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VISUAL LEXICONS FOR VISUALLY IMPAIRED STUDENTS: A SEMANTIC INTERPRETATION ANALYSIS

Wita Dwi Payana[1], Rahil Helmi[2*]
[1]witadwipayana@isbiaceh.ac.id, [2]rahilhelmi@isbiaceh.ac.id

INSTITUT SENI BUDAYA INDONESIA ACEH

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ABSTRACT

This study explores how students who are blind from birth comprehend and form semantic concepts, focusing specifically on the notion of a "visual lexicon." By investigating the development and understanding of semantic concepts in these students, this study aims to reveal how blind students interpret meanings usually derived from visual experiences and adapt them through alternative sensory inputs. This is a descriptive qualitative study. The data were collected from observation and interview The data source of this research consists of 21 visual vocabulary words, categorized into three groups: nouns that can be touched, nouns that cannot be touched, and adjectives. The data of this research revealed that first and third-grade students use definitions and paraphrases in conceptualizing the semantics of visual vocabulary, while fifth and sixth-grade students use classification, naming, and definitions. In acquiring the semantic concepts of visual vocabulary, there is a shift from sight to hearing and touch. Since blind children lack visual input, their language acquisition, particularly in semantic concepts, relies solely on experiences conveyed through spoken information from others. Therefore, the study's results are expected to support curriculum development for language teaching tailored to blind students and contribute more broadly to educational and linguistic insights for the visually impaired.

Keywords: Semantic Concept, Visual Lexicon, Visually Impaired

A. INTRODUCTION

Understanding and interpreting language meaningfully is a fundamental component of human communication. Almost all human activities are closely linked to the use of language. Language is one of the most essential tools possessed by humans in the development of culture or civilization. In this regard, issues related to communication are not solely the domain of linguists, especially those concerning meaning. These issues have garnered attention from scholars in various fields outside of language, albeit with differing emphases. One such field outside of linguistics that also deals with the issue of meaning is psychology. This branch of knowledge has a different focus in studying the meanings within language, yet still significantly contributes to linguistics in the effort to unravel linguistic meanings. There are three important aspects that should at least be revealed in every linguistic research task. These three aspects are form, meaning, and function (Wijana, 2021). Form pertains to

the formal structure of linguistic units, meaning relates to the relationship between form and concept, and everything it signifies, while function is connected to the social role played by the linguistic unit in communication events. These three aspects are equally important. In this research, the focus is on the study of meaning while still considering its relationship with form and function. In communication, each speaker must be able to convey the meaning of the information communicated, either orally or in writing, clearly to the listener, and conversely, the listener must also be able to understand the speaker's intention (Kowal, 2009; Sato & Loewen, 2022; Sato & Storch, 2022).

Understanding communication involves several perceptions, such as sight, hearing, touch, smell, and taste. With these five perceptions, speakers can convey the meaning behind the spoken intent. For instance, through sight, humans can acquire knowledge of their surroundings clearly because something abstract can be described concretely with vision. This enables the information received to be more quickly and easily understood. However, speakers can sometimes understand meaning without involving all these perceptual aspects. This can be demonstrated in the case of the blind. They can grasp meaning without involving sight. It is believed that blind individuals still face challenges in interpreting speech (Sandywell, 2016). Hearing becomes the primary sense used by the blind (Cattaneo & Vecchi, 2011; King, 2014). They acquire information by listening to others, thus describing an object based on its direction, size, shape, texture, and location. Moreover, Kaharuddin (2022) states that "For the blind, every sound they hear, smell they detect, quality of touch they feel, and taste they experience has the potential to enhance their cognitive abilities.

Based on the description above, it can be concluded that the concept of meaning in the visual lexicon poses unique challenges for the blind, as these lexicons typically rely on visual perception to convey abstract concepts. For visually impaired individuals, understanding visual lexicons necessitates alternative sensory inputs, such as touch and sound, to grasp the essence of visually oriented terms (Andersen et al., 1993). People often believe that blindness implies a complete loss of vision, but this is not entirely accurate. Blind children experience limitations or may even lack the ability to receive stimuli or information from the world around them through their sense of sight. " (Rahmawati, 2018). Blindness can be categorized into several groups. Children with visual impairments can be defined as those with damaged vision that, even with corrective measures, still has a detrimental effect on the child concerned (Fitria et al., 2020). This definition includes children who still have residual vision and those who are entirely blind. Therefore, the definition of blind children refers to individuals whose sense of sight (both eyes) does not function as an information-receiving channel in daily activities. The classification of blindness based on visual ability is divided into two categories: total blindness (blind) and partial blindness (low vision) (Cattaneo & Vecchi, 2011; Gupta, 2019; Hollins, 2022).

The concept of a “visual lexicon” stretches far beyond mere images; it is a vast and dynamic vocabulary, woven from symbols, colours, shapes, and textures that silently speak to the mind’s eye (Restrepo, 2007). In a world where our vision often precedes words, this language operates with an unparalleled immediacy, translating feelings and complex ideas into tangible forms (Cohn, 2007). Visual lexicon refers to the vocabulary in which words can be seen through vision as mentioned in Large dictionary of Indonesian language or known as KBBI (RI, 2016). For adjectives and nouns in the lexicon, the researcher asked participants to describe the words based on their knowledge and understanding. This

research is driven by the researcher's interest and curiosity about the concept of language meaning by the blind.

According to Pateda (2001), there are four procedures that can be used to analyze meaning or components of meaning. These procedures are: (1) The naming process, which is related to reference. Reference can include objects, behaviours, events, phenomena, processes, and systems. (2) Paraphrasing is used to analyse meaning components in greater detail. Paraphrasing starts from a brief description of something. (3) Defining is an effort to explain something (Pateda, 2001). The effort to define is based on meaning analysis and paraphrasing. (4) Classifying is the process of linking a lexeme with a genus or class. Additionally, second language acquisition in children is influenced by three main factors: psychological factors, social situation factors, and other psychological variables (Steinberg et al., 2013). Psychological factors refer to an individual's intellectual processes in constructing grammar and language rules in memory, such as in second language vocabulary enrichment, and motor skills, especially the speech organs. Children's vocabulary acquisition generally progresses through experience, both in terms of sound and orthography and meaning. (Soemantri, 2007) explains the cognitive development of blind children by comparing it with that of sighted children. When compared, the cognitive development of blind children tends to be hindered because their understanding of the outside world through their senses is not fully obtained.

The field of language acquisition among blind students is a profoundly intricate and inspiring area of study, revealing how language develops when visual input is limited or absent (Bottini et al., 2020; Connolly et al., 2007; Lenci et al., 2013; Mikołajczak-Matyja, 2015). Unlike sighted children, who often rely on visual cues to understand words and concepts, blind students primarily engage other senses, such as hearing, touch, and kinaesthetic feedback, in their language acquisition process. Prior research on language acquisition in blind students has addressed various aspects of this process, including the semantic concept of the visual lexicon among blind students at special schools in Banda Aceh. These studies serve to inform and enrich the discussion in this research, highlighting both similarities and distinctions from the present study. For instance, Muharomah (2016) explored the use of language among blind children by observing their reasoning processes during dance activities at the Bina Netra Social Welfare Centre. The study highlighted the unique characteristics of language used by blind children, emphasizing how language must align with their reasoning, particularly in dynamic contexts such as dance activities. Similarly, Deviyanti et al. (2022) examined the effectiveness of Braille crossword puzzles in enhancing English vocabulary mastery among blind students at SLB Negeri Batam. Through pre-tests and post-tests, the study revealed a significant improvement in vocabulary mastery, with scores rising from 15% in the pre-test to 48.17% after one month of learning with Braille crossword puzzles. This suggests the efficacy of such tools in improving vocabulary among blind students.

In addition, Efflamengo & Asyrofi (2019) investigated the factors contributing to Arabic language learning difficulties among blind students at MAN 2 Sleman. The study found that blind students at this institution faced challenges similar to those encountered by students in general madrasah settings. These difficulties included linguistic challenges, such as phonology, semantics, and syntax, as well as non-linguistic issues, such as lack of motivation, limited teacher proficiency in Braille, and inadequate teaching methods and facilities. Furthermore, Febriana (2020) highlighted the need for additional communication tools for blind students, including visual aids, language symbols, and descriptions for

unrepresented objects. These methods, particularly when implemented through teaching activities like field trips and environmental socialization, were found to be more effective in conveying messages. Similarly, Suseno (2016) examined the use of two-dimensional magnetic board media in English vocabulary learning for blind fifth graders at SLB A Yaketunis. The study demonstrated that this media was effective in enhancing vocabulary mastery, as evidenced by improved test scores. In a related study, Aldriani (2017) explored the receptive vocabulary mastery of totally blind individuals using tactile methods. The study revealed that totally blind individuals mastered 88.6% of receptive vocabulary, which was classified as good, with a total of 89 vocabulary items across various categories, including nouns, verbs, adjectives, and adverbs. Factors influencing receptive vocabulary mastery were identified as both internal (e.g., intellectual and psychological factors) and external (e.g., age). Finally, Bachtiar et al. (2022) focused on the development of visual media for communication among deafblind and low-vision children. The study found that the use of visual media improved communication abilities and, consequently, language skills, though the results varied among subjects.

The previous studies have highlighted various aspects of language acquisition and vocabulary mastery among blind students, shedding light on the challenges and strategies involved in their linguistic development. Building on these insights, the aim of this research is to identify the semantic concept of the visual lexicon for blind students at special schools in Banda Aceh. By focusing on this specific area, the study seeks to fill a gap in understanding how blind students conceptualize and acquire language in the absence of visual input. This research is expected to provide both theoretical and practical contributions. For the theoretical contribution, the findings of this study can contribute to the development of psycholinguistic research and theory and serve as a reference for future research. This research can offer valuable insights and learning materials for the community and serve as a source for researchers interested in exploring the relationship between psychology and linguistics in blind individuals. Additionally, it is hoped that this study will provide input for curriculum developers in teaching language to blind students. In terms of practical contributions, this research can enhance education and linguistic understanding for the blind. Moreover, educators will gain knowledge on how to describe words for blind students.

B. METHOD

This research focuses on the concept of meaning in the visual lexicon for the blind (Cattaneo & Vecchi, 2011). The subjects of this study are students from SLB Bukesra in Banda Aceh, who have been totally blind since birth. The object of this research is the visual lexicon, which is divided into three groups: touchable nouns, untouchable nouns, and adjectives. Based on semantic theory, these categories are referred to as semantic fields. This study employed qualitative descriptive research. Qualitative research produces descriptive data in the form of written or spoken words from people and observable behaviour (Maleong, 2012). The qualitative research method applied is the analysis of the semantic concept of the visual lexicon in Indonesian for blind children. The data source of this research consists of 21 visual lexicon items grouped into three categories. The first group includes touchable nouns, comprising the words cloud, sun, moon, and sky. The second group includes touchable nouns, with the words tree, house, car, motorcycle, chicken, and rat. The final group consists of adjectives, including the words clean, dirty, beautiful, handsome, tall, big, bright, clear, colour, wide, and lovely.

This study utilizes two primary data collection methods such as observation and interviews to explore the semantic understanding of visual lexicons among blind students at SLB Bukesra in Banda Aceh. Observation involves systematically recording the students' interactions with and comprehension of visual vocabulary items through structured activities. The observation instrument consists of 21 visual vocabulary words, categorized into three groups:

1. Touchable Nouns: This group includes words such as tree, house, car, motorcycle, chicken, and rat.
2. Intangible Nouns: This group comprises words like cloud, sun, moon, and sky.
3. Adjectives: This final group features words such as clean, dirty, beautiful, handsome, tall, big, bright, clear, wide, and lovely.

During observations, the researcher notes how students utilize sensory experiences such as hearing, touch, and contextual cues to understand the meanings of these words. Moreover, interviews provide deeper insights into students' semantic interpretations of visual lexicons. In these sessions, students are asked to describe their understanding and associations with each vocabulary item, drawing on personal experiences to articulate their semantic concepts. Furthermore, data analysis follows an extra-linguistic comparison method, comparing students' interpretations with external elements that inform the formation of semantic concepts. This approach enables a nuanced understanding of how blind students construct meaning. The findings will be presented in an accessible, reader-friendly written report, ensuring clarity and coherence for a broad audience (Mahsun, 2017).

C. FINDINGS AND DISCUSSION

The semantic concept of a visual lexicon refers to the system of meaning embedded within visual symbols, images, and cues that convey information beyond words. In essence, a visual lexicon acts as a vocabulary of visual elements colours, shapes, textures, and spatial arrangements each carrying semantic weight that communicates ideas, emotions, or instructions to the observer. These elements are culturally and contextually informed, often relying on shared understanding to bridge visual signs with intended meanings. The progression of semantic concepts from Grades I and III to Grades V and VI highlights the development of cognitive and linguistic abilities among students. In the earlier grades, paraphrasing acts as a fundamental tool that encourages students to actively engage with content, helping them comprehend and restate information. Defining, on the other hand, is critical in building their understanding of how to explain terms in simple, concrete ways. These two skills establish the groundwork for more advanced learning as students mature. As learners move to Grades V and VI, they encounter the semantic concept of description, which nurtures their ability to create vivid and detailed portrayals of ideas, objects, or scenarios as shown Table 1.

Table 1. Semantic Concepts of Visual Lexicon divided by grade

NO	GRADE	SEMANTIC CONCEPTS
1	I and III	Paraphrasing
		Defining
2	V and VI	Description
		Definition
		Classification

This skill supports their creative thinking while also sharpening their observational and expressive capabilities. The continued emphasis on definition at this stage allows students to refine their explanations with greater accuracy and depth, moving beyond simple explanations to more nuanced understandings. Classification is introduced as a pivotal skill in the later grades, providing a structured approach to organising information into meaningful groups. This not only enhances their logical reasoning but also prepares them for academic disciplines requiring analytical categorisation, such as science and mathematics. Together, these advanced semantic concepts equip students with the tools needed for critical thinking and problem-solving in real-world contexts. Overall, the structured approach to semantic concepts reflects a pedagogical strategy aimed at scaffolding learning, enabling students to develop language skills incrementally and effectively. The clear distinction between the skills taught at different grade levels ensures that students are continually challenged while building on previously learned competencies. This developmental framework ensures their readiness to tackle complex linguistic and cognitive tasks in higher education and beyond.

1. Semantic Concept of Visual Lexicon (Grade I and Grade III)

A visual lexicon is the principle that certain images, shapes, or colours carry specific meanings that viewers can interpret, even without accompanying text. There are four procedures for analyzing meaning or meaning components such as paraphrasing, naming, defining, and classifying (Pateda, 2001). The data show that informants in Grades I and III use two methods to conceptualize visual vocabulary. These two methods are paraphrasing and defining, which are described as follows.

Paraphrasing

The table below presents a detailed analysis of visual vocabulary items used in the study, focusing on paraphrased meanings. These paraphrases were developed to bridge the gap between lexical definitions provided by the Kamus Besar Bahasa Indonesia (KBBI) and their contextual interpretations in a specific educational setting. The objective is to make the meanings more accessible and relatable for learners by emphasizing sensory cues, such as sounds and behaviors, that are associated with the words.

Table 2. Visual Vocabulary Paraphrase

No	Lexicon	Word Class	Lexical Meaning Based on KBBI	Paraphrased Meaning
1.	chicken	noun	Poultry that are generally flightless, can be domesticated and kept, roost, the males crow and have spurs, while the females squawk and do not have spurs.	Identify the concept of the word ‘chicken’ from sounds and behaviours (chicken crows in the morning, the sound is *petok, petok*)
2.	rat	noun	Rodents, belonging to the Muridae tribe; A pest that causes losses, both at home and in the fields, hairy, long-tailed, with a pair of chisel-shaped incisors in the jaws,	Recognizing the concept of the word ‘rat’ from the sound and behaviour of rats (rats biting clothes, wires, cabinets in the informant's house)

			generally black and grey, but some are white.	
3.	beautiful	adjective	Beautiful in its form and manufacture.	Identifying and associating the concept of the word ‘beautiful’ with the figure of a woman who has a sharp nose and uses skin care.
4.	clean	adjective	Free from impurities; Clear not cloudy.	Recognize the concept of the word ‘clean’ as opposed to dirty.
5.	dirty	adjective	Unclean, stained	Recognizing the concept of ‘dirty’ with lots of rubbish, and dust.

The meanings of words as presented in the table highlight an interplay between the formal definitions in KBBI and their paraphrased interpretations, which focus more on sensory and behavioural associations. For example, ‘chicken’, a noun defined in KBBI as a flightless bird with distinct characteristics between males and females, is paraphrased as recognizing the concept through its sounds and behaviours, such as crowing in the morning or the ‘*petok, petok*’ sound. Similarly, ‘rat’ transitions from a textbook definition describing its physical traits and classification as a pest to a more experiential understanding, emphasizing the damage it causes, such as biting clothes or wires, and its intrusive presence in a household. When comparing adjectives, the divergence between KBBI and paraphrased meanings showcases the shift from abstract qualities to tangible examples. ‘Beautiful’ is formally defined as aesthetically pleasing in form or manufacture, but the paraphrase anchors this idea to a specific image: a woman with a sharp nose and skincare practices. Likewise, ‘clean’ and ‘dirty,’ defined in KBBI as the presence or absence of impurities, are paraphrased in everyday terms that evoke vivid contrasts, like the absence of rubbish and dust for "clean" versus their presence for ‘dirty’. This comparison demonstrates how informants paraphrased meanings rely on relatable and observable details, making abstract concepts accessible through practical and sensory frames of reference. This findings support the idea presented by Fayyaz et al., (2023).

Defining

The informant uses a lexical definition to conceptualize the term "tree," describing it as a large entity with roots, a trunk, fruit, and leaves. This definition captures the key physical attributes that are universally associated with trees. While a tree is a tangible object that can be physically touched, understanding its entirety requires more than the sense of touch. Given that trees are typically large and tall, the sense of sight plays a vital role in forming a complete mental image of their scale, structure, and overall appearance, which cannot be fully conveyed through touch alone.

2. Semantic Concept of Visual Lexicon (Grade V and Grade VI)

Understanding how students conceptualize visual vocabulary is crucial in supporting their learning processes. In Grade 5 and Grade 6, students demonstrate the ability to organize and interpret visual information effectively. Their methods reflect a structured approach to grasping complex visual lexicons. Further data indicates that these informants utilize three key strategies: description, definition, and classification, as outlined below.

Description

The following table illustrates the description and naming of visual vocabulary items, highlighting how they are interpreted and referenced in context. This approach emphasizes the practical understanding of each lexicon by connecting its standard definition from Kamus Besar Bahasa Indonesia (KBBI) with descriptive meanings. These descriptions aim to help learners relate to the words through tangible examples or familiar concepts, thereby fostering a deeper comprehension and contextual application of the vocabulary.

Table 3. Visual vocabulary reference

No	Lexicon	Word Class	Lexical Meaning Based on KBBI	Description Meaning
1.	big	adjective	Over medium size; Opposite of small	Recognizing the concept of the word ‘big’ as something big such as a house, a road, a tree, and a big person.
2.	bright	adjective	In a state of being able to be seen (heard), real, clear	Recognizing the concept of the word ‘light’ as a house with lights inside.
3.	spacious	adjective	Spacious, wide	Recognizing the concept of the word ‘broad’ as something long, not narrow.
4.	lovely	adjective	In a state of being pleasing to the eye, beautiful, lovely	Recognizing the concept of the word ‘beautiful’ as a beautiful night view.

The comparison between the lexical meanings from KBBI and the descriptive meanings provided in the table reveals a shift from abstract definitions to tangible representations. For instance, ‘big’, defined in KBBI as something over medium size and the opposite of small, is described with relatable examples like a large house, a road, or a tree. Similarly, ‘bright’, which KBBI characterizes as a state of clarity or visibility, becomes a more visual and practical reference to a well-lit house in the descriptive meaning. These adaptations ground the abstract qualities in everyday experiences, making them accessible and relatable for learners or observers. Adjectives like ‘spacious’ and ‘lovely’ further illustrate the interplay between abstract and contextualized meanings. KBBI defines ‘spacious’ as wide or broad, but the descriptive meaning anchors this to something long and not narrow, such as a space or area one can visualize. Meanwhile, ‘lovely’, which KBBI describes as pleasing to the eye or beautiful, is reimagined as the charm of a picturesque night view. These descriptive interpretations by informants enhance the KBBI definitions by linking abstract attributes to concrete scenarios, fostering a deeper understanding through vivid imagery and context.

Definition

The table below provides definitions of visual vocabulary items, focusing on how their lexical meanings are simplified and contextualized for educational purposes. By aligning the standard definitions from Kamus Besar Bahasa Indonesia (KBBI) with accessible descriptions, the table aims to enhance learners' ability to identify and recognize these concepts in real-world contexts. This method facilitates a clearer understanding by connecting abstract definitions with concrete, relatable imagery and characteristics.

Table 4. Visual Vocabulary Definition

No	Lexicon	Word Class	Lexical Meaning Based on KBBI	Description Meaning
1.	sun	noun	A celestial body, the centre of the solar system is a ball of gas that brings light and heat to the earth during the day.	Identify the concept of the word ‘sun’ as an object in the sky.
2.	moon	noun	A celestial body that circles the earth, shining at night due to the reflection of sunlight	Recognizing the concept of the word ‘moon’ as something round.
3.	house	noun	Building for living	Recognizing the concept of the word ‘house’ as something that has a roof, walls and floor.
4.	motorcycle	noun	Engine that is the driving force	Know the concept of the word ‘motorbike’ as a means of transport that has round tires, a plate, and handlebars.
5.	tree	noun	A plant with a large, hard stem; a woody tree.	Identify the concept of the word ‘tree’ as something that is tall and has roots, branches, trunk, and fruit.
6.	car	noun	A land vehicle powered by an engine, with four or more wheels (always even), usually using fuel oil to start the engine.	Recognizing the concept of the word ‘car’ as something that has an engine, seats, doors and glass.
7.	chicken	noun	Poultry, which are generally flightless, can be domesticated and kept, roosting, the males crowing and spurring, while the females squawking.	Recognize the concept of the word ‘chicken’ as an animal that has a beak, legs, wings, feathers and a mouth.
8.	rat	noun	Rodents, belonging to the Muridae tribe, are pests that cause losses, both at home and in the fields, hairy, long-tailed, on the jaw there is a	Identify the concept of the word ‘mouse’ as an animal that has four legs, fur, a small head and teeth, and eats clothes.

			pair of chisel-shaped incisors, generally black and grey, but some are white	
9.	clean	adjective	Free of impurities	Get conceptualized with the word ‘clean’ as something that is devoid of dust, odor and dirt.
10.	dirty	adjective	Unclean; Stained	Recognizing the concept of the word ‘dirty’ as something with dust, dirt and rubbish.
11.	clear	adjective	Looks bright (about water), clear, clean, not cloudy	Get to know the concept of the word ‘clear’ as something that has no colorless impurities.
12.	spacious	adjective	Spacious, wide	Know the concept of the word ‘large’ as a field and not narrow.

The table shows how the descriptive meanings from informants simplify and ground the formal definitions found in KBBI by using observable features or everyday associations. For example, the ‘sun’, described in KBBI as a celestial body providing light and heat during the day, is simplified to ‘an object in the sky’. Similarly, the ‘moon’ transitions from a celestial body reflecting sunlight at night to the simpler recognition of ‘something round’. These descriptive interpretations strip down the technical or astronomical context to focus on recognizable visual or physical attributes, making them easier to understand in daily life. This trend of translating abstract meanings into concrete descriptions is evident in terms such as ‘house’ and ‘motorcycle’. KBBI defines a house as ‘a building for living’, while the informants focus on physical components like ‘a roof, walls, and floor’, giving a tangible image of the concept. Likewise, ‘motorcycle’, formally defined as an ‘engine-driven vehicle’, is described in practical terms as ‘transport with round tires, a plate, and handlebars. These shifts highlight how informants prioritize visible and functional features to make meanings more relatable and accessible for everyday understanding. Similarly, the descriptive meanings of ‘clean’ and ‘dirty’ provide a vivid contrast to their more abstract definitions in KBBI. While ‘clean’ is described as ‘free of impurities’ and ‘dirty’ as ‘unclean or stained’, the informants’ descriptions specify observable attributes: ‘clean’ as free from dust and dirt, and ‘dirty’ as involving dust, dirt, and rubbish. This grounding in sensory experiences extends to words like ‘spacious’, which moves from the abstract definition of ‘wide’ to a description of ‘a field that is not narrow’. Across all these examples, the informants’ descriptive meanings prioritize clarity and relatability, making abstract concepts more immediate and tangible.

Classification

The table below presents the classification of visual vocabulary items, focusing on their categorical meanings and contextual interpretations. This classification links the lexical meanings provided by Kamus Besar Bahasa Indonesia (KBBI) to simplified explanations that help learners grasp the essence of these concepts. By associating the vocabulary with their observable or relatable features, this approach aims to enhance comprehension and foster a deeper connection between the words and their classifications in the natural world.

Table 5. Visual Vocabulary Classification

No	Lexicon	Word Class	Lexical Meaning Based on KBBI	Meaning of Classification
1.	clouds	noun	Groups of water droplets, ice, or both that appear clustered in the atmosphere; Mega	Know the concept of the word 'cloud' as an object in the sky.
2.	star	noun	Celestial bodies are made up of flaming gas like the sun, especially visible at night.	Know the concept of the word 'star' as something that is above the clouds.
3.	sky	noun	The vast space above the earth, where the moon, stars, sun, and other planets reside.	Recognizing the concept of the word 'sky' as something that is above.

The classification of visual vocabulary in this study follows a similar process of categorizing lexemes based on shared characteristics. As explained by Pateda (2001) that classification is the process of associating a lexeme with a genus or class. In this case, the informants classified the visual vocabulary 'cloud', 'sky' and 'star' based on their location. The three objects are in the sky; therefore, the informants classified the three objects as celestial objects.

3. Semantic Concepts of the Visually Impaired

This section explores how visually impaired students at SLB Bukesra in Banda Aceh conceptualize various lexical items, comparing their understandings with the standard definitions provided in the KBBI. The semantic concepts of the visually impaired refers to a condition in which an individual experiences significant difficulty in seeing, even with the help of corrective measures like glasses or contact lenses or is entirely unable to see (Doster, 1974). This term encompasses a range of visual challenges, from mild vision loss to complete blindness.

Clouds

The informants conceptualized the word 'cloud' primarily in terms of its location in the sky, associating it with celestial elements such as stars and the moon. This interpretation emphasizes the spatial and observational aspect of clouds, focusing on their visible presence in the sky as part of the broader natural scene (Diveica et al., 2024). In contrast, the KBBI defines 'cloud' more scientifically, describing it as a visible mass of condensed water vapor floating in the atmosphere, typically high above the ground. This formal definition highlights the physical and meteorological properties of clouds, offering a technical perspective. The informants' concept is therefore notably different, leaning toward a simplified, observational understanding rather than the scientific explanation found in KBBI.

Star

The informants conceptualize the word 'star' based on its location in the sky, often visualized as being behind the clouds. This interpretation focuses on the star's spatial context and visibility, emphasizing its appearance as part of the natural scenery rather than its intrinsic characteristics. In contrast, (KBBI) defines 'star' as a celestial body, highlighting its astronomical nature and scientific attributes. This formal definition encompasses the star's

role as a luminous sphere of plasma, distinct from its mere location or appearance in the sky. The informants' understanding, therefore, diverges significantly from the KBBI's explanation, presenting a simplified, observational view rather than a detailed scientific perspective. This finding aligns with previous research, (Diveica et al., 2024) indicating that experiences enable blind students to express visual vocabulary through the transfer of experiences (Fayyaz et al., 2023).

Sun

The informants described the word ‘sun’ by focusing on its physical and observable attributes, particularly its round shape, its ability to emit light and heat, and its presence in the sky. These characteristics formed the basis of their conceptualization, highlighting a sensory and experiential understanding of the term. In contrast, when compared to the definition of the word ‘sun’ as presented in the KBBI, notable differences emerge. The KBBI typically provides a more formal, linguistic, or scientific definition of the sun, encompassing its role as a celestial body, its position as the canter of the solar system, and its astronomical significance. Thus, the informants' conceptualization, rooted in direct perception, stands in stark contrast to the broader, more technical meaning offered by the KBBI (Diveica et al., 2024; Fayyaz et al., 2023)

Moon

Like their understanding of the word ‘sun,’ the informants conceptualized the word ‘moon’ primarily based on its round shape, emphasizing a simple and visual characteristic of the celestial body. This perception is rooted in their direct observation and sensory experiences, focusing on the moon’s appearance in the night sky. When compared to the definition of the word ‘moon’ provided in the KBBI, the informants’ conceptualization differs significantly. The KBBI typically describes the moon in a more formal and scientific context, highlighting its role as Earth’s natural satellite, its orbital behavior, and its influence on phenomena such as tides. In contrast, the informants’ perspective is less technical, prioritizing visible features over scientific or astronomical details. This creates a noticeable divergence in the two interpretations (Diveica et al., 2024; Fayyaz et al., 2023).

Sky

The informants conceptualized the word ‘sky’ primarily based on its location as something above, emphasizing its spatial position, and as a place where planes pass, highlighting its functional role as observed in daily life. This understanding reflects a practical and visual perception of the sky, shaped by direct experience and observation. In contrast, the definition of the word ‘sky’ in the KBBI offers a more formal and comprehensive explanation. The KBBI typically describes the sky as the expanse that surrounds Earth, encompassing the atmosphere and the celestial realm, including its role in meteorological and astronomical phenomena. Thus, the informants’ concept of the sky, grounded in everyday associations, differs significantly from the broader and more scientific meaning provided in the KBBI(Diveica et al., 2024; Fayyaz et al., 2023).

Tree

The informants conceptualized the word ‘tree’ by describing its distinctive characteristics, including having roots, a trunk, fruit, and leaves. They also emphasized its size, often noting that it is big, long, and tall. This conceptualization highlights both the physical structure and visual attributes of a tree as observed in their environment. When compared to the definition of the word ‘tree’ in KBBI, the informants' understanding aligns closely with the formal

explanation, mentioning many of the same characteristics. However, the informants provided additional details, offering a more nuanced description based on their practical and direct experiences with trees. This suggests that while their concept overlaps with the KBBI definition, it extends beyond it by including richer, everyday insights (Diveica et al., 2024; Fayyaz et al., 2023).

House

The informants conceptualized the word 'house' by focusing on its characteristics, particularly its structural and functional parts. They described a house as having a roof, door, floor, tiles, and various rooms, including a TV room, dining room, study area, and kitchen. This detailed understanding reflects their practical and lived experiences with the concept of a house, emphasizing both its physical components and its functional spaces. When compared to the definition of the word 'house' in the KBBI, the informants' concept appears more detailed. While the KBBI provides a general and formal explanation of a house as a structure used for dwelling, the informants expanded on this by enumerating specific features and areas, offering a richer and more comprehensive description grounded in everyday life (Diveica et al., 2024; Fayyaz et al., 2023).

Car

The informants conceptualized the word 'car' by describing its key components, such as an engine, seats, and doors. This understanding focuses on the tangible and functional aspects of a car, highlighting the parts that are essential for its operation and utility. Their conceptualization is rooted in a practical and straightforward perspective, shaped by their interaction with cars in daily life. When compared to the definition of the word 'car' in the KBBI, differences become apparent. The KBBI typically defines a car more formally, often including technical details such as its use as a motorized vehicle for transportation and its classification among automobiles. In contrast, the informants' concept is less formal and narrower in scope, concentrating on specific, observable features of the car (Diveica et al., 2024; Fayyaz et al., 2023).

Motorbike

The informants conceptualized the word 'motorbike' by focusing on its shape and key components, such as its wheels, tires, handlebars, and engine. Their understanding emphasizes the physical and functional elements of a motorbike, shaped by their direct experiences and observations. This practical perspective highlights the motorbike's essential features as a mode of transportation. When compared to the definition of the word 'motorbike' in KBBI, there are noticeable differences. The KBBI typically provides a more formal and comprehensive definition, describing a motorbike as a two-wheeled motorized vehicle designed for individual or limited passenger use, often including its role in transportation and its mechanical design. In contrast, the informants' conceptualization is simpler and focuses primarily on its visible and functional attributes (Diveica et al., 2024; Fayyaz et al., 2023).

Chicken

The informants recognized the concept of the word '*ayam'* based on its distinctive sound, such as crowing in the morning, and its physical characteristics, which include a beak, legs, wings, feathers, and a cockscomb. Their understanding emphasizes observable and sensory features, highlighting both the chicken's physical traits and its association with daily life. When compared to the definition of the word 'chicken' in the KBBI, the informants' concept differs. The KBBI defines a chicken more formally, describing it as a type of poultry with

physical characteristics such as feathers and two legs, while also emphasizing its behavioural traits, including its inability to fly, its tame nature, and its role as a domesticated animal. The informants' concept omits these behavioural aspects, focusing instead on visible and audible features (Diveica et al., 2024; Fayyaz et al., 2023).

Rat

The informants conceptualized the word 'rat' based on its characteristic behaviours, such as biting clothes and eating tomatoes and wires. They also described the rat's physical traits, noting that it is four-legged, hairy, and has teeth. Additionally, they associated rats with living in dirty places. This understanding reflects a practical and experience-based perspective, focusing on the animal's actions and general appearance. In comparison, the definition of the word 'rat' in KBBI is more specific and comprehensive. The KBBI identifies the rat as a type of rodent, including its complete physical characteristics, such as a long tail and its common colours of black, grey, or white. The informants' concept omits these specific details, concentrating instead on observable behaviours and general traits (Diveica et al., 2024; Fayyaz et al., 2023).

Clean

The informants recognized the concept of the word 'clean' as being the opposite of 'dirty' and associated it with the absence of dust and smell. Some informants also described cleanliness in terms of personal hygiene, such as having bathed and cut their nails. This understanding reflects both environmental and personal aspects of cleanliness, emphasizing a state free from dirt, odors, and unkempt conditions. When compared to the definition of the word 'clean' in the KBBI, the informants' concept aligns closely. The KBBI similarly defines 'clean' as a condition free from dirt, impurities, or anything unpleasant, encompassing both physical and hygienic aspects. Therefore, the informants' understanding of the word 'clean' is consistent with its meaning in the KBBI (Diveica et al., 2024; Fayyaz et al., 2023).

Dirty

The informants depicted the notion of 'dirty' by describing a scenario where there is an absence of impurities, refuse, or particulate matter. This explanation delves into a more intricate understanding than the standard definition in KBBI, where 'dirty' merely refers to something being unclean or tainted. In contrast, the informants' interpretation paints a broader, more nuanced picture, focusing on the complete lack of unwanted elements, emphasizing the distinction between just being soiled and being devoid of any contaminating substances. Their portrayal adds a layer of depth to the conventional description, offering a richer perspective dictionary (Diveica et al., 2024; Fayyaz et al., 2023).

Beautiful

The informants conceptualize the term 'beautiful' by linking it to a female figure, characterized by her use of skincare products, her neatness, a flawless complexion, and a distinctively sharp nose. This depiction closely mirrors the definition found in the KBBI, where 'beautiful' is often associated with a woman's face. However, unlike the standard description, the informants did not simply provide synonyms for 'beautiful.' Instead, they focused on the specific attributes they consider essential to beauty, offering a more personalized and detailed perspective on what makes someone truly beautiful (Diveica et al., 2024; Fayyaz et al., 2023).

Handsome
The informant envisioned the word ‘handsome’ in relation to a man who is well-groomed, fresh from a bath, tidy, and exudes a pleasant scent. This aligns closely with the KBBI definition, which associates ‘handsome’ with a man’s physical appearance, particularly his stature and facial features. However, the informant's interpretation expands on this by including personal hygiene and overall presentation as key components of handsomeness, providing a broader, more holistic view of the term (Diveica et al., 2024; Fayyaz et al., 2023).

Height
The informants conceptualized the concept of height by referring to structures such as buildings, rooftops, and trees. This interpretation contrasts with the KBBI definition of 'high,' which describes it as the vertical distance from the ground. Instead, the informants provided tangible examples of objects they consider tall, offering a more practical perspective on the idea of height, beyond just a theoretical measurement (Diveica et al., 2024; Fayyaz et al., 2023).

Big
The informants conceptualized the word ‘big’ by referencing various objects with a notably large physical form, such as trees, plump individuals, houses, loud voices, and people with large bodies. While the KBBI defines ‘big’ primarily in terms of size, the informants took a more illustrative approach, providing specific examples of what they perceive as large. This interpretation highlights the practical, observable aspects of bigness, offering a more relatable understanding of the term (Diveica et al., 2024; Fayyaz et al., 2023).

Bright
The informant conceptualized the word ‘bright’ through an analogy, comparing it to a house illuminated by lights and the sun. In contrast, the KBBI defines ‘bright’ more abstractly, focusing on its condition or quality. The informant, however, opted for a more vivid comparison, linking the concept of brightness to familiar, tangible sources of light, offering a more relatable and concrete interpretation of the term (Diveica et al., 2024; Fayyaz et al., 2023).

Clear
The informants conceptualized the word ‘clear’ as something devoid of colour, scent, and dirt. Their interpretation aligns closely with the KBBI definition, which describes ‘clear’ as something bright (particularly referring to water), clean, and free from muddiness. Both perspectives emphasize clarity in its purest form, with the informants focusing on the absence of unwanted qualities, while the KBBI extends this to include a state of transparency and cleanliness (Diveica et al., 2024; Fayyaz et al., 2023).

Spacious
The informants conceptualized the word *‘luas’* (vast) by citing examples of objects that possess a broad, expansive form, such as a yard, a house, and a field, all characterized by their spaciousness and lack of narrowness. In contrast, the KBBI defines ‘vast’ more through its synonyms, focusing on the idea of extent or scope. The informants, however, provided tangible illustrations of what they consider to be vast, offering a more practical understanding of spaciousness (Diveica et al., 2024; Fayyaz et al., 2023).

Lovely

The informants conceptualized the word ‘lovely’ by referencing objects with a physical presence that are generally considered beautiful, such as scenery, the night, and nature. This interpretation contrasts with the KBBI, which defines ‘lovely’ more through descriptive terms. While the KBBI focuses on the essence or qualities of being lovely, the informants provided specific examples of beautiful objects, giving a more tangible and illustrative perspective on what makes something lovely (Diveica et al., 2024; Fayyaz et al., 2023).

D. CONCLUSION

This study has explored the conceptualization of semantic visual vocabulary by students who are blind from birth, highlighting differences in the methods employed across grade levels. It can be concluded that students in Grades 1 and 3 predominantly use methods such as definition and paraphrase to conceptualize semantic visual vocabulary, while students in Grades 5 and 6 demonstrate a preference for classification, naming, and definition methods. The findings also reveal that the visual vocabulary acquired in this study is predominantly in the form of nouns, with a significant emphasis on nouns being used even when explaining abstract concepts like adjectives. Specifically, both Grade 3 and Grade 6 students often explain abstract semantic concepts of adjectives using concrete noun vocabulary through examples or associations. Moreover, the study identifies a sensory shift in the acquisition of semantic concepts, transitioning from vision to hearing and touch. This sensory shift is particularly pronounced among Grade 3 students, who rely heavily on experiential knowledge exchange, such as interactions with peers who have partial blindness or their teachers. In contrast, Grade 5 and 6 students leverage more advanced cognitive abilities, enabling them to process and conceptualize more complex information without relying solely on empirical interactions.

The results of this study are expected to serve as a reference and source of information for future researchers exploring semantic concepts of visual lexicons. Additionally, this research aims to contribute to enriching the theory of semantic concepts in visual lexicons for visually impaired students. It is also recommended for educational policies that could enhance support for visually impaired students in vocabulary learning. This might include policies on how the government can develop teaching materials for teachers training visually impaired students. Thus, students who have been totally blind from birth can learn and enrich their vocabulary with accessible teaching materials and the use of assistive technology.

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