates language dynamics in the ExxonMobil mining industrialization area in Bojonegoro, Indonesia. Despite the impact of industrialization and economic development on language shift, this study highlights how loyalty to local languages can resist these influences, leading to language maintenance. The goal is to understand the factors behind language preservation and shift, as well as efforts to uphold the local language.

Methods: The research focuses on the Gayam District, specifically Braboan, Gayam, and Kalitidu villages. Data collected from 300 individuals of different age groups were analyzed using a mixed-method approach involving a questionnaire, interviews, and observations.

Results: The analysis, based on language vitality indexes, reveals that Javanese language in the industrialization area remains stable, reflecting language maintenance. However, Indonesian language is under threat and shows signs of language shift. Factors like family, familiarity, and adherence to social and cultural norms drive language loyalty. Government language policies, while intended to promote language use, can sometimes exacerbate linguistic conflicts, rather than prevent them.

Conclusions: This study demonstrates that the Javanese language in the ExxonMobil mining industrial area of Bojonegoro remains robust, with a vitality index of 1.0, signifying a stable and safe status despite industrialization. Community-driven efforts, cultural pride, and intergenerational transmission have effectively preserved the language, even as it expands into formal domains traditionally dominated by Indonesian.

Keywords: language maintenance, language shift, language vitality, ExxonMobil

لغة ديناميكيات في منطقة التصنيع التعديني لشركة إكسون موبيل: مقاومة التحول اللغوي وتعزيز الحفاظ عليه

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ملخّص

الأهداف: يهدف هذا البحث إلى دراسة ديناميكيات اللغة في منطقة التصنيع التعديني التابعة لشركة "إكسون موبيل" في بوجونيغورو، إندونيسيا، وأثر التصنيع والتنمية الاقتصادية في تغيّر اللغة. يسلّط البحث الضوء على دراسة كيف يمكن الولاء للغة المحلية أن تقاوم هذه التأثيرات من أجل الحفاظ على اللغة. ويكمن الهدف في فهم العوامل التي تؤدي إلى المحافظة على اللغة أو تغيّرها، إلى جانب الجهود المبذولة لصون اللغة المحلية.

المنهجية: يركّز البحث على منطقة غايام، وتحديدًا قرى برابوان، وغايام، وكالتيدو. وقد جُمعت البيانات من 300 مشارك من فئات عمرية مختلفة، وحُللت باستخدام منهجية متعددة، تضمنت استبيانات، ومقابلات، وملاحظات ميدانية.

النتائج: يكشف التحليل القائم على مؤشرات حيوية اللغة، فإن اللغة الجاوية لا تزال مستقرة في منطقة التصنيع، مما يعكس نجاح جهود صيانة اللغة. في المقابل، تُظهر اللغة الإندونيسية مؤشرات على التراجع والتحول اللغوي. وتشمل العوامل التي تعزّز الولاء اللغوي: دور الأسرة، وشعور الألفة، والالتزام بالمعايير الاجتماعية والثقافية. ورغم أن السياسات اللغوية الحكومية تهدف إلى دعم استخدام اللغة، فإنها قد تؤدي أحيانًا إلى تفاقم النزاعات اللغوية بدلًا من التخفيف منها.

الخلاصة: تُبيّن الدراسة أن اللغة الجاوية في منطقة بوجونيغورو الصناعية التابعة لشركة "إكسون موبيل" لا تزال قوية، حيث بلغت درجة حيويتها 1.0، مما يشير إلى وضع مستقر وآمن رغم التصنيع. وقد أسهمت الجهود المجتمعية، والاعتزاز بالهوية الثقافية، والتوريث اللغوي بين الأجيال في الحفاظ الفعّال على هذه اللغة؛ بل وامتدادها إلى مجالات رسمية كانت تقليديًا تحت سيطرة اللغة الإندونيسية.

الكلمات المفتاحية : صيانة اللغة، التحول اللغوي، حيوية اللغة، إكسون موبيل

Introduction

According to O'Cinneide et al., (1985), industrialization is recognized as one of the contributing factors to language shifts. The process of industrialization attracts migrants from diverse ethnicities, cultures, and linguistic backgrounds to settle and engage in economic activities in a particular area. As a result, the native language spoken in the vicinity of industrialized regions becomes threatened by bilingualism, which is more prevalent among its speakers (Clingingsmith, 2007). In such language scenarios within industrialized areas, languages that serve an economic purpose tend to emerge as dominant, leading to the displacement of other languages, particularly minority languages. This phenomenon is a primary driver of language shift, wherein one language is gradually replaced in communication and social interactions (Potowski, 2013). However, in certain cases, local languages may persist due to unique and specific local conditions, supported by a sense of loyalty and motivation to preserve cultural heritage (Ash et al., 2013; Wright & Kurtoglu-Hooton, 2006).

In the case of Bojonegoro, East Java, the presence of ExxonMobil's industrialization poses a significant threat to the preservation of the local language, Javanese. Despite this challenge, the characteristics of the local culture remain strongly preserved, and the community demonstrates a high level of loyalty in protecting their cultural heritage. ExxonMobil, a global oil and gas company headquartered in Irving, Texas, United States, has been operating in Indonesia for 125 years. Specifically in the Gayam District of Bojonegoro, ExxonMobil has been active since 2008. Being an international company, they employ a considerable number of foreign experts and workers. Additionally, they also hire a significant workforce from Indonesia, particularly from East Java. As a result, the Gayam District and its surrounding areas have become bilingual due to the presence of ExxonMobil and the diverse linguistic backgrounds of its employees.

Bojonegoro Regency consists of 28 sub-districts, including three that are designated as ExxonMobil's oil and natural gas mining industrial areas in the Banyu Urip–Jambaran Cepu Block. These sub-districts are located in Mojodelik Village, Ngasem District. The three specific districts are Ngasem, Gayam, and Kalitidu. Within Ngasem District, the ExxonMobil industrial area encompasses Mojodelik Village, Ringin Tunggal Village, Brabuwan Village, Begadon Village, and Bonorejo Village. The industrial area in Kalitidu District includes Cengungklung Village, Sudu Village, and Katur Village. In Gayam District, the industrial area is situated in Gayam Village. To summarize, the industrial area spans three districts and nine villages.

According to the Central Bureau of Statistics for Bojonegoro Regency (June 2022), the total population of Bojonegoro Regency is 1,450,889. Gayam sub-district alone is inhabited by approximately 35,863 people. The majority of the population in this sub-district speaks Javanese, specifically the Javanese subdialect known as Jonegoroan. This sub-dialect has been widely adopted as the standard Javanese spoken by the people of Bojonegoro and the surrounding areas along the north coast of East Java (Hardiana, 2020).

Sociolinguistically, the people of Bojonegoro live in a bilingual society, with Indonesian being used in formal settings and Javanese in informal contexts. The presence of ExxonMobil has introduced English as an additional language, resulting in a multilingual environment.

The three research sites – Gayam, Brabuan, and Mojodelik villages – are situated within the Gayam District of Bojonegoro Regency, an area profoundly affected by the presence of ExxonMobil's oil and gas operations. This industrial footprint has transformed the region into a socio-economic hub, attracting migration, expanding infrastructure, and altering community interaction patterns. However, despite these changes, the sociolinguistic data reveal a resilience of the Javanese language. The community's strong cultural attachment and linguistic pride appear to buffer against industrialization-induced language shift. The corporate presence has not homogenized linguistic practices but instead created a multilingual ecology where the local language maintains dominance, even in the face of increased language contact and economic mobility.

The presence of a bilingual environment necessitates a bilingual community's competence. In such a situation, languages used in the area share different domains, leading to language contact during communication. Migrants from diverse ethnicities, languages, and cultures interact with the local community, resulting in language choices. Within a communication setting, there is a dominant and non-dominant language. The frequently used language naturally undergoes

lexical development, affects speech situations, and determines the language's domain of use. Consequently, less frequently used languages may stagnate or even become extinct. However, some non-dominant languages continue to be utilized by speakers due to loyalty towards them, as these languages still fulfill their linguistic functions.

Language loyalty persists as local traditions are upheld, and the local language remains relevant for communication. Additionally, the local and traditional communities are still distant from industrialization and modernity, contributing to the limited language competence. This situation promotes the maintenance of the local language.

Literature review

Language maintenance and diglossia

Language maintenance refers to the collective choice of a community to continue using a language they have previously used (Fasold, 1984). Fasold also noted that language maintenance stands in contrast to language shift, where a speech community decides to abandon their current language and adopt a different one. Sumarsono & Partana (2002) discovered that language maintenance occurs when a community collectively opts to persist with their existing language. This decision is influenced by several factors. Firstly, there is a sense of loyalty to the language as it represents the group's symbolic identity. Secondly, as highlighted by Sumarsono (Chaer & Agustina, 1995), the concentration of residential areas plays a role. When speakers of different languages reside in separate areas, there is limited linguistic contact with speakers of other languages, which strengthens the ties among speakers of the same language. Thirdly, a high level of inter-community tolerance ensures that no conflicts arise when using the language. Lastly, there is a structured transmission of the language to the next generation.

In the same geographical area where multiple languages coexist, individuals naturally exhibit a preference for a specific language during their interactions. Gunarwan (2006) introduces the concept of "domain", which can be divided into two categories: high language and low language. High language is employed in formal settings such as religious, educational, and professional contexts, while low language is utilized in informal situations such as kinship and friendship. Language shift does not occur when languages share domains and do not compete with each other; instead, they coexist and are mutually accepted. The community is aware of and understands when to use a particular language based on the linguistic context. If this equilibrium is maintained, the neighboring languages do not vie for speakers, and this situation is referred to as diglossia.

The presence of international large-scale industrialization impacts local language usage. In the ExxonMobil industrial area, the majority of the local population consists of Javanese individuals who exhibit strong loyalty to using the Javanese language. Preliminary observational data indicates that young individuals tend to use Indonesian when interacting with ExxonMobil employees. However, adults and the elderly predominantly use Javanese Kromo, as some of them are not proficient in Indonesian. These observations suggest that there has been a shift towards using High Language among the younger generation. If this high-intensity interaction continues, it will likely impact the use of the Javanese language.

This research focuses on examining the vitality of the Javanese language and the division of linguistic domains in industrial areas, identifying threats to the Javanese language, and exploring efforts to preserve it. The significance of this research lies in understanding how local languages are impacted by the threat of international-scale industrialization.

Several studies have investigated the preservation of the Javanese language in various contexts in Indonesia. While Setyaningsih (2010) focused on Javanese language maintenance among the Samin tribe in Bojonegoro, Hardiana (2020) investigated the student community from Malang City residing in Bojonegoro. In addition, Efita et al., 2022; Fitriana, 2017; Hakim & Novianty, 2020; Ningsih & Harahap, 2019; Rusminto et al., 2021; Seli & Kristi, 2020; Siregar, 2020; Siregar et al., 2020; Suherman, 2015; Sundari, 2020; Ulfah et al., 2022; Utami et al., 2022, have examined Javanese language maintenance both within and outside the island of Java, within Islamic boarding schools, and through Javanese song lyrics. However, research regarding the maintenance of the Javanese language, particularly in industrialized areas has been overlooked.

This study aims to investigate the vitality of the Javanese language in the vicinity of the ExxonMobil mining industry,

explore the factors that contribute to language maintenance, examine language loyalties, and analyze the language policies implemented in government and education within the area.

Method

This study utilizes a mixed-method approach on three villages, namely Gayam, Brabuon, and Mojodelik Villages, in the Gayam District of Bojonegoro. The study took place in Gayam, Brabuan, and Mojodelik villages in Bojonegoro, East Java, near ExxonMobil's operations. Each village reflects different degrees of socio-economic change and mobility, offering a comparative perspective on language use and vitality in communities adjacent to industrial development.

This study involved 300 purposively selected Javanese speakers from Gayam, Brabuan, and Mojodelik villages in Bojonegoro, East Java. The sample included diverse age groups to explore intergenerational language transmission. Age was a key criterion, as older generations often retain traditional language, while younger ones may shift toward dominant or economically driven languages, revealing trends in local language vitality over time.

Table 1. Data on informant's language usage

Informant	Low Language (11 subdomain)			High Language (9 subdomain)		
	Braboan	**Gayam**	**Mojodelik**	**Braboan**	**Gayam**	**Mojodelik**
Amount	55	55	55	45	45	45
Total	165			135		

The study includes a sample of Javanese speakers, with a total of 300 participants selected based on age criteria. The informants encompass children (7-12 years old), youth (13-18 years old), young adults (19-35 years old), adults (36-60 years old), and the elderly (over 60 years old). Data collection focused on two main sociolinguistic domains: Low Language and High Language. The Low Language domain includes informal settings such as family, friendships, neighborhood interactions, and public spaces like markets and public transport. Eleven subdomains were identified, with five informants per subdomain across age groups to observe intergenerational use. The High Language domain refers to formal, institutionalized settings such as schools, workplaces, and media platforms. Nine subdomains were defined, with five informants per age group from Brabuan, Gayam, and Mojodelik. This classification enabled a detailed analysis of language vitality across social contexts and age demographics.

Language data was collected through questionnaires.Triangulation of data sources was utilized, including observation, questionnaires, and interviews. The questionnaire adopted for this study was based on the Use of Everyday Language (Cohn et al., 2013; Cohn & Ravindranath, 2014), while interviews were conducted to gather insights into the community's perspectives regarding the use of the Javanese language.

Data analysis was conducted using the language vitality concept proposed by Grimes (2000). Grimes suggests that the language vitality index can be measured by considering category components, vitality index, indicators, and language situations, as presented in Table 2.

Table 2. Language vitality index

Vitality Indeks	Category	Situation	Indicator
0 – 0,20	I	Very threatened	1. the number of speakers is very small 2. aged > 60 3. used in traditional ceremonies
0,21– 0,40	II	threatened	1. the number of speakers is small 2. aged >40 3. Used by family and neighbors

Vitality Indeks	Category	Situation	Indicator
0,41 – 0,60	III	shift	1. the speakers are quite a lot 2. children and adults. 3. It is used in families, neighbors, friendships
0,61 – 0,80	IV	Stable-steady but has the potential to shift	1. The number of speakers is large 2. All ages use it 3. Used in informal domains
0,81 – 1,0	V	save	1. The number of speakers is large 2. Used in all domains 3. This language is used and learned by its speakers 4. There is standardization of language

Next, the researcher calculates the vitality of language with the following formula.

LVI = AoU/NoI

LVI = Language Vitality Indeks
AoU = Amount of Usage
NoI = Number of Informants

Based on the calculations of language vitality, the study reveals the vitality index, categories, situations, and indicators prevalent within the community. The researchers conducted two separate language vitality analyses of Javanese language usage: one for low language and another for high language. While low language vitality was examined in the domains of family, neighborhood, friendship, and general interactions, high language vitality was assessed in schools, offices, banks, and technology.

To further assess the linguistic situation, the researcher classified the results based on previous measurements. This classification helps determine whether the language situation corresponds to diglossia or language leakage. The specific classification can be found in Table 3.

Table 3. Language status

Category	Situation	Vitality Indeks	Status	
I	Very threatened	0 – 0,20	Very leakage	Leakage diglossia
II	threatened	0,21– 0,40	leakage	
III	shift	0,41 – 0,60	Small leakage	
IV	Stable-steady but has the potential to shift	0,61 – 0,80	Diglossia enough	Diglossia
V	save	0,81 – 1,0	Diglossia	

Categories I, II, and III are included in the leakage diglossia status, while IV and V are diglossia.

Results

Javanese vitality

The vitality of the Javanese language is presented in the Table 4.

Table 4. Vitality of Javanese language in the low languages

Villages	Family					Friendship		Neighbor		Geneal	
	Mother	Father	Brother-sister	Grandfather-grand mother	Husband-wife	Food stall	Worship place	Neighbor	Traditional ceremony	Traditional marketr	Public transportation
Braboan	5	5	5	5	5	5	5		5	5	5
Gayam	5	5	5	5	5	5	5	5	5	5	5
Mojodelik	5	5	5	5	5	5	5	5	5	5	5
Total	15	15	15	15	15	15	15	15	15	15	15

Table 4 displays the utilization of Low Language in Javanese, indicating a significant prevalence across various domains such as family, friendship, neighborhood, and general interactions. Remarkably, the entire population residing in the vicinity of the ExxonMobil industry employs Javanese as their primary means of communication. The Javanese language remains widely used among all age groups, including the elderly, adults, youth, adolescents, and children within the three villages under study. Notably, neither Indonesian nor English, typically seen as symbols of modernization, have managed to exert any influence on the usage of Javanese. The calculations based on the data presented in the aforementioned table indicate a low language vitality index of 1.0, denoting full and sustained preservation of the Javanese language.

Based on the given vitality index, category V corresponds to index 1.0, indicating a safe and diglossic situation. The Javanese language has a significant number of speakers in the region, according to the indicators. It is utilized in various domains, including family, neighbors, friendships, and the wider public, all under the influence of low language. Additionally, there is evidence that both informal settings like families and formal institutions like schools teach Javanese. The learning of this language also carries cultural values, despite being primarily spoken. Braboan Village is situated in Ring 1, close to the ExxonMobil industry, within the industrialization area. This village serves as a significant hub for oil production. Additionally, ExxonMobil has acquired the largest land in this village, apart from Gayam and Mojodelik. Furthermore, researchers are currently investigating the utilization of Indonesian in the High Language domain. Their objective is to compare the language vitality index of Javanese and Indonesian, aiming to understand the linguistic situation in that area.

Table 5. Indonesian usage in high language domain

Villages	School			Office	Bank	Technology			
	Elementary	Junior High	Senior High			SMS	Social Media	Radio	TV
Braboan	0	0	1	0	1	2	2	2	4
Gayam	0	1	1	1	1	2	2	2	4
Mojodelik	1	1	1	1	1	2	2	3	5
Total	1	2	3	2	3	6	6	7	13
Indeks	0,13			0,2	0,13	0,53			

Based on the given data, the vitality of the Indonesian language can be calculated as follows: 43 out of 135, which results in a value of 0.32. Consequently, the vitality index of the Indonesian language is 0.32, classifying it under category II, indicating a threatened situation and experiencing diglossia leakage. Furthermore, comparison between the usage of both languages (Low and High) reveals that the employment of Javanese in the Low Language domain encounters diglossia in a secure state. On the other hand, the utilization of Indonesian in the High Language realm experiences diglossia leakage and faces a threatening situation.

The vitality index data shows that Javanese in Bojonegoro hold a value of 1.0 (Category V), indicating a strong and secure position. In contrast, Indonesian has a lower vitality index of 0.32 (Category II), signalling vulnerability and diglossia leakage. This reflects a shift where Javanese not only remains dominant but expands into areas traditionally dominated by Indonesian, such as official meetings. As one respondent stated, “We feel more comfortable using Javanese, as it feels more heartfelt and

respectful." This illustrates how linguistic behavior aligns with vitality, promoting Javanese in family and peer contexts.

Discussion

Diglossia, a linguistic phenomenon where a language is used in specific domains, plays a crucial role in the preservation of the Javanese language in East Java, particularly in the Bojonegoro region. Language vitality is determined by the degree to which a language is used in various domains of life, such as family, kinship, and community interactions. Javanese has a secure vitality index of 1.0, indicating its strong position within the local community, where it is actively used across a range of social contexts.

Within the family domain, Javanese is the primary language of communication among family members, including parents, children, grandparents, and extended relatives. The way Javanese is spoken in these settings varies depending on the relationship and context. For instance, when speaking with parents, there is often a code-mixing between Javanese and the Jonegoroan subdialect. This code-mixing blends elements of the Mataraman accent and speech style with the East Javanese characteristics of the Jonegoroan subdialect. Similar speech patterns are observed between husbands and wives, as well as with grandparents. This intergenerational transmission of Javanese from parents to children helps maintain the language's presence in daily life.

The persistence of Javanese within families can be attributed to several factors. First, the practice of teaching Javanese from a young age remains strong. Javanese is valued for its role in teaching politeness, as it involves various speech levels that require speakers to consider their relationship with the listener. This emphasis on respect and hierarchy reinforces the use of Javanese in family interactions.

Second, Javanese functions as the lingua franca in many areas of East Java, including the villages of Braboan, Gayam, and Mojodelik. These communities are largely isolated, with low migration rates due to their reliance on farming and trade, which are primarily local occupations. As a result, Javanese is the dominant language for communication in these regions. The lack of widespread migration also ensures that Javanese remains the central language for local interactions.

Third, Javanese fosters a strong sense of identity and pride. People in the Bojonegoro region feel confident using Javanese in most social situations, even when interacting with new or unfamiliar people. This confidence is linked to their community and cultural identity, which encourages the continued use of Javanese, even in the presence of non-Javanese speakers or in mixed-language contexts. In such cases, people will often switch to Indonesian if the interlocutor does not speak Javanese.

Javanese also serves as a communal language, used in various domains across the village, including markets, prayer rooms, shops, patrol posts, rice fields, and local events. Despite the increasing dominance of Indonesian in formal spaces like banks, offices, and schools, Javanese continues to be widely spoken. This bilingual situation, where Javanese coexists with Indonesian, exemplifies a form of diglossia.

Geographical isolation further contributes to the preservation of Javanese. The villages of Braboan, Gayam, and Mojodelik are remote, with limited access to urban areas. Public transportation is minimal, and the infrastructure remains underdeveloped. ExxonMobil's presence in the region has had little impact on the language dynamics, as it has restricted access to the surrounding community and hired mostly low-skilled local workers. The occasional presence of non-local employees does not significantly alter the linguistic landscape of the area.

The resilience of Javanese in this industrialized context challenges the typical view that industrialization leads to language shift. Instead, Javanese remains vital due to its deep cultural significance, its role in maintaining social norms like politeness, and its strong connection to community identity. This situation reflects a reverse diglossia, where the local language strengthens in everyday use, even as the national language, Indonesian, holds sway in formal settings. Thus, Javanese remains an essential part of the Bojonegoro community's social fabric.

Leakage of diglossia from Indonesian into javanese

Diglossia leakage occurs when a language infiltrates a domain typically controlled by another language. In this case, Indonesian permeates the High Language domain (Gunarwan, 2006). This study investigates the use of Indonesian across various domains within the three villages, including schools, offices, banks, and information technology.

The study examines informants from Gayam Village, focusing on situations where students communicate with teachers outside of class hours. During these interactions, Javanese is predominantly used as the chosen language of communication by both teachers and students. They feel awkward when using Indonesian in these informal settings. Many teachers in Gayam Village are neighbors or even relatives of the students, which further reinforces the prevalence of Javanese in casual speech events outside the classroom. However, the situation is slightly different in Mojodelik, a village adjacent to Bojonegoro city. Although this village is located within the Ring 1 area, it is farthest from ExxonMobil. Many teachers in the village are from outside, including the city. Therefore, the use of Indonesian is more prevalent in this context.

The same pattern emerges in SMP (junior high school) settings. Private schools are found in both Gayam and Mojodelik villages, while public schools are available in Bojonegoro City. The process of student enrollment and teacher recruitment follows a similar pattern as in primary schools (SD). Despite being in the adolescent category, the use of Indonesian remains low due to factors such as personal connections between teachers and students, as they may be friends, neighbors, or even relatives.

The situation changes when examining the realm of high schools (SMA). Since SMA is located in the city center and not in the villages, teachers and students do not have prior acquaintance. With higher levels of education, Indonesian has become the language of academia. Communication with teachers outside the classroom predominantly involves academic topics such as extracurricular activities and school lessons. Furthermore, teachers in SMA tend to maintain a certain distance from their students due to the smaller age gap. Therefore, the use of Javanese is considered impolite in various school areas such as the teacher's room, library, canteen, parking lot, and schoolyard. As a result, Indonesian retains its role as the language of education in these settings.

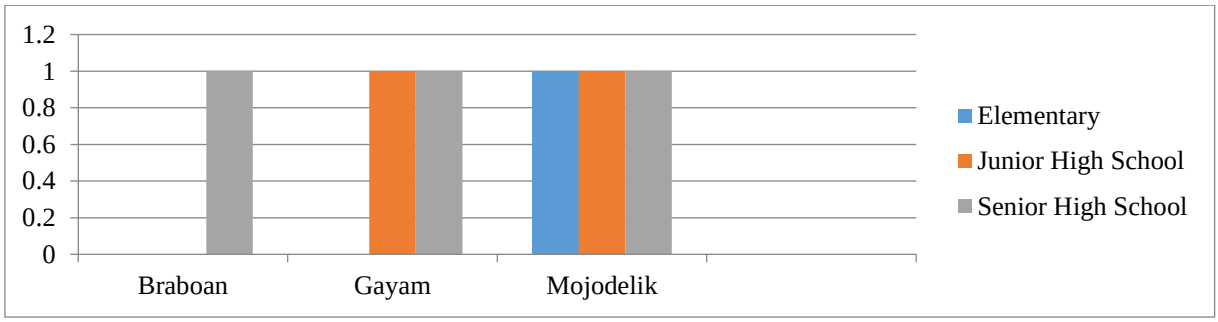


Figure 1: Indonesian usage in school

Figure 1 evidences the diglossia leakage from Indonesian into Javanese. The vitality index of Indonesian in the area is 0.13 (6 out of 45). This score classifies the language situation as Category I, indicating that the language condition is highly threatened. Such a situation signifies the occurrence of diglossia leakage.

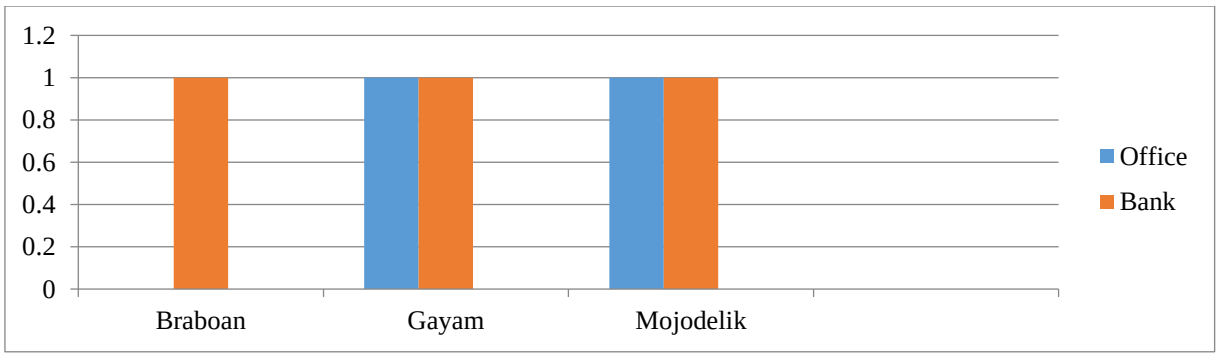


Figure 2: Indonesian usage in office and bank

In office and bank settings, there is also evidence of diglossia leakage in the usage of Indonesian. The survey results reveal a distribution of 5 out of 30, resulting in a vitality index of 0.17. This places the language situation in category I, indicating a highly threatened condition. Several factors contribute to this phenomenon.

Firstly, the familiarity and close relationships among office employees and bank staff play a role. The use of Indonesian feels foreign and uncomfortable to them, even in meeting situations where Javanese is still the preferred language. Similar conditions are observed in banks, where people visit for specific purposes. Bank employees adapt to the local population by using the Javanese language. In the surveyed area, there is only one bank, Bank Rakyat Indonesia (BRI), located in Mojodelik, serving the three villages.

The second factor is the level of education. The majority of individuals have only completed elementary or, at most, high school education, and even that is quite rare. In Braboan Village, for instance, only junior high school graduates were found. When researchers inquired about education, it was revealed that the proximity of the junior high school in Bojonegoro City posed difficulties due to challenging road access at the time. Only a select few who had bicycles could pursue higher education. As a result, there was limited interest in continuing education, and many preferred to work in rice fields and assist their parents. This historical background has had a lasting impact. During meetings with villagers, employees in the village office feel more comfortable using Javanese as it allows for better understanding among the residents. Even when discussing information related to ExxonMobil's corporate social responsibility (CSR), village office employees employ code-switching and predominantly use Javanese. The use of Indonesian is primarily to show respect to delegates from ExxonMobil.

The third factor influencing language usage is politeness. Javanese is perceived as a highly polite language, while Indonesian is considered more direct and less polite. Therefore, if a village office employee or bank employee were to use Indonesian, it might be seen as arrogant and impolite.

Regarding the usage of Indonesian in the technology domain, it can be divided into four contexts: sending SMS messages, using social media platforms such as Facebook and WhatsApp, listening to radio broadcasts, and watching television.

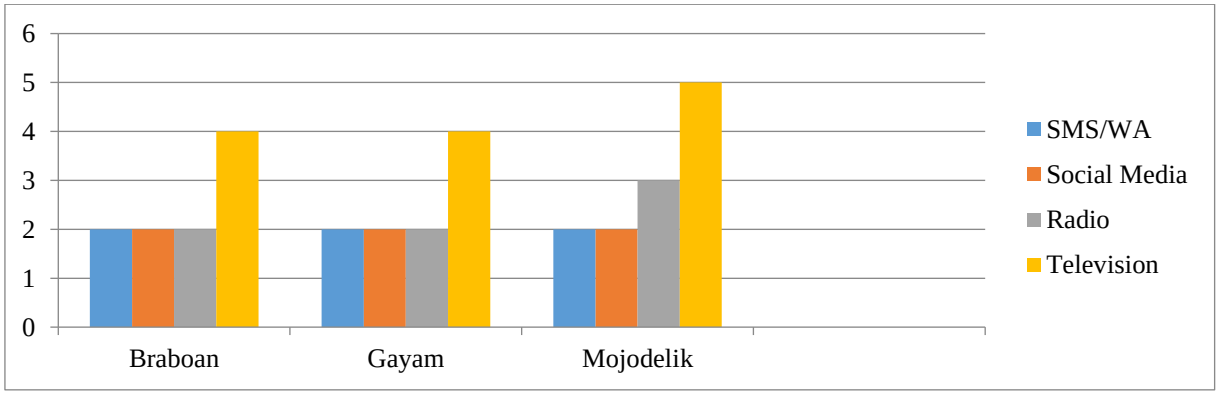


Figure 3: Indonesian usage in technology domain

In Bojonegoro, both local (e.g., Bojonegoro TV, JTV Bojonegoro) and national television stations (e.g., JTV, TV One, SCTV, Indosiar, Net TV, RCTI) are available. However, national channels are more popular due to their wider program variety, mostly in Indonesian. Local channels occasionally air programs in Javanese, but the overall language choice in TV media is limited, favoring Indonesian.

In contrast, SMS communication often uses Javanese, valued for its politeness and intimacy. Although SMS usage is declining due to platforms like WhatsApp, Javanese remains dominant in personal digital communication. On platforms like WhatsApp and Facebook, adults and youth mostly use Javanese, while children tend to use Indonesian.

Radio is a favored medium across generations, with Javanese-language programs such as *campursari*, *ludruk*, and *ketoprak* being the most popular. This shift shows diglossia leakage from Indonesian to Javanese, with a domain index of 0.53, indicating a declining situation where Javanese increasingly dominates technological communication domains.

Javanese language maintenance efforts

The preservation of the Javanese language in Bojonegoro has occurred organically, driven by cultural norms rather than formal policies. Local communities have developed their own strategies to maintain the language, placing strong emphasis on its use within the household. Parents teach their children Javanese from an early age, focusing on politeness and etiquette. This informal mode of transmission ensures the continuity of these values, as parents guide their children and correct them when mistakes are made.

The community also plays a key role in upholding language norms. If someone deviates from the accepted use of Javanese, they are gently corrected. Additionally, formal village events serve as platforms for using Javanese in communication, preserving its relevance. Local celebratory events, such as weddings and circumcision ceremonies, are conducted in Javanese, reinforcing its cultural significance.

Religious sermons, particularly those in Javanese by figures like Kyai Anwar Zahid (traditional Javanese Islamic leader), further strengthen the language's role in community life. Traditional arts like wayang and kentrung also promote Javanese, educating the public while entertaining. Lastly, primary schools in the area incorporate Javanese into their curriculum, ensuring the younger generation is exposed to the language both at home and in school. This comprehensive approach ensures the continued vitality of Javanese in the region.

Industrialization vs language maintenance

The introduction of industrialization is often accompanied by economic advancements in the respective area. This economic motivation attracts support, both directly and indirectly, leading to continued economic growth within the region. Areas surrounding industries are typically encouraged to develop as supporting systems for this economic growth, including social and cultural conditions. However, the pursuit of industrial and economic interests has had a significant impact on language shifts. Researchers in language studies across various regions in Indonesia, such as (Bramono & Rahman, 2012; Ernawati, 2019; Herlina, 2018; Maulud et al., 2019; Nita et al., 2023; Supriyadi, 2020; Zakiyah, 2016), have confirmed this trend. The presence of industry and its economic benefits are suspected to be the driving forces behind language shift cases in Indonesia. People are attracted to the economic advantages provided by industrialization, leading them to actively use languages that offer economic benefits.

On the other hand, industries often operate within communities characterized by a bilingual environment, where migrants make up a significant portion of the population. As a result, Indonesian becomes the preferred mode of communication due to language contact between migrants and the local community in industrial areas. Over time, this impact extends beyond communication with migrants and begins to permeate other domains, including familial, social, and neighborly interactions. Additionally, the education sector plays a substantial role in supporting language shifts. This situation gives rise to a natural language shift, as Indonesian gradually replaces the local language in various spheres of daily life.

However, the findings of this study present a contradiction as not all areas with a significant migrant population resulting from industry and economic development experience language shifts. The strong loyalty to the local language (Javanese) persists due to intrinsic factors within the language itself. Socio-cultural influences and norms within social groups also contribute to the maintenance of the language (Castle, 2021). The loyalty of individuals towards a language establishes its legitimacy (Nekula, 2021). This concept indicates that languages lacking support in terms of normalcy, social interactions, and culture are considered illegitimate by society. Community members must understand when and where a particular language is spoken (Hauptfleisch, 1977).

Furthermore, the bilingual policy has played a role in fostering language loyalty. Language policies have been formulated to protect both local and national languages. The use of the Indonesian language is regulated by Presidential Regulation Number 63 of 2019, Article 36 of the 1945 Constitution of the Republic of Indonesia, and Law Number 24 of 2009. Simultaneously, the use of regional languages is governed by the Law of the Republic of Indonesia Number 24 of 2009 and Government Regulation Number 57 of 2014. These regulations address issues related to the development,

guidance, and protection of regional languages. The language policy has made a substantial contribution to shaping language maintenance in the Bojonegoro region, in addition to the previously discussed factors.

Although industrialization is often linked to language shifts, this study reveals that in Bojonegoro, East Java, industrial influence has not caused such shifts. Instead, the Javanese language has expanded into other linguistic domains, while Indonesian use has declined. The vitality index for Javanese is 1.0, indicating a strong position, while Indonesian stands at 0.32, suggesting vulnerability and diglossia leakage. The preservation of Javanese is driven by social and cultural values, such as politeness and familiarity, which have reinforced its role as a symbol of identity. Government regulations support both local and national languages, preventing language shift despite industrialization.

In addition to ExxonMobil's industrial presence in Gayam District, broader macro-level factors influence the language usage in the studied communities. Migration, both temporary and permanent, introduces new linguistic repertoires, often strengthening proficiency in Indonesian and leading to bilingual interactions. Educational policy, which mandates Indonesian as the primary language of instruction, reinforces a hierarchy between Indonesian and Javanese, promoting Indonesian as a symbol of success. Media exposure, both traditional and digital, further shapes language attitudes, especially among youth, favoring Indonesian and global languages. These factors, alongside socio-economic aspirations, influence language shift dynamics, necessitating future research into their role in language vitality.

This study builds on theories of diglossia (Ferguson, 1959; Fishman, 1967) to explore Javanese language variation amidst shifting domains. Ferguson's model helps understanding functional distinctions in formal and informal language use, while Fishman's theory highlights how industrialisation and education can destabilise diglossia. In Bojonegoro, Javanese dominates domestic and ceremonial contexts, yet Indonesian prevails in public and professional spaces, particularly among younger generations influenced by ExxonMobil's operations. Unlike in Kalimantan, with more significant language shifts due to resource extraction, the study showcases that local language resilience in Bojonegoro is supported by cultural practices, intergenerational transmission, and community agency. This research refines Fishman's Reversing Language Shift theory by showing that resistance to language shift can emerge organically through local factors, not just top-down policies. It underscores the need for policies that support bilingual and bicultural education, promoting local language vitality alongside national ones. This case illustrates how sociocultural and economic forces interact with language practices, offering insights for similar regions facing industrial and linguistic change.

Conclusion

This study reveals that the Javanese language in the ExxonMobil mining industrial area of Bojonegoro remains robust. The vitality index of 1.0 indicates a safe and stable situation, with widespread use across various domains such as family, neighborhood, and cultural events. This preservation is supported by deep-seated cultural norms, strong community loyalty, and active intergenerational transmission. Interestingly, while Indonesian typically dominates formal domains in bilingual societies, it experiences diglossic leakage in this region, with Javanese encroaching upon areas traditionally reserved for High Language use.

Furthermore, the findings highlight the critical role of community-driven efforts and sociocultural values in maintaining linguistic vitality. The community's emphasis on politeness, cultural identity, and pride in local heritage sustains Javanese against industrial influences. These insights underscore the importance of integrating sociolinguistic frameworks with local engagement strategies to promote language preservation in other industrialized and multilingual regions. Future research should explore policy implications and adaptive strategies for fostering linguistic resilience amid globalization.

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