

(Re)defining ecolinguistics in Indonesia's research: A systematic review

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Abstract - The emergence of ecolinguistics in the early 1970s has expanded into various academic discussions, including Indonesia's context. Many articles of ecolinguistics can be found massively online, yet only few of them are stored in an international database, such as Scopus and DOAJ. This article attempts at (re)defining ecolinguistics concept in Indonesia's research by taking 19 sample articles indexed in doaj.org. To collect the data, the researches searched the keywords "ecolinguistics" and "Indonesia" and applied the systematic review method by comparing the definition of ecolinguistics, its methods, and findings of ecolinguistics research in Indonesia. There are found some definitions of ecolinguistics: the study of language diversity, local wisdoms, language endangerment, and ecological awareness. Based on those findings, this article tries to redefine the concept of ecolinguistics as an approach that does not only take data from ecological issues, but also use ecological approach to analyze texts. By doing so, it is expected to figure out critical studies that find out ecological effects from the linguistic strands from various sources to offer more ecological understandings.

Keywords: ecolinguistics; systematic review; Indonesian research

1. Introduction

In Indonesia's context, ecolinguistics has been researched by scholars to examine the interaction between society and their environment. To mention some, ecolinguistics is said as a fruitful approach to examine lexicons of traditional texts such as traditional games, folksongs, literary works, wedding ceremony, and customary laws (Astawa et al, 2019; Dauly & Widayati, 2021; Perangin-Angin & Dewi, 2020; Rahardi & Setyaningsih, 2019; Widarsini, 2021). Beyond lexical level, ecolinguistics is also applied in Indonesian tourism websites, university website, mass media, students' writings and political speech (Isti'anah, 2020; Mantiri & Handayani, 2018, 2018; Subiyanto et al, 2020; Yuniawan et al, 2017). The similarities of those aforementioned studies lie in the theoretical and methodological aspects. Ecolinguistics has positioned itself as a theory that is applicable in many areas of research.

The ecolinguistic researches have been published online and can be accessed openly in a medium international journal database, such as doaj.org. DOAJ stands for Directory of Open Access Journal that aims to index and provide access to high quality, open access, peer-reviewed journals (doaj.org). This free-access database enables the researchers and other scholars to read and download the articles free without subscribing or completing financial requirements to access the papers. This open-access platform has motivated scholars to share or disseminate their thoughts academically and invited other scholars to criticize the published works for research development purpose. In the notion of ecolinguistics as a concept that discusses the relation between human beings and their environment, it is found that Indonesian scholars have started to pay attention to the issue of language and ecology. It is proven by some publications that are doaj-indexed.

This paper attempts to (re)define ecolinguistics in Indonesia's researches by taking samples of academic papers published and indexed in doaj.org. Therefore, the primary aim of this paper is to "(re)define ecolinguistics in Indonesia's researches with a systematic review method". A systematic review is pivotal in the development of ecolinguistics as a science that has been developing in various areas of life. The stories we live by on the necessity of technology and industry are shaped by language. The role of mass media, education, and government rules become central to influence how people think about their world. The stories of consumerism and neoclassical economy that target physical development need to be challenged. What really happens toward the environment may be hidden by the purr-words or euphemisms to justify anthropocentric discourse we find in many areas of life. This paper, thus, attempts at figuring out how ecolinguistics that pays attention to the relation between language and ecology has been exercised by Indonesian scholars and redefining ecolinguistics for future research, including some future directions.

Ecolinguistics is often related to biological dimensions of life, such as physical environment that includes non-human species. However, ecolinguistics also deals with other domains of environment that shape a community's belief systems or values. Through language, human beings conceptualize their experience towards their surroundings, not limited to nature but also their relationship with other human beings as social beings. Therefore, it is inevitable that ecolinguistics is not only about the ecology but also the people and how they treat their surrounding environment (its physical, social, and economic ones) (Sapir, 2001). An example of the conceptualization of human beings' experience is accessed through vocabulary. A society close to coastal area, for instance, will have richer vocabularies of marine life than those living in an urban area. It is a proof on how language, as the distinctive property of human beings, is greatly influenced by the environment where a society belongs to.

The term ecology of language or language ecology was firstly postulated by Einar Haugen in 1970 when he delivered his talk entitled "on the ecology of language" at the Center of Applied Linguistics (do Couto, 2014). Haugen emphasizes the interaction between any language and its environment; language is a part of larger environment including ecological systems. The notion environment refers to other languages spoken in a society and language interacting within the mind of the speaker (Fill & Mühlhäusler, 2001). The idea of involving ecology in the study of language is followed up by Mackey in 1979 when he applied the language ecology to the study of language contact and language shift. The growth of ecolinguistics also attracted a psychologist, Salzinger (1979), who believes that language behavior should be studied as thoroughly as possible in its environment.

In 1990, Halliday delivered a speech entitled “New ways of meaning: The challenge to applied linguistics” in the Association Internationale de Linguistique Appliquée (AILA) or International Association of Applied Linguistics in Greece. He emphasizes that “language does not passively reflect reality; language actively creates reality” (Matthiessen & Guo, 2020). One of focal points in his talk is how grammar functions as theory of experience that construes the world. Halliday pays attention to the connection between language and environmental problem, such as language conflict, peace, and climate change. He further explains that language is considered unecological when it carries some of the responsibility for environmental degradation in all forms, and one of its goals is to create language awareness of linguistic anthropocentrism (Fill & Penz, 2018).

The attention of ecolinguistics expands on the connection between language loss and the loss of biodiversity (Fill & Penz, 2018). Nettle and Romaine (2000) assert that the advancement of technology and industry is inevitable in the loss of biodiversity that affects the loss of language. Globalization of market forces, capital, hegemonic language, and fashion are other factors that generate the extinction of cultural and biological diversity. The interaction of humans and their cultures, including languages, discourses, and other coded conceptions of the world beyond the human, is thus the focus of ecolinguistics.

2. Method

This systematic review article collected the data by selecting 19 articles of Indonesian published papers indexed on doaj.org, a medium international journal database. The researchers input the keywords “ecolinguistics” and “Indonesia” in the search engine provided by doaj.org and found 19 articles having those keywords. When observing the articles more thoroughly, those 19 articles fulfill the requirements to be included as the data. They explicitly mentioned ecolinguistics in their title, abstract, or keywords. The data range from 4,000 to 8,000 words and consist of IMRAD structures: introduction, method, results and discussion. The table below shows the research paper titles and their publication information.

Table 1 Research Title and Publication Information

Num.	Research Titles	Year	Publisher
1	Ecological and ideological representation of Kabhanti performed by muna community in Muna regency, South East Sulawesi	2013	e-Journal of Cultural Studies, 6(3), pp.
2	The Interpretation of Ecological Preservation in the Awig-awig (Customary Law) Text of Tenganan Pegringsingan Village: Positive Discourse Analysis	2015	e-Journal of Linguistics, 13(2), pp. 56-71
3	Pengembangan cerita anak dengan pendekatan ekolinguistik sebagai pengungkap kearifan lokal untuk pelestarian bahasa Jawa di lingkungan SD	2017	Sekolah Dasar: kajian teori dan praktek pendidikan, 26(2), pp. 134-143
4	Metaphorical lexicon in Maena lyrics of wedding in Nias: ecolinguistic study	2017	Retorika: Journal of Linguistic, 3(2), pp. 1-7
5	Ecolinguistic study of conservation news texts in Indonesian mass media	2018	International journal of humanity studies, 1(2), pp. 163-183
6	Dampak ekologis penggunaan kalimat indikatif pada media massa online Papua: tinjauan ekolinguistik kritis	2018	Ranah: Jurnal kajian bahasa, 7(2), pp. 146-163
7	Animal metaphors in Iwan Fals’ social critics and humanity songs: ecolinguistics study	2019	Okara: Jurnal Bahasa dan Sastra, 13(1), pp. 47-64
8	Lexical items in Batak Toba language representing fauna, flora, and social environment: ecolinguistics study	2019	Haluan Sastra Budaya, 3(1), pp. 74-85

Num.	Research Titles	Year	Publisher
9	The Core Contradictions Elements in the Mob of Papua: A Dialectical Ecolinguistics Analysis	2019	e-Journal of Linguistics, 13(1), pp. 104-112
10	Today's Local Values of Traditional Children's Games: A Methaphorical Ecolinguistics View	2019	Linguistik Indonesia, 37(2), pp. 101-117
11	Khazanah Leksikon Tradisi Penangkapan Ikan Paus dalam Novel Suara Samudra Karya Maria Matildis Banda: Kajian Ekolinguistik	2019	Humanis: Journal of arts and humanities, 25(1), pp. 36-43
12	An Ecolinguistics Perspectives for English Syllabus Development	2019	e-Journal of Linguistic, 13(2), pp. 255-280
13	Merawat lagu-lagu daerah Pagu untuk pemertahanan bahasa: analisis ekolinguistik	2020	Ranah: Jurnal Kajian Bahasa, 9(2), pp. 272-286
14	Kenomotetisan dan Keideosinkretisan Makna Simbolis Pernikahan Adat Masyarakat Nusa Tenggara Timur dan Jambi: Perspektif Ekolinguistik Metaforis	2020	Lensa: Kajian kebahasaan, kesusastraan, dan budaya, 10(1), pp. 69-82
15	Local values preservation of Torok oral tradition through education domain: metaphorical ecolinguistic perspective	2020	Jurnal Gramatika, 6(1), pp. 13-28
16	Ecolinguistic study of the writing works of achieving students of Bali State Polytechnics in 2020	2020	Journal of applied studies in language, 4(2), pp. 151-159
17	Marine Ecolexicon of Noun-Verb of the Coast Community in Pesisir Barus, Central Tapanuli	2021	Jurnal Arbitrer, 8(1), pp. 82-92
18	Lexical meaning of "Pakkat" young rottan plant in Mandailing society in Padang Lawas district: ecolinguistic study	2021	Jurnal Tarbiyah, 28(1), pp. 44-55
19	Eco-critical Discourse Analysis of the Indonesian President's Statement at the 21st Conference of the Parties in Paris	2021	ReiLA: Journal of research innovation and language, 3(2), pp. 105-114

The articles above were identified structurally of their title, research problems, method, results, and conclusion. Reading between lines became a pivotal step to comprehend how the Indonesia's researches define ecolinguistics and applied it in the data found from the topic similarities between the papers. Those topics were examined further into which concept of ecolinguistics they apply. After figuring out the major topics and definitions of ecolinguistics, this article observed the methodology used in the researches in terms of the object of study or data. The following step was to look into the results of the researches and recheck how the applied methodology answer the research problems. The review was then summarized in a microsoft excel file to see the roadmap of Indonesia's researches on ecolinguistics. The last step was redefining ecolinguistics in Indonesia by considering opportunities Indonesian researchers possess and also the experts' suggestions of current trends in ecolinguistics. The major supporting literature sources were from the handbook of ecolinguistics and international reputable journal articles published after 2010.

3. Results and Discussion

This paper found four major definitions of ecolinguistics in Indonesia's researches: ecolinguistics as the study of language diversity, language endangerment, interconnectedness to local wisdoms and ecological awareness. The following parts explain each definition and offer opportunities/ redefine ecolinguistics in Indonesia's context.

3.1 Ecolinguistics and Language Diversity

Geographically, Indonesia is categorized as an archipelago country having more than 17,000 islands. This fact results in the diversity Indonesia has, including both social and biological diversity. Indonesia is also mentioned to have around 650 languages, 10% of the world's language, 1,340 local tribes, and having numerous types of flora and fauna diversity. This unavoidable fact becomes a fruitful resource for Indonesian researches, including in the study of ecolinguistics. The first definition of ecolinguistics found in the Indonesian research papers is that ecolinguistics is the study of language diversity. Some researches selected traditional texts as the objects of ecolinguistic study to prove the dependence between human beings and their environment.

One of local languages observed ecolinguistically is Mandailing language spoken by Batak Toba community. Silalahi (2019) identified lexicons of flora, fauna, and social environment of Batak Toba language and related their values to the present lives of the community. The research figured out that the lexicons of flora, fauna, and social environment carry positive philosophical grounds that express some values: prestige (identified from lexicon 'horbou' or buffalo), gratitude to God (identified from lexicon 'dekke' or fish), soul strengthening (identified from 'boras sapir ni tondu' or rice practiced in cultural activities such as entering new homes, child birth), harmony and peace (identified from lexicon 'demban' or 'sirih'/ betel leaf), idigenous of Batak tribe (identified from 'ulos'), and medium of communication (identified from lexicon 'tortor'). Those Batak Toba lexicons have experienced changes in their meanings since they are used in different occasions or events (Silalahi, 2019) as a result of behavioral choices in a community that reflects how its people are correlated to their environment (Fill & Penz, 2018).

Similar analysis of Mandailing community identified the lexicon 'pakkat' rattan plant (Daulay and Widayati 2021). Using the concept of Bang and Dorr (2000) about the dialectical theory of ecolinguistics, the paper examined the biological, sociological, and ideological dimensions of lexicon 'pakkat' spoken by Mandailing community. However, the findings of the research only discussed the biological information about 'pakkat' without inferring the sociological and ideological meanings of the lexicons. The paper discussed thoroughly the biological descriptions of the plant including its stems, leaves, and flowers and how they are economically and culturally benefited by Mandailing community (Daulay & Widayati, 2021). Beside its comprehensive description of the biological characteristics and its benefits for human beings, ecolinguistic study is expected to explain how language as a distinctive property of human beings reflects how its speakers treat their environment. The analysis of 'pakkat' as a lexicon should be challenged further in terms of how its people project their understanding and engagement of the word. For example, a deep interview to Mandailing community on the word 'pakkat' in their life may provide an insight on ecolinguistic study.

The research by Lubis and Widayati (2021) provided a thorough evidence of how Pesisir Barus community reflected their relationship toward marine environment through the lexicons they utter in the interview. The community used to consist of various dialects since Barus was an important trading route even though the major groups were Minangkabau and Batak. The research figured out that the domination of nouns and verbs of ecolexicon used by the community refers to some categories: fauna lexicons, flora lexicons, infrastructure of marine environmental activities, and nominal environmental lexicons. The research proved that the vast number of ecolexicons spoken by Barus community reflect the speakers' relationship with their environment. The research concluded that the linguistic evidence in the interview depicted that Barus community reflects an understanding of the interaction, interrelation, and interdependence of the society and its environment. Human beings are parts of the organisms that are dependent one to another (Lubis & Widayati, 2021).

The similarities among papers above lie in the language diversity and its relation to biological dimensions of environment. In Indonesia's context, language diversity is a rich analysis to conduct due to the country's richness in both biological and cultural sources. The notion of 'environment' in ecolinguistics does not only denote the physical environment, but also the social one that comprises cultural values and language (Skutnabb-Kangas & Harmon, 2018). Ecolinguistics is, therefore, deals with the complex web of the relationship between language, environment, and speakers. As an archipelago country having a large number of local languages and local tribes, future researchers have

an opportunity to introduce Indonesian environment, involving its biodiversity and local values. Its speakers' vocabularies, for example, are proofs on how a community recognize their environment.

3.2 Ecolinguistics and Local Wisdoms

Language does not only reflect its speakers' knowledge and experience. It is also a tool of cultural repository, including local wisdoms a community has. In Indonesia's research, some papers have discussed the connection between language, environment, and local wisdom values taken from traditional texts. One example of a research conducted ecolinguistically is Awig-awig customary text in Pegringsingan village (Astawa et al, 2019). Awig-awig text consists of rules and sanctions to the people of Pegringsingan Village, Bali. One example of the rule is realized in lexical level, particularly the verbs 'anyandayang' means 'pawning' and 'angandol' means 'selling' that aim to prohibit Pegringsingan people to sell land of inheritance that is in the form of gardens, rice fields, and home yard. The rule aims to maintain the existence of the village environment and avoid the change function of the area for industrial goals. By applying positive discourse analysis, the paper found that the Awig-awig customary text brings positive impacts to the society. Awig-awig text is in line with Tri Hita Karana philosophy that aims to create human happiness and prosperity by harmonious relationship between natural, human, and spiritual ecology preservation.

Similar data of ecolinguistics is found in Hadirman's research that took Kabhanti text of Muna community in South-east Sulawesi. Kabhanti text is an oral tradition functioning as an amusement in a traditional ceremony and used by pemantun, or the text ceremony reader. By conducting an interview to three villages in Muna regency, the research figured out that the lexicons of Kabhanti text are loaded with environmental meanings, cultural endurance, identity, and solidarity (Hadirman, 2013). Besides, pemantun's words are also responsible for teaching Muna community ideologies that comprise environmental, educational, social, and spiritual ideologies. Despite the local wisdoms it contains, Kabhanti text also consists of the loss language or lexicon such as 'kaghua', 'kaperangku', 'o kampanaha', dan 'kawera' that refer to household tools. Due to the lack of young generations who learn to become a pemantun, the local language of Muna community might be endangered. The lack number of speakers of a language is one of important factors that triggers language endangerment (Perangin-Angin & Dewi, 2020).

Another traditional text called Torok owned by Manggarai community was involved in an education purpose to teach local wisdoms to students (Helmon & Rahardi, 2020). Torok is an oral tradition from Manggarai regency, Flores, used as an expression to the ancestors and/or Supreme Being. The existence of Torok text is closely associated to the society belief of the life cycle or peang circle that states a unity of relations between the house as a place to live and with the circle as land to scavenge life. By observing the linguistic units of Torok text and conducting an ethnographic interview, the research showed that Torok oral traditional text is loaded with values of solidarity, religious, love, politeness, and hard work. The research also proposed that the integration of Torok tradition in education will give a positive impact towards young generations.

Very similar research on local wisdom in traditional texts was found in Rahardi and Setyaningsih's (2019) work that examined Javanese traditional games. By applying Kravchenko's notion of metaphorical ecolinguistics, the paper examined how the social, cultural, and ethnic ecology are embedded in language. The research argue that local wisdom emerges from the good practices shared by a community. Therefore, in a communal life, it should be passed to the young generations. The research conducted an interview to the experts of Javanese local wisdoms and to the children playing the games. To be specific, the research observed local wisdoms of the following games: jejamuran, umbul gambar, egrang, sunda manda, gobak sodor, cublak-cublak suweng, delikan, biyok, nekeran, and yeye. The local wisdom values found in Javanese traditional games are solidarity, balance, synergy, sportsmanship, agility and resilience, agility and precision, and obedience to norms. The authors argue that the positive local wisdoms are important in the development of Indonesian children through education (Rahardi & Setyaningsih, 2019). However, local wisdom as parts of a community's identity is a social construct, not inherited givens, but hybrid and nomadic; dynamic and changing, not static (Skutnabb-Kangas & Harmon, 2018). Therefore, the local wisdom perseverance is the

responsibility of not only education stakeholders, but the society itself, realized from various discursive practices.

3.3 Ecolinguistics and Language Endangerment

In Indonesia, research on ecolinguistics also examined the endangered language in terms of language maintenance and perseverance. For example, Perangin-angin and Dewi (2020) observed three folksongs of Pagu, located in North Halmahera. Pagu language is categorized as an endangered language, considering the lack number of its speakers. Some factors that trigger its endangerment are the obligation to use Indonesian in schools, the presence of multinational companies that urge people use non-Pagu language, the lack authority of Pagu language, the failure application of Pagu language as local content in curriculum, and the community's low awareness that the loss of language affects the loss of its cultural values. The songs are loaded with cultural values and emotional closeness between the community and nature. Even though some linguistic units reveal anthropocentrism, Pagu language also consists of positive values such as patriotism and appreciation to nature, shown by the use of conjunction, metaphor, and lexicalization. It proves that Pagu community has a close relationship with its environment even though sometimes nature is positioned as an obstacle to fulfill human needs.

Due to the advance of technology that affects people's lifestyle, Ndruru and Umiyati (2017) observed a wedding ceremony text called Maena spoken by Nias community. The lack number of wedding ceremony that still used Maena lyrics triggers the language loss in wedding practice even though it basically shows how a community preserve its local values. The research examined how Maena wedding lyrics used both biotic and abiotic lexicons to show the community's sociological and ideological dimensions towards nature. From its distribution, Maena lyrics consists of flora and fauna nouns. Even though the research mentioned about the metaphor of ecolexicons in Maena wedding lyrics as a means to show the sociological and ideological dimensions between the community and its environment, the paper did not discuss how the ecolexicons project ideologies of Nias community (Ndruru & Umiyati, 2017). Metaphor is indeed an important linguistic strategy that shows stories or ideologies of a community since it carries an important part of cognition and understanding of the world (Stibbe, 2015). Further, Nerlich and Jaspal (2012) assert that "choosing the wrong metaphor may arguably contribute to the extermination of our species" (cited in Stibbe, 2015).

There are some factors affecting the loss of linguistic diversity and biodiversity: population growth, overconsumption resources, waste production, habitat destruction, climate change, and neoliberal globalization (Fill & Penz, 2018). The habitat destruction indeed significantly affects the language endangerment as it is comparable to the endangerment of biological species in the natural world (Skutnabb-Kangas & Harmon, 2018). It also depends on how people behave over the next few decades. Illegal logging, use of pesticides, deforestation, and overfishing are some examples of habitat behavior that trigger the disappearance of biodiversity. Endangered or extinct language is the ultimate effect of the parallels between biological and linguistic diversity (Fill & Penz, 2018).

3.4 Ecolinguistics and Ecological Awareness

Ecological awareness is realized through the critical evaluation of how certain linguistic strands motivate a community to build a positive relationship to their environment. One of the strategies is through education, as practiced by Kurniati (2017). By developing storytelling teaching materials that adhere Javanese language and cultural values, Kurniati included Javanese dialects: Banyumas, Tegal, Brebes, and Javanese dialect of Yogyakarta, Semarang, and Surakarta. The need analysis conducted by the researcher found that both teachers and students need audio-materials that assist them in learning Javanese language. Moreover, to help the teachers, they require reading materials that contain pictures. The designed materials comprise the biological, ideological, and sociological dimensions. The biological dimension is facilitated by human beings as a part of organisms that also consist of non-human species which actually human beings are dependent of (Kurniati, 2017). The sociological dimension is realized through interpersonal relationship that regulate relationship with other people, including family and neighbor and other social dimensions. The ideological dimension is construed through the local wisdom of Javanese community that need to be inherited to younger generations. The validity result of the designed materials prove that ecological materials can be applied in teaching Javanese to students.

Similarly, Tjendani et al (2019) designed a syllabus that offer a balanced and harmonious connectedness that emphasizes environment-oriented character building. The previous syllabus used was focused on the following parts: text, context, linguistic elements, topic of the learning material, and learning process. The overlapping domains of text, context, and linguistic elements was revised to the one offering more ecological perspectives. By designing a task-based syllabus, Tjendani et al (2019) described text, context, linguistic elements, learning material/ topic, learning process, and evaluation. The types of texts were focused on the interpersonal and transactional types comprising intra-cultural, inter-cultural contexts, and trans-cultural contexts reflected in different domains of contexts that enable students to acknowledge their culture and nature (Tjendani et al, 2019).

To prove students' ecological awareness, Subiyanto et al (2020) examined the students' writings in relation to the campus label as green campus. From the 20,648 words examined, the students only used 174 ecological words, or below 1% of the total data. This very low percentage of students' ecological awareness seen from their writings indicated that reading texts used by the university have not encouraged their ecological knowledge despite the campus slogan. Morphologically, the students' vocabularies of ecology are in the form of adjectives, nouns, verbs, and noun phrases. The low dynamics of the ecolexicons used by the students indicate their poor interactions and understandings of the environment around them (Subiyanto et al, 2020).

Students' low ecological awareness is a result of the exposure of new political and economic situations in the form of modernization. "Modernization has wrought important ecosystemic changes that frequently have an impact level of language" (Bastardas-Boada, 2017). The advancement of technology has shaped people's behavior and interaction towards their environment. However, Indonesia is included in the 'core-areas' of global biocultural diversity that provides a huge opportunity to raise ecological awareness towards the young generations. Formal education and mass media are the two agents having the highest opportunity to implement linguistic human rights or legitimize their powerful position to use language falsely (Skutnabb-Kangas & Harmon, 2018).

3.5 Redefinition of Ecolinguistics in Indonesia

Ecolinguistics has been examined in various types of data, such as traditional texts, mass media, and for education purposes. Beside the lack analysis of how language is connected to its community, the previous research has elaborated the forms lexicons referring to nature and culture as integral parts of an ecosystem. Language is a central factor that preserve environment, both physical and social environment. Language functions not only as a means of communication, but relate its social structures that involve humans, non-human species, and other abiotic organisms. The loss of biotic organisms has been proven as a serious factor that triggers language loss and endangerment. In this sense, the ecological awareness should be integrated seriously in many aspects of life. Though some studies have involved ecology in education, other factors that are close to people need to examine further.

Le Vasseur (2015) proposes that ecolinguistics deals three levels of analysis: language diversity, discourse, and transdisciplinary science. In the domain of language diversity, ecolinguistics can be applied to examine the issues of minority language, language endangerment, and language death. In Indonesia's context, some researches have examined the minority language and language endangerment as a result of globalization (Perangin-angin & Dewi, 2020; Ndruru & Umiyati, 2017). The opportunity for future scholars to examine minority language is widely open. Indonesia is stated to have 718 languages based on 2,560 researched areas ("Peta Bahasa," n.d.). The Language Development and Fostering Agency provides the data of language spread based on dialectometric analysis that rely on the phonetic and lexical data.

One of the islands having the greatest number of languages is Papua. Even though the number of languages does not correspond the language diversity, thus biodiversity, Papua occupies more than a half number of languages in Indonesia. Some languages in Papua have a very few numbers of speakers, take for example is As language spoken by Asbaken community. There are only more or less 360 speakers left. The other examples are Tandia language that is spoken by 34 speakers and Borai language spoken by four people left. The factor affecting language loss of Borai language is the flood that struck the area in 1976, and the condition forced its people to move to Anday and Mupi. The disaster is proven to be a trigger of language loss and endangerment (petabahasa.kemdikbud). The elaboration above

proves that language endangerment is closely related to biological endangerment and the lack number of its speakers.

Future scholars can expand the research of endangered language in Melanesia, whose some parts are located in Indonesia such as Papua and North Maluku since the language ecology in those areas are very limited (Fill & Penz, 2018). The repository of ‘language ecology’ can be integrated with cultural studies to maintain minority languages as important parts of a country’s identity. The government can portray its identity to be economically interesting through tourism, for example. This research area is still under-examined since language and tourism are often associated with persuasive language to boost economic vibrancy only. The presence of local cultures is displayed in terms of its people and nature without massively introduce the cultural values that minority language has. Papua is promoted massively through Raja Ampat that offers natural beauty, yet the local values and language seem limited on the official website of Indonesian tourism. Despite the appreciation directed to the physical environment, promotional website or other social media can include the social environment through the local languages and values of the society (Isti’annah, 2019).

Beside focusing on language diversity, ecolinguistics is also applicable in discourse analysis. While Indonesia’s research has examined some objects including political speeches and newspaper headlines, the discussion seems limited in how the discourse criticize climate change and global warming. It seems to associate ecolinguistics as the critic of global warming even though there are underlying factors triggering global warming, such as consumerism, neoclassical economy, and capitalism. Despite focusing on ecological sustainability, ecolinguistics should deal about socio-ecological sustainability which considers a sustainable relationship between humans and the natural world (Stibbe, 2015). Humans and nature should not be separated as agents and goals considering the dependence of humans to their environment. Nature as a domain of a larger environment should be treated equally as humans that have options to behave. Nature, on the other hand, is the dimension that is affected by humans’ behavior. On the other hand, humans have the ability to create rules, norms, and values that concern nature worth. The injustice and oppression may be directed to non-human species and it is the job for Critical Discourse Analysis to challenge the stories of anthropocentrism in many areas of life, particularly the consumerism culture.

In discourse level, language is responsible for describing, creating, aggravating, and solving environmental problems, or positive and negative aspects of media and language affect public’s perspectives (LeVasseur, 2015). The news about forest-fires or flood is a fruitful topic to observe as the disasters are often related to nature as the Actor. Newspapers, as text producers, have motivated choice that influence its readers perspectives of an area of life. Human beings are often portrayed as the Affected participants because of disaster, forest fires take an example such as presented in the headline “Tourism in crisis: Forest fires cause foreigners to cancel trips” (The Jakarta Post, September 18, 2019). The use of Theme in the headline signals the crisis of Indonesian tourism and forest fires are the one responsible for it. The foreigners or tourists are positioned as the Affected participant by the Actor, forest fires. The damage of the habitat along with its organism seems underrated since the media covers it with anthropocentric point of view. This small example needs further examination to create another story, perspective of the surrounding world, that we have to live by. The construction of a new narration can be conducted by Critical Discourse Analysis to deconstruct ideologies as a result of hegemony and asymmetrical power relations.

4. Conclusion

Ecolinguistics has been exercised by Indonesian scholars in recently in relation to biological diversity, cultural values, and language endangerment. The previous scholars have proven that ecolinguistics is an important tool to criticize ho human beings are connected and dependent on their surrounding environment. However, research of ecolinguistics in Indonesia’s context still needs further examination in a larger area of discussion that is found daily and closely to people’s contemporary life. Media or social media take an essential role to shape people’s thought and behavior towards their environment. Thus, raising ecological awareness becomes a central key to create stories that provide balanced relation between humans and non-human species and their social values. It can be achieved when stories of

anthropocentrism are challenged by our critical thinking of the underlying belief or ideologies of the discourse.

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