



A STUDY OF REFERRING EXPRESSIONS IN MALAYSIAN SIGN LANGUAGE / BAHASA ISYARAT MALAYSIA (BIM)

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Abstract

The research question of this paper is how referring expressions (REs) in Bahasa Isyarat Malaysia (BIM) change according to the availability/availability state of referents across the identification, re-identification and sustained identification phases of discourse. In order to study the distribution of the various RE types, namely nominal references, agreement verbs, constructed actions, classifiers, and indexing (IX), the sources include narratives produced by nine native BIM signers. The current study suggests that the reference type is nominal during the introduction phase, and there are many constructed actions and null forms in the maintenance phase as it improves the vividness of the narrative. The reintroduction phase involves pointing, nouns, and adjectives in order to repeat introduced entities that has been previously mentioned. The study also defines a mode of accessibility hierarchy of the BIM, and based on the accessibility of the referent, the REs are; nominals, classifiers, and IX. This research disambiguates the pragmatic framework of BIM and gives a definite idea regarding the special characteristic and language features of this sign language along with giving a model for analysis of any other sign language.

1. Introduction

Sign language in Malaysia is known as BIM (Bahasa Isyarat Malaysia) or the Malaysian Sign Language which has developed permanently over the many decades with the beginning of the first school for the Deaf in the fifties (Chew & Cheung, 2022). Although BIM is the signed language that is acknowledged by the government for the Deaf people of Malaysia via the Persons with Disabilities Acts of 2008, the language has been studied comparatively less in terms of its linguistic aspects. Although sign languages in the world more especially the American Sign Language (ASL) has attracted a lot of empirical attention, BIM has continued to be part of imagination and has been misunderstood as merely a manual representation of oral Malay rather than being a total natural language which it is (Osugi, San and Akiyama, 2023). In this research, the investigation is restricted to the following subtopic of BIM: the phenomena of referring expressions (REs) with regard to the various discourse roles: introduction, reintroduction, and maintenance. The goals of the study are to investigate the impact of the accessibility on the types of the referring expressions in BIM and to compare the findings with the data from well-developed sign languages such as ASL. Additionally, it lists a set of simple and complex referring expressions in BIM and gives some idea regarding

how the native signers perceive the referents in a discourse. This research will also benefit the understanding of the sign language as a new language other than the spoken Malay and the denial of it being a simple sign language.

2. Referring Expressions in Language

The work of referencing an object from another point in a discourse is a part of every language spoken or signed (Cooperrider et al., 2021). They allow the interlocutors to construe referential relations with the help of a referent in the course of a particular discourse; should the referent be known to both participants, then it helps to constitute its referential relation. According to Ariel (1990), individuals' use of referring expression depends on the accessibility of the referent in the discourse. The concept is most accessible if familiar or referred to recently and least accessible if new or referred to after a while (Hamid et al., 2023). In spoke languages it is possible to distinguish such referring expressions as definite descriptions containing much information about the referent and pronouns, which are the less informative form of a reference. In the same manner, in the sign language, there are REs as the pointing or the indexing, the classifiers, and the constructed actions (Saiful Bahri et al., 2023). Such extra linguistic gestures as eye gaze and facial expressions are also instrumental for clarifying the referent in signed languages (Ferreira, 2020). BIM, being a new sign language compared to other sign languages understands that it has certain similarities and these are the use of classifiers and indexing. Nevertheless, there is only limited literature regarding the pragmatic level of BIM and its relation to accessibility after the deployment of REs (Tan et al., 2022). It is also important to know that many of the BIM user have fluency in spoken Malay; hence, there is a question as to how this factor impacts BIM's REs. This supplies this gap by given a comprehensive examine of the varieties of REs that is employed in BIM and their connection with the Access of referents.

3. Research Methodology

This study adopted qualitative approach and involved a collection of narratives of the native BIM signers. Nine informants; five females and four males were interviewed; ranging from 21 to 45 years of age; purposively selected based on their interaction with Deaf people and their current usage/employment on BIM. Every informant was given 30 seconds cartoon of Sylvester and Tweety; which is a story involving two characters, a cat and a bird, and the idea was to narrate the cartoon in BIM. In particular, the narratives were transcribed using ELAN which enables precise analysis of the propositions submitted. The data were analysed according to three types of referent discussion: initial discussion, resuming discussion and sustained discussion. The referring expressions used were distinguished and analysed according to the type and compared with the phases. In the data collection procedure, subjects with certain criteria were chosen such that they were the regular users of BIM with a strong relationship with the Deaf population.

All informants reported family members that were Deaf and all attend DeAF residential schools and this ensures the informants efficiently communicated in BIM. The age of the informants was between twenty one and forty five years, and therefore, the data was diverse due to this age differences that led to difference in the linguistic experience of the

informants. Thus, to ensure that while minimizing variation in the content of the different stories given by each informant, the stories that were collected were derived from a cartoon that is commonly known and easily understood; thus, each informant signed the same story in their own way to capture their signing style and experience. After the obtained narratives, they were written down using the Technology-Enhanced Assessment of Narrative (TEA) system, which is acquired with the use of the ELAN system, a powerful tool for language documentation that can organize and analysed detailed descriptive data. The first type that is being identified is where the narratives are being transcribed and segmented into propositions based on predicate boundaries with an aim of identifying the referents that are either being introduced or re-introduced or even maintained in the discourse. The propositional analysis was more fine-grained and concerned the referent identification and the types of referring expressions used especially the non-manual signals such as eye-gaze and face expressions most common on sign languages. Such an approach of data analysis was possible to use when comparing the selected referring expressions through the three discourse functions.

The research questions guiding the study were:

1. What types of referring expressions are deployed during the main phases of discourse—introduction, reintroduction, and maintenance?
2. What strategies are used in relation to the accessibility of the entities at introduction, maintenance, and reintroduction?

4. Findings and Discussion

The analysis of the data revealed several interesting patterns in the use of referring expressions by native BIM signers. The following sections discuss the findings in each of the three phases of discourse.

4.1 General Observations

In all the respondent's 169 propositions were realized. Therefore, distributing these propositions across the three discourse functions was as follows:

- **Introduction Phase:** 18 propositions (11%)
- **Reintroduction Phase:** 31 propositions (18%)
- **Maintenance Phase:** 120 propositions (71%)

Table 1: Amount and Proportions of Referring Expressions by Discourse Functions

Discourse Function	Introduction	Reintroduction	Maintenance
Total Number	18	31	120
Percentage (%)	11	18	71

From the findings presented above, it can be inferred that most of the referring expressions were used in the maintenance phase slightly followed by the recommendations phase and a negligible amount in the introduction phase. It is because the frequency of maintenance propositions may increase given that the target throughout the whole discourse is to maintain the two primary characters, namely, Sylvester and Tweety.

The number of propositions that is evident in the maintenance phase shows the continual monitoring of the referents by keeping them relevant in the construction of the story. The two main characters, Sylvester and Tweety, are mentioned all through the story and therefore, the signers use referring expressions that are adequate to make the conversation continuous and coherent. This is evident so especially in sign languages where the analysis shows that while the referents may be verbalized orally, other paralinguistic features such as eye gaze and body posture are used to point to the objects in space, thus allowing the audience to follow the story conveniently (Chong and Hussain, 2021). In this way, the necessity of constantly referring to a sign agent or reminding of its existence when describing the scene is eliminated, and the maintain phase takes more time in the process of signing, indicating that signers care about breaking the connection to the referents (Lin and Murli, 2022).

On the other hand, the number of propositions in the introduction and reintroduction stages is significantly lower: four and two, respectively, to be precise, which meet the expectation, as once the actual referent is used, the further mentions of it are less frequent because the word referent is easily retrievable. The identification phase in which occurred only in the 11% of the proposition, is performed by the first time a referent is mentioned where an unequivocal reference is required. The notion of reuse occurs in 18% of the propositions, and it entails referring to previously mentioned entities again. The small percentage in this phase indicates that to maintain the referents once they are set and socially constructed it is easy to do so. These considerations evidence the scalar organization of sign language discourse as for information flow is concerned, as well as the fact that the latter is aligned with the availability of referents at the various points of the narration.

4.2 Referring Expressions at Introduction Phase

In the first reference, when adopting a referent into a discourse, the dominant kind of referring expressions was nominal (nouns or noun phrases). This is also in agreement with other sign languages that whenever introducing a new entity there is often the need for refection. In BIM, nominal references referred to the bare noun, for instance CAT and nouns that are preceded by a pointing (Jamaluddin et al., 2022). There were few instances of

classifiers in this phase due to the fact that the characters are initially introduced and so it is easier to identify them.

Table 2: Nominal Phrase Sub-types at Introduction Phase

Nominal Phrase Sub-Types	Total Number (n=18)	Percentage (%)
Bare Noun	9	50
Noun Preceded by Pointing in BIM	8	44
CL + IX + Noun	1	6

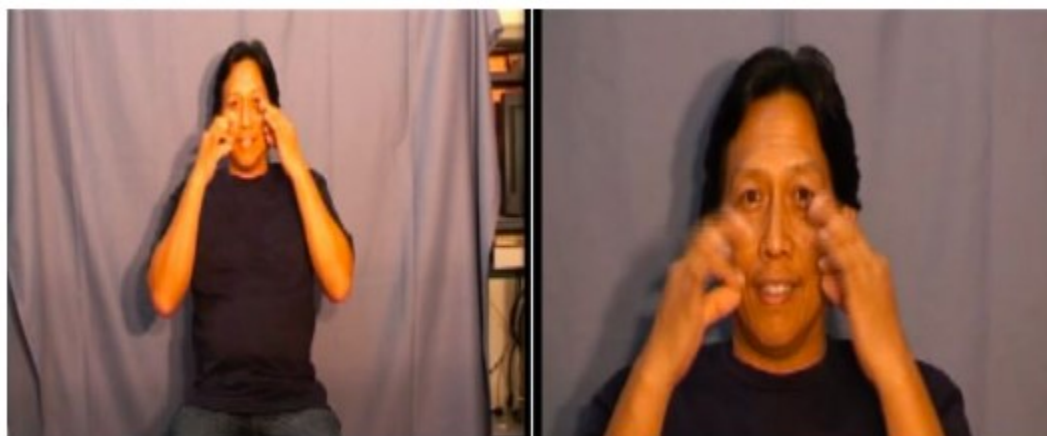


Figure 1: Example (Use of Bare Noun (CAT) at Introduction)

As another component of non-manual features, the eye gaze was also observed during the introduction phase. All informants employed eye gaze to guide the attention of the addressee to the newly introduced referent and therefore the accompaniment of these non-manual features in signed discourse is highly significant. The use of nominal references in the introduction phase is appropriate in as much as it captures the identification mode of endowment of a new entity in the minds of the discourse participants. In BIM as in any other sign languages gestural reference which is used to establish the contact with the addressee does make explicit reference to the intended referent (Chew and Cheung, 2022). This is definitely paramount in visuo-spatial languages like BIM since the identity of the referring expression is critical for understanding. The use of bare nouns including “CAT” or nouns that are signed after pointing guarantees that the referent is recognised with ease and has a connection with the physical location that the signing is being done from (Padmanand and Lim, 2022). The absence of classifiers in this phase also raises more evidence to support the fact that when coming up with a new object, the best way is to use direct name instead of using some other relatively flexible features like classifiers corresponding to location. Besides the manual gestures, the use of eye gaze helped the addressee to follow from the

referring expression to the newly introduced referents. This non-manual feature belongs to the sign languages as it plays a role in refining the reference and directing attention within the visuospatial space. Eye gaze is not only used to direct attention to the referent, but also other aspects of it reveal more about the nature of the relationship the signer has with the referent. It is crucial in BIM discourse especially in the phase introducing a new referent because of the consistent use of eye gaze among all the informants (Halim et al., 2024). This is an indication that sign language involves the use of both manual and non-manual features that combine to form what can effectively be referred to as meaningful discourse.

4.3 Referring Expressions at Reintroduction Phase

The reintroduction phase entails repeating a referent that has shifted to the background for some time. In BIM, mimetic references prevailed as the primary type of reference while signs employed classifiers as well as constructed actions as the other types of references at this phase. There was relative more of pointing (indexing) in this phase because the referents were easy to get because they had already been made. However, pointing was not sufficient to determine the referent and it was commonly used together with a noun or an adjective.

Table 3: Nominal Phrase Sub-types at Reintroduction Phase

Nominal Phrase Sub-Type	Total Number (n=31)	Percentage (%)
Bare Noun	20	65
Noun Preceded by Pointing in BIM	5	16
IX	4	13
Null	2	6



Figure 2: Use of Bare Noun (BIRD) at Reintroduction

In the process of reintroduction, the use of mimetic references such as classifiers and the constructed actions was helpful to the signers as it helped them to bring back the referents in a dynamic and particularly vivid manner. These strategies assisted in recalling back to focus the identity and function of the referent in the discourse after they were briefly displaced. Though index fingers pointing was common in this phase it was commonly followed by nouns or adjectival phrases which served to remove any possible confusion. It then became a way of restating another character's name or identification when necessary at least after the character had already been introduced in the scene. Extension of classifiers and constructed actions in reintroduction also shows how versatile BIM is in sustaining the referential tracking and tackling the referents which otherwise poses considerably turn-taking issues to the addressee by making the discourse less engaging.

4.4 Referring Expressions at Maintenance Phase

The maintenance phase had the highest amount of referring expression variation. In interacting with an avatar, signers employed grounded actions and no signing to keep preferentiality to the two main characters. These strategies were conducive for working under conditions which do not demand rather explicit referential use of nouns. Constructed actions were conspicuously prominent in this phase because they offer more kinetic perspective of the characters, making the narration realistic. The use of classifier also intensified particularly when describing the actions or postures or the relationship between the characters.

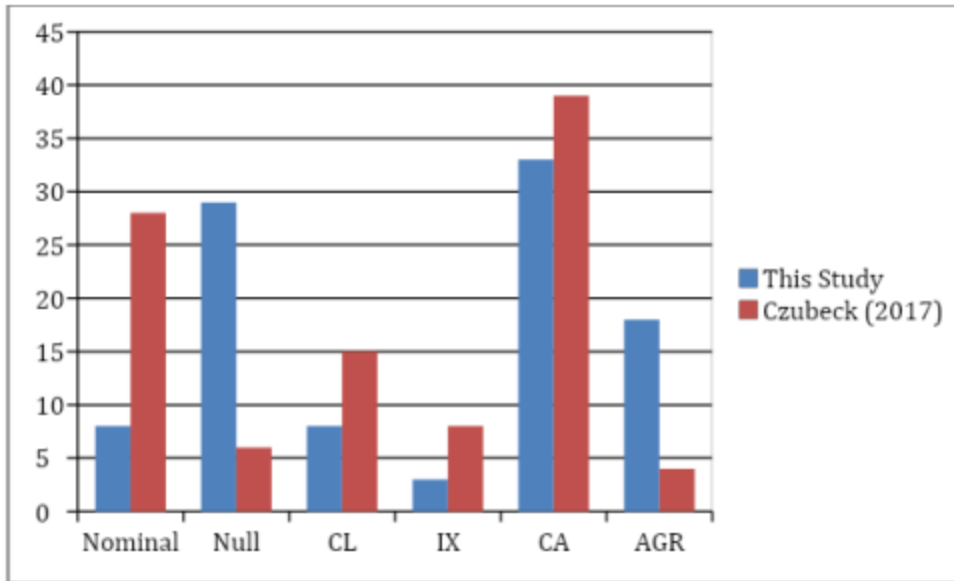


Figure 3: Comparing Referring Expression Types at Maintenance
Czubeck (2017)

The above chart shows the distribution of various types of referring expression (RE) used in the maintenance phase according to this study and Czubeck (2017). Indeed, the data extracted from the two graphs show that Constructed Actions (CA) were the most often adopted strategies of RE for both studies; although, this study had a slightly higher representation of this strategy. On this phase is evident how CA is depicting characters into more appealing and animated way due to its obvious advantages regarding the preferences of the audiences. It can therefore be seen in this context that constructed actions enable the signer to provide a graphic depiction of the actions/feelings/beings that are being referred to, and keep them as referents in focus even if they are not nominal. As evidenced in the chart of this study, there are fairly many uses of Agreement Verbs (AGR), which leads to the conclusion that signers also make frequent use of verbs of agreement to support referential continuity. When the referents are entirely familiar in a discourse, they can also show syntactic and semantic relations between the subject and object, or two entities in the discourse with its help of spatial markers in agreement verbs. The scarcity of Null forms that signal weak connection also suggest that signers in the maintenance phase prefer to openly control the discourse opting for higher transcribe means such as constructed actions and agreement verbs. This strategic choice makes sure that the referents are always easily recognizable by the addressee at every point the referents appear in the narrative.

5. Conclusion

This research brings a new light into the topic of the current linguistic investigation of the Malaysian Sign Language with an emphasis on referring expressions. The present study showed that, like other NSLs, BIM employs a great variety of referring means to control the ongoing communication process. The research also pays adequate attention to BIM,

which lack determiners with a high frequency while, non-manual elements like eye gaze and facial expressions. There is also proposed new hierarchy for the accessibility of BIM that captures the contextual distribution of referring expressions into three types of discourse progress. Future research might also investigate the applicability of classifiers and non-manual features to more complicated Settings and enhance the knowledge about the pragmatic regarding BIM.

Table 4: Proposed New Hierarchy of Accessibility Based on BIM

Accessibility	RE Types	Features
Low	Nouns / Nominals	Frequent use of bare nouns or nouns + determiners (IX or numerals) at introduction and reintroduction phase.
Mid	Agreement Verbs Constructed Actions Null	High deployment at maintenance phase with constructed actions preferred to null forms when signers want to enhance vividness and/or append additional information such as character personification.
High	Semantic Classifiers IX	Used when signers want to include, with less ambiguity, movement of entities that can be referred to in a discourse. Use of pointing sign independent of other strategies rarely occurs even when the discourse has only two main entities.

The given hierarchy of accessibility with reference to BIM makes it easier to determine the nature of REs used depending on the level of accessibility of the referents. The hierarchy shows that low accessibility concerns the high use of nouns or nominal phrases especially with indexical or numeral determiners in in and reactivation phases. When the referent is less far and not perceptible, signers use mid-level strategies such as agreement verbs, construction of actions, and no action forms where needed mostly in the maintenance phase where details and heaviness are required to continue the telling. High accessibility can be seen in application of semantic classifiers and resources such as indexing (IX) through

which signers differentiate the entities with small degree of uncertainty if the narrative involves only two characters predominantly. This is because the notion of BIM that is proposed here highlights the fact that referent identification is 'confessedly imprecise', and that the choice of referring expression must necessarily be oiled in the 'pragmatic conditions of accessibility of referents in an ongoing text' and require contextual decisions made for the need for an efficient passing on of information all through the narrative.

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