Managing Google Maps for linguistic landscaping of pollution and health signage

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Abstract. Pollution and health have emerged in recent years as worldwide concerns. A great deal of information is communicated in order to raise human awareness of this issue. Public signage is one way to obtain this information. The aim of this paper is twofold. Firstly, this article outlines the use of Google Street and Google Maps to locate street signs linked to pollution and health issues. The second is to develop a conceptual approach into creative learning by employing digital technology in discovering and introducing students to information regarding pollution and health signs in the outdoor landscape using a novel technique and approach called Digital Linguistic Landscape Learning. It was revealed that the self-access center is the focal point for the development and use of digital technology, which provides students with the autonomy to investigate or discover solutions to the contestation of socio-cultural phenomena connected to the two key concerns in the public spheres.

Keywords. Digital Technology, Google Street, Linguistic landscape, Pollution and Health

INTRODUCTION

Pollution and health have recently risen to the top of the global priority list. Discourses on these two topics have attracted international attention and are frequently debated at international meetings. Invisible threats such as pollution and disease may cause irreversible damage to ecosystems across the world. To ensure that human existence can be sustained in the long term, it is important to raise public awareness about the need of conserving the environment in order to prevent the globe from becoming contaminated by pollution and to ensure that people's health is not compromised. Signage on pollution and health in public places is one of the measures being made to keep this issues under control.

In an effort to understand the meaning conveyed through the signage, both from top-down and bottom-up, the method commonly used is through linguistic landscape. Linguistic landscape s has lately gained popularity in the field of sociolinguistics as a method of studying language in its natural environment. A number of sociocultural phenomena have been extensively studied using this linguistic landscape method. Among them are several studies that link linguistic landscape with ethnolinguistic vitality[1][2], schools capes[3][4], linguistic landscape and identity[5], politics and economics[6], and virtual linguistic landscape[7][8]. Meanwhile, studies that combine linguistic landscape with environmental issues, particularly pollution and health issues, may not have been widely discussed.

The aim of this conceptual paper is to explain two key ideas. First, to demonstrate how to utilize Google Maps to figure out pollution and health related signage. Second, it provides procedures for creative learning through the use of digital technology to introduce and locate information relevant to signs in the domains of pollution and health in public places, as well as processes for creative learning in the classroom. The use of this type of digital method is known as Digital Linguistic Landscape Learning[9]. Another term for this technique is called Virtual Linguistic Landscape.

Linking Linguistic Landscape and Google Maps

Language is represented visually everywhere around us - in type of artwork, posters, labels, packaging, our devices, and signage. Written signs, whether top-down or bottom-up, provide us with information about the area in which they are placed. They can only be used in a certain location. As a result, how signs are used in a specific location can provide important insights regarding how that area's languages are used [10]. Because signs are intended to be read, they can also provide general information about which languages are spoken in a specific location, how much they are spoken, and in what situations and domains they are spoken.

The linguistic landscape was initially described by Landry and Bourhis as "the visibility and prominence of languages on public and commercial signs in a specific territory or region"[1]. They identified two major roles of the linguistic landscape: on the one hand, the languages employed in signs gave information about various linguistic communities; on the other hand, the relative prominence of different languages produced information about language status and power. Ever since pioneering works, linguistic landscape researchers have addressed a wide range of social and cultural issues related to language policies, language status, and linguistic identity. While most research focuses on specific geographical locations, the study has extended to encompass the Internet's linguistic environment, such as virtual spaces [7][8] and geo-tagging [11].

Linguistic landscape can be classified into two groups according on the actor that placed the sign, namely top-down and bottom-up [12]. The first refers to any public signage created by the government or elements of the government. The latter deals with the use of language on public spaces produced by the private, such as store owners, private companies, and so on.
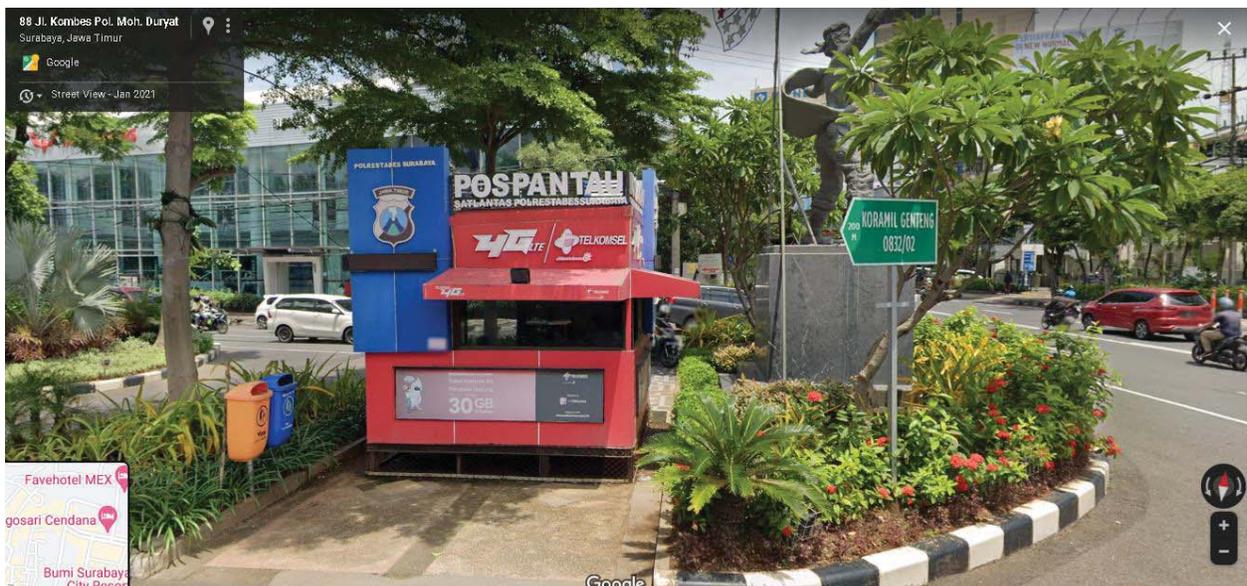
FIGURE 1. Two signs of top-down show the police control post and street sign in one of the main streets in Surabaya
(Sources: Google Maps ©2021/Google)

FIGURE 2. An example of bottom-up sign shows a billboard in English above the main street in Surabaya
(Sources: Google Maps ©2021/Google)

Google Street as Linguistic Landscape Learning Innovation

Google Maps is a digital service supplied by Google that allows users to navigate around the world. Its use in learner autonomous learning may be further explored. One of them can also be found in the linguistic landscape, which is another possibility. In this context, the term Digital Linguistic Landscape, which was developed by Kweldju[9], refers to a technique of examining the linguistic landscape that has been developed. In this method, linguistic landscape research is conducted using an ethnographic technique, which has been modified to work in conjunction with Google Maps to provide learners with digital learning autonomy in the study of linguistic landscapes.
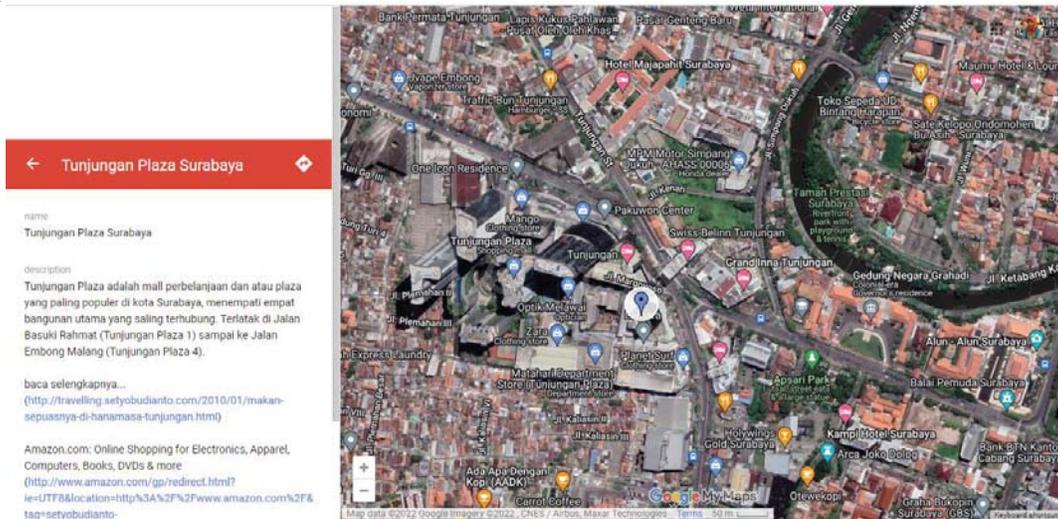

FIGURE 3. The interface of Google Maps
(Sources: Google Maps ©2022, CNES/Airbus, Maxar Technologies)

Regarding signage in public spaces, according to the findings of a research done by Dagenais et al. [13], cities are described as text filled with environmental prints. The presence of signs encompasses a wide range of topics, including those relating to pollution and public health. In order to connect this concept, one may utilize Google Maps to visit any city in the globe in order to figure out the key concerns that have been mentioned.

Furthermore, this concept is based on the idea that Google Maps and Google Street are creative teaching tools inside an autonomous digital linguistic landscape learning environment. This program is a simulation model designed to help students improve their language and pragmatic competencies. This digital application enables learners to study language through the linguistic landscape as well as other problems concerning the usage of language in public space.

Google Maps allows students to browse Google Street and explore all public areas in the region they observe for their linguistic input, from buildings to cellphone messages, all in one place. When they are walking down the street, they will spot the interesting usage of linguistic patterns, various languages, and even long texts, which they are not accustomed to seeing. When researching pollution and health concerns, they should make use of search engines such as Google, Google Images, and YouTube to situate their results and extend their understanding of the issues at hand. Presently, Google Search has created a natural language search tool, which allows users to frame their inquiries as if they were talking to a person. Because they are not just confined by semantic keywords, students may find nearly anything they want to know about the issues they are studying, such as pollution and health.

To put it succinctly, introducing students to the innovative method of using Google Maps to learn the natural use of language in relation to pollution and health issues in public spaces is an innovative model for increasing students' awareness that the internet is a limitless tool for independent effective learning. It also assists students in being more aware of and concerned about global environmental concerns. In a fast-changing environment, the ability to study and deal with new knowledge becomes far more essential than the ability to memorize facts.

DISCUSSION: PROCEDURES OF LINGUISTIC LANDSCAPE LEARNING ON ENVIRONMENTAL ISSUE

Finding environmental prints of pollution and health in a city may be accomplished in a variety of ways by using the linguistic landscape activities and tasks in the classroom. When it comes to linguistic landscape-based learning, according to Willians [14], there are seven ways that may be used:

1) guessing the place;
2) talking about graffiti;
3) exploring the history of streets;
4) describing new urban spaces;
5) correcting linguistic errors;
6) improving the adverts; and
7) creating an open space.

All of these activities can be used to explore linguistic landscape in the city as a choice of learning activities for students.

In addition to the aforementioned, this article also attempts to provide a longer list of these types of activities. The procedures and steps of activities that can be offered to students in relation to the introduction and promotion of pollution and health awareness are as follows.

1. Instruct learners to access Google Maps.
   In this step, we first direct students to open the internet and access Google Maps. Google Maps is available from Web or Android.
2. Select the city or region that will be explored.
   We set the city where the tour of linguistic landscape will be discover. In this setting, learners are given free choice to determine which city or area they want to explore.
3. Instruct learners to identify signs related to the environmental issues.
   Given specific signage of theme, learners identify signs across the street of selected city from Google Maps. As shown in figure 3, they can find a number of example of signs related to the pollution and health issues.

FIGURE 4. Signs officially put by the Police department send messages on the new normal of Covid-19
(Sources: Google Maps ©2021/Google)

4.   Students present their findings from their investigation.
    The last step is to have learners presenting their linguistic landscape city tour of the Google Maps. This activity is prominent to build critical thinking in research. In addition, they can contextualize their findings into a specific theme provided in the learning process.
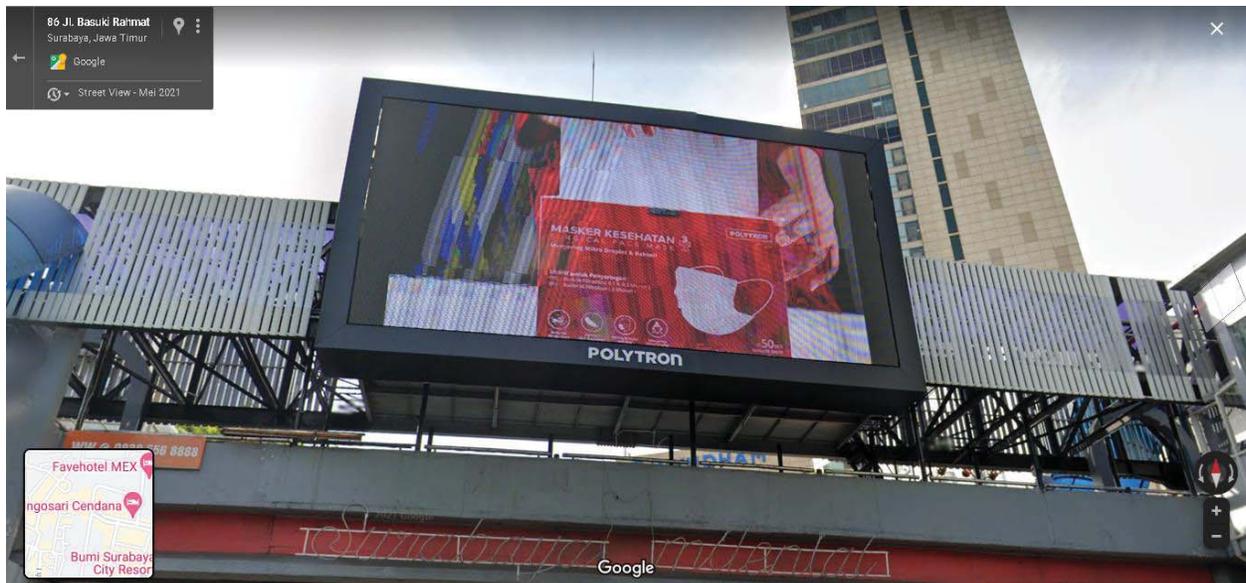

FIGURE 5. A sign of bottom-up represents the importance of health masker informed by an international company in Basuki Rahmat Street of Surabaya, Indonesia
(Sources: Google Maps ©2021/Google)

CONCLUSION

It is anticipated that, through the procedures for the aforementioned activities, learners will not only increase their knowledge of the social symbol of linguistic landscape signs, but that they will also contribute to the raising of awareness of the environmental prints of the city they toured. By creating learning activities for learners through the use of Google Maps in the digital learning, we are also introducing them to digital humanities. Therefore, linguistic landscape learning can be beneficial not only for language learning purpose, but also can be extended to recent actual issues of the globe.

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