

When Local Meets Formal: Influence of Deaf Education on Color Signs Variation in Indonesian Sign Language

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ABSTRACT

This study discusses the dynamics of sign language variation in Indonesian Sign Language, especially on color terms used in Yogyakarta deaf community. Cross-linguistically, sociolinguistic variation of sign language has high concentration of linguistic diversities. In signing communities, sign language is varied because the deaf communities live in different regions and went to different schools in which the language is developed. The aim of this study is to describe the influence of formal education for the deaf on color sign variation. Color terms are one of the semantic domains with high lexical variation cross-linguistically. This study uses qualitative descriptive method. The data is obtained from 11 signers who were asked to sign 13 colour terms. Overall, not less than 118 tokens were collected. In this study, the finding suggests that the variation of colour terms can be identified into 4 types: initialized signs, iconic signs, non-iconic signs, and phrasal form. The color signs variation is a mix of indigenous signs, developed by the deaf community, and influence of the surrounding spoken language, which is used in deaf education in the region. The use of Sistem Bahasa Isyarat Indonesia, the artificial yet official communication system in deaf education, resulted in the high percentage of initialized color signs in the overall data.

Keywords: *Color; Deaf Education; Variation; Yogyakarta; Bahasa Isyarat Indonesia*

1. INTRODUCTION

Very little is known about sign language situation in Indonesia. Sign language studies have been developed since 2012 and are still growing in number. Many of those studies focused on the language used in some regions, namely Jakarta, Solo, Yogyakarta, and Makassar [1]–[5] However, up until now, the study on the variation within a region is still very little in number.

This kind of study can give insights about the range of sign variations in a region and what factors contribute to the variations.

This study focuses on lexical variations on color signs in Indonesian sign language, also known as Bisindo, specifically in Yogyakarta. Color signs are observed to be varied cross-linguistically. In the study of British Sign Language by Stamp et al. [6], signs for numbers and colors are considered to be highly varied within a region. Moreover, from the study of Stamp in [2], it is documented that the language has 22 variants for 'purple' and 14 variants for 'grey'. The high degree of sign variations, cross-linguistically, is due to sociolinguistic factors, i.e. age, region, gender, and educational background [6]. The latter factor is also significantly applied to Bisindo [5].

Up until now, the number of Deaf people in the Special Region of Yogyakarta (DIY) cannot be stated in certainty because there has not been a population census that targets this group. Most of the deaf people in the region spend their lives interacting with other deaf people. The interaction between Deaf people usually started when they were enrolled in deaf schools or special schools where there are 76 schools in DIY. Before 1990's, deaf education used oral method in which the deaf students were trained to speak in spoken language. Although that method was used in schools, sign language had never been opted out. Students used sign language during school recess or outside their school. The emergence of this natural sign language was due to the direct interaction between deaf people. This sign language was later called Bahasa Isyarat Indonesia 'Indonesian Sign Language' or Bisindo.

Bisindo used in Yogyakarta is also influenced by an artificial communication system called Sistem Isyarat Bahasa Indonesia 'Indonesian Signed System' (SIBI). SIBI is a manually-coded spoken Indonesian. Indonesian grammar is transferred into signs, including its affixes and word order. It was compiled by the Ministry of Education in 1997 in the form of dictionary and became the official communication system in deaf education in Indonesia. In the Preface of SIBI dictionary, it is stated that the vocabulary of SIBI was adopted from American Sign Language (ASL), British Sign Language (BSL), and local sign language that had been used by the teachers of special schools [7]. The use of SIBI resulted in initialized signs which consist of a handshape that stands for the initial letter of the spoken word.

2. METHOD

This study can be categorized as a qualitative-descriptive study since it relies on the interpretation of the researchers and informants serve as data provider [8]. To serve its purpose as a lexical signs documentation study, the data is collected in isolation, using elicitation materials in the form of pictures [9].

The data of this study consists of signs for 13 color terms: BROWN, RED, BLACK, WHITE, YELLOW, GREEN, BLUE, ORANGE, PINK, PURPLE, GREY, GOLD, and SILVER. The data was obtained through elicitation by showing each informant a colored flash card and asked them to sign the color they saw. The signs were recorded using camcorder and then grouped according to the color terms. In this study, not more than 118 signs were obtained. The signs were then grouped according to the type of signs they belong. This will be discussed in the Findings section.

There are 11 informants participating in this preliminary study, all of which were enrolled in special schools for the deaf. Below is the informants' recapitulation.

Table 1. Informants' data (n=11).

District	Code	Gender	Age	School
Kota Yogyakarta	YKYK_01	M	60	SLB/B Don Bosco, Wonosobo
Bantul	YKBL_01	M	18	SLB/B Marsudi Putra 2, Pandak
	YKBL_02	M	20	SLB/B Marsudi Putra 2, Pandak
	YKBL_03	M	25	SLB/B Marsudi Putra 2, Pandak
	YKBL_04	M	23	SLB/BN 1, Bantul
Sleman	YKSL_01	M	25	SLB/BN 1, Bantul
	YKSL_02	F	24	SLB/BN 1, Bantul
Kulon Progo	YKKP_01	M	33	SDLB Wates
	YKKP_02	M	32	SLB/BN 1, Bantul
Gunung Kidul	YK GK_01	M	32	SLB/BN 2, Bantul
	YK GK_02	M	21	SLB/BN 1, Gunung Kidul

3. RESULT AND DISCUSSION

3.1 Types of signs

In the data, it is found that there are at least 4 types of colour signs in Yogyakarta sign variety. The recapitulation of the sign type is presented below.

Table 2. Data recapitulation.

No	Colour	Type 1	Type 2	Type 3	Type 4
1.	BROWN	10	-	-	-
2.	RED	-	8	-	1
3.	BLACK	-	8	-	2
4.	WHITE	2	3	9	-
5.	YELLOW	9	-	-	1
6.	GREEN	-	-	11	-
7.	BLUE	7	-	-	-
8.	ORANGE	7	-	-	-
9.	PINK	9	1	2	-
10.	PURPLE	4	-	2	-
11.	GREY	9	-	-	-
12.	GOLD	1	5	-	1
13.	SILVER	2	-	2	2
Total		60 (51 %)	25 (21 %)	24 (20 %)	9 (8 %)

Below is the description of each type.

1. Type 1: initialized signs

There are 67 initialized signs for colours or 51 % of the overall tokens. This means that initialization is the most preferred strategy in producing colour concepts. Sign variations for BROWN, YELLOW, BLUE, ORANGE, PINK, PURPLE, and GREY are dominated by this type of sign. In the data, we found two kinds of manual alphabet that are used for forming the initialized signs: Bisindo alphabet and ASL alphabet. The Bisindo alphabet is used in BROWN, ORANGE, PURPLE, and GREY. The sign PURPLE, for example, is signed with the letter “U” because the Indonesian word for it is *ungu*. Below is the example of ORANGE, which the initial letter is produced in circular movement in front of the signer.



Figure 1. ORANGE.

The influence of ASL alphabet can be seen in the sign YELLOW, BLUE, and PINK. In the sign YELLOW, for example, signers use the ASL version of “K” to represent the first letter of *kuning*. Also, it is found that some signers use the ASL alphabet of “U” to sign ‘purple’. However, in PINK, signers do not only use ASL alphabet, but they also borrow the entire ASL sign. The ASL sign for PINK is produced with “P” which is located in the chin of the signer. Below is the picture of the sign.



Figure 2. PINK (ASL).

Initialized signs can be said to be a result of current deaf education system that the government implement [5], i.e. SIBI. In SIBI dictionary, there are many initialized signs, such as the name of colors, days, months, adjectives, and abstract nouns [5]). This system also uses the ASL fingerspelling system. This explains the use of ASL fingerspelling system in the aforementioned initialized signs. Since Bisindo also have its own fingerspelling, some of the colour terms use its alphabet.

2. Type 2: iconic lexical signs

The second type of the colour sign variations deals with some degree of iconicity. By “iconic”, it means that we can quickly infer that the sign is represented by an object related strongly with the colour. This type of sign variation dominates the sign for RED, BLACK, and GOLD. Below are the pictures of RED and BLACK.

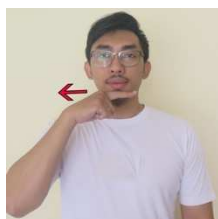


Figure 3. RED.



Figure 4. BLACK.

From the pictures above, we can see that RED and BLACK are represented in certain ways that we can quickly make sense of the signs. RED is signed with the index finger move along the lower lip area which can be related to the concept of red lips when someone is using lipstick. Meanwhile, BLACK is signed on the side of the signer’s head area by closing the index and thumb finger together. This sign can be inferred as the typical color of Indonesian people hair. This strategy in producing RED and BLACK also corresponds with other sign language varieties in Solo and Makassar [2].

3. Type 3: non-iconic lexical signs

In contrast with Type 2, this third type of sign deals with arbitrary aspect of the language. Although there is a possibility that the signs of this type have undergone phonological changes overtime, we can no longer see a relation between the sign and the meaning. This non-iconic type dominates the sign WHITE and GREEN. See the picture of both signs below.



Figure 5. GREEN.



Figure 6. WHITE.

As we can see, GREEN is produced by an initial contact of index finger on the tip of the nose and unbending the finger away from the nose. Meanwhile, WHITE is a two-handed sign which is produced by moving the thumb and little finger together of both hands in an alternate movement. Both of the signs are clearly arbitrary where the traces of its iconic origin (if there are any) can no longer be seen.

4. Type 4: phrasal form

In the data, there are 9 tokens that take the form of a phrase in expressing a colour concept. We found three sub-types of this type. The first one is the combination of a lexical sign and another lexical sign. For example, SILVER is signed by combining GOLD and WHITE. Below is the picture.

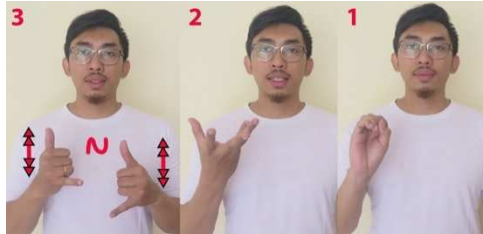


Figure 7. GOLD+WHITE ‘silver’.

The second sub-type is the combination between initialization of the first letter of the word and a lexical sign. This can be found in the sign GOLD, where the signer firstly sign “E” that represents *emas* in bahasa Indonesia and followed by an iconic type GOLD. The third sub-type under this Type 4 signs is the combination between a lexical colour sign and a sign to specify the quality of the colour, whether it is dark or light. Example of this kind that found in the data is RED+DARK to convey ‘red’. Another example is RED+YOUNG to form ‘pink’. Although it did not appear in the data, anecdotally, we can find this sign in Yogyakarta and many other sign language varieties in Indonesia. See the picture of PINK below.



Figure 8. RED+YOUNG ‘pink’

The motivation of this kind of signs is clearly the language contact with spoken Indonesian. In bahasa Indonesia, the concept of “dark” and “light” colour is represented by the word *tua* and *muda*, respectively. These words are then adopted in sign language to represent the same colour concept. We can find many signs using this combination, such as RED+YOUNG, BLUE+OLD, GREEN+OLD, and GREEN+YOUNG.

3.2 Discussions

As stated in the Introduction section previously, the formal communication system used in deaf schools, SIBI, contributes to the variation of lexical signs of Bisindo. Inevitably. Bisindo used in Yogyakarta is also a result of Deaf interactions in schools and social groups. Before 1970’s, there were not any special schools for the Deaf in Yogyakarta. Parents usually sent their deaf children to Dena Upakara and Don Bosco Deaf Schools (established in 1935) in Wonosobo, Central Java. After 1970’s, special schools started to grow in Yogyakarta and deaf children were enrolled in those schools. This situation triggered sign variations between schools. The use of SIBI in those schools also contributes to the variations [10]. Moreover, volunteer work from

foreign organizations was said to be influencing the sign language there also, such as ASL, French Sign Language, and Japanese Sign Language [10].

The influence of SIBI system, as we can see from the data, dominates the lexical variation in Bisindo. One of the motivations of this situation can be seen from the sociolinguistics factor on this study, one of which the age of the informants. Ten out of eleven deaf informants fall, referring to McKee et. al's research [11] within two age groups of 15—29 (7 informants) and 30—44 (3 informants). Informants from these two groups, then, were born in 1980's and 1990's. During a certain period of their formal education in a special school, we can infer, SIBI was implemented and taught to them. Meanwhile, the only informant (YKYK_01) whose age falls within 45—64 group didn't longer attend a deaf school when SIBI is used. Moreover, informant YKYK_01 attended Don Bosco deaf school in Wonosobo, in which the oral method was used. This contributes to the fact that he does not sign an ASL-fingerspelling-based initialized sign.

Another motivation worth to discuss is the nature of the color terms itself. The concept of colors is abstract. In spoken languages, color vocabularies is represented arbitrary. In sign languages, however, the chance of a concept to be represented iconically is higher. This can be seen from the fact that iconic variation is used more than the non-iconic ones. This means that abstract concepts, including colors, have the potential to be represented iconically in Bisindo. However, in this study, it is observed that the influence from SIBI contributes more to the color sign variation in Bisindo.

4. CONCLUSION

From the data description, it can be seen that most of the color terms are represented by initialized signs. The use of these type of signs is clearly motivated by the use of SIBI system in Deaf education which is based on spoken Indonesian and borrows many American Sign Language signs. It can be said that the variation in the color terms in this study shows that Bisindo in Yogyakarta is a mixture of indigenous sign language and language contact with spoken Indonesia, which is represented by SIBI. This situation can be understood as a result of a formal system in deaf education. The implementation of SIBI contributes to the sign variation in Bisindo. For abstract concept, it may be assumed that SIBI influence is more prominent than concrete ones.

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