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Repositioning Teachers' Instructional Language Based on the *Huma Betang* Philosophy to Optimize Primary School Learning

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ABSTRACT
Background: Teachers' instructional language plays a central role in transferring knowledge, managing classroom interaction, and shaping students' learning experiences in primary schools. However, lengthy, ambiguous, and overly abstract verbal instructions may increase students' extraneous cognitive load, particularly in subjects with high element interactivity such as Mathematics and Science. Objective: This study aims to analyze the patterns of primary school teachers' instructional language and to formulate a repositioned model of instructional language based on Cognitive Load Theory and the *Huma Betang* philosophy. *Methods:* This study employed a descriptive qualitative approach using content analysis. The research was conducted at SDN 1 Menteng, Central Kalimantan, Indonesia, involving six primary school teachers selected purposively. Data were collected through classroom observations, interviews, document analysis, and verbal transcription. The data were analyzed through repeated transcript reading, identification of meaningful instructional utterances, coding, categorization, and interpretation. *Results and Discussion:* The findings revealed four dominant patterns in teachers' instructional discourse: verbose procedural direction, instructional ambiguity, abstract verbalistic explanation, and limited humanistic-cultural feedback. These patterns indicate that instructional language should be repositioned through verbal chunking, verbal signaling, concrete analogy, constructive feedback, and culturally grounded expressions. The integration of Huma Betang, Penyang Hinje Simpei, and Belom Bahadat values strengthens the humanistic and ethnopedagogical dimensions of classroom communication. *Conclusion:* Effective instructional language in primary school should be concise, sequential, concrete, empathetic, and culturally grounded to reduce unnecessary cognitive load, support students' emotional safety, and strengthen local wisdom-based learning

Keywords: Instructional Language, Primary School Teachers, Cognitive Load, Huma Betang Philosophy, Ethnopedagogy

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INTRODUCTION

The learning process at the primary school level possesses unique characteristics that are deeply influenced by the students' cognitive development phase. According to Jean Piaget's theory of cognitive development, school-aged children (ranging from 7 to 12 years old) operate within the concrete operational stage. During this crucial phase, while children's reasoning abilities have advanced significantly, their mental operations remain highly dependent on physical objects, tangible realities, and direct sensory experiences. Children do not yet possess the mature cognitive capacity to abstract complex information, untangle ambiguous meanings, or interpret figurative language such as multi-interpretable metaphors. When confronted with instructional language loaded with figures of speech, convoluted instructions, or abstract terms lacking contextual anchors, children are prone to cognitive dissonance and misinterpretation. Consequently, the primary education ecosystem demands the use of instructional language that is concrete, explicit, straightforward, and free from confusing linguistic distortions.

In this context, the implementation of teachers' spoken language in the classroom must fundamentally undergo a paradigm shift; it can no longer be viewed merely as a linear communication tool or a one-way message delivery medium (the transmission model). Moving beyond that, a teacher's instructional language serves as a scaffolding instrument a tool to safeguard students' emotions while grasping and responding to pedagogical comprehension, adaptively designed to bridge the students' actual cognitive limitations and their attainable academic potential (the Zone of Proximal Development). Through tactically structured instructional language, teachers provide measured verbal assistance at the initial stage of concept absorption, which is then gradually phased out as students' independent thinking increases. Without the teacher's proficiency in formulating instructional language that functions as this concrete scaffolding, even the simplest learning material will be difficult to comprehend, thereby hindering the effective acquisition of knowledge and the solid formation of character in primary school children.

Ironically, the reality in primary school classrooms frequently demonstrates teacher linguistic practices that contradict children's developmental needs. Teachers often deliver instructions that are overly lengthy (verbose), overlapping, and laden with abstract vocabulary that is not yet aligned with the cognitive structures of primary school students. This ineffective communication pattern directly triggers the Transient Information Effect, a condition in which the oral information delivered by the teacher evaporates and vanishes from the students' auditory space before it can be processed or encoded by the brain.

From a cognitive psychology perspective, this has a fatal impact because the working memory of primary school-aged children has a highly limited capacity. Instead of focusing on the core material (intrinsic load), students' working memory is exhausted merely sorting through and guessing the meaning of the teacher's confusing sentences. This unnecessary inflation of extraneous cognitive load blocks the space for deep information processing (germane load), thereby preventing students from building a comprehensive understanding of concepts and triggering early learning frustration.

Recent studies have increasingly emphasized the importance of instructional clarity in supporting students' learning processes.Serki & Bolkan (2024) found that clarity in instruction can influence learning by reducing cognitive load and increasing students' motivation to process instructional information. In a similar direction,Bolkan & Goodboy (2024) demonstrated that teacher clarity affects students' information processing through cognitive load-related mechanisms. Oschwald et al. (2025) also showed that instructional clarity is closely related to students' motivational states in learning situations. These studies confirm that clear instructional communication is not merely a matter of linguistic simplicity, but is also connected to students' cognitive processing, motivation, and learning engagement.

However, most recent studies on instructional clarity and cognitive load have focused on general teaching effectiveness, student motivation, learning achievement, or instructional design. They have not sufficiently examined the micro-structure of teachers' spoken language in everyday primary school classroom interaction. In particular, there is still limited discussion on how teachers' oral instructions, such as long procedural directions, unclear verbal references, abstract explanations, and corrective feedback, may increase or reduce students' extraneous cognitive load. This issue is important because primary school students, especially those aged 7–12, still require verbal instruction that is concise, sequential, concrete, and developmentally appropriate.

In the Indonesian context, recent studies have also highlighted the relevance of Huma Betang values in education. Sion and Affandi (2024)discussed the multicultural values of Huma Betang as a foundation for character building among elementary school students. Badriah et al. (2025) examined how the Huma Betang philosophy can be inherited as a basis for character education in Palangka Raya. Salasiah & Anwar, (2025) further explored the integration of Huma Betang philosophy into progressive Islamic education in elementary schools, particularly in relation to curriculum development, character education, contextual pedagogy, and respect for diversity. These studies indicate that Huma Betang has strong potential as a local wisdom-based foundation for developing inclusive and culturally responsive education.

Nevertheless, existing studies on Huma Betang have generally positioned local wisdom as a philosophical, moral, curricular, or character education framework. They have not yet explained in detail how Huma Betang values can be operationalized into concrete instructional language practices used by teachers in primary school classrooms. In other words, previous studies have not sufficiently connected local wisdom with the verbal structure of classroom instruction. This leaves an important gap between the study of instructional communication, Cognitive Load Theory, and ethnopedagogy based on Central Kalimantan's local wisdom.

Based on this gap, the present study seeks to reposition teachers' instructional language as both a cognitive scaffold and a cultural-humanistic instrument. Unlike previous studies that discuss teacher clarity, cognitive load, or Huma Betang separately, this study integrates these perspectives by examining how teachers' language can be made concise, sequential, concrete, empathetic, and culturally grounded. The novelty of this study lies in its attempt to connect Cognitive Load Theory with the Huma Betang philosophy in order to formulate instructional language that reduces unnecessary cognitive load while strengthening values of togetherness, respect, harmony, and ethical conduct in primary school learning.

Grounded in these urgent challenges, this study aims to formulate the ideal characteristics of teachers' instructional language in elementary schools. This formulation is designed as a dualistic pedagogical communication model: it is not only cognitively effective in mitigating students' working memory load (cognitive effectiveness), but also capable of engaging humanist and cultural aspects (ethnopedagogy) rooted in the local wisdom of Central Kalimantan. The strengthening of this local aspect is expected to serve as a 'moral anchor' for children's development in the digital era. Through the formulation of these characteristics, this study aims to provide a tactical guide for teachers to construct linguistic structures that optimize material retention while simultaneously acting as an adaptive moral anchor for children's emotional development.

METHOD

This study employed a descriptive qualitative approach using content analysis. This design was chosen to examine teachers' instructional language as naturally used in primary school classroom interaction without manipulating learning variables. The research was conducted at SDN 1 Menteng,

Central Kalimantan, Indonesia, involving six primary school teachers selected purposively based on their active teaching roles and use of oral instructional language.The primary data consisted of verbal interactions between teachers and students, including words, phrases, clauses, and sentences used by teachers when giving instructions, explaining concepts, providing feedback, giving reinforcement, and asking guiding questions. Data collection focused on subjects with high element interactivity, such as Mathematics and Science, because these subjects require students to process concepts, procedures, symbols, and representations simultaneously.

Data were collected through classroom observations, interviews, and document analysis. The interview recordings were transcribed word for word (verbatim), while field notes were used to support contextual interpretations of classroom situations, learning activities, and student responses. The data were analyzed using qualitative content analysis adapted from Krippendorff (2018)Krippendorff (2018) and Elo and Kyngäs (2008). The analysis involved repeated transcript reading, identification of meaningful instructional utterances, coding, categorization, and interpretation based on Cognitive Load Theory, instructional communication theory, and the Huma Betang philosophy. The coding focused on patterns such as verbose instruction, instructional ambiguity, abstract verbal explanation, verbal chunking, verbal signaling, feedback, and culturally grounded instructional language. Data trustworthiness was ensured through triangulation of verbal transcripts, observation notes, and classroom context. Coding consistency was maintained through repeated checking of transcripts and categories. The identities of teachers, students, and the school were protected through research codes, and all data were used only for research purposes.

RESULTS AND DISCUSSION

Content analysis of teachers' verbal transcripts from six primary school teachers at SDN 1 Menteng revealed that teachers' instructional language contained several recurring patterns across classroom interaction. The analysis was not limited to isolated utterances, but covered teachers' verbal expressions when giving procedural directions, explaining concepts, providing feedback, giving reinforcement, and asking guiding questions. Four dominant categories emerged from the data: verbose procedural direction, instructional ambiguity, abstract verbalistic explanation, and limited humanistic-cultural feedback.

The first category was verbose procedural direction. This pattern appeared when teachers delivered several instructions in one long utterance. In several transcripts, teachers combined page references, task numbers, task limitations, exceptions, and confirmation questions without clear verbal sequencing. For example, one teacher stated, "Children, now open your textbooks, the blue one, page 45, then do questions number 1 to 5, but only part A, and if number 3 is difficult, skip it first, we will discuss it later." This utterance shows that the teacher intended to help students, but the instruction contained too many elements at once. As a result, students had to remember several procedural details before starting the task.

The second category was instructional ambiguity. This pattern appeared in utterances that used unclear references or vague commands, such as "do it like the previous one," "pay attention to this part," or "make it neat." These expressions were understandable to the teacher, but they did not always provide explicit guidance for students. For primary school students, such ambiguity may create confusion because they still need direct, concrete, and step-by-step instructions. Ambiguous language may also cause students to guess the teacher's intention instead of focusing on the learning content.

The third category was abstract verbalistic explanation. This pattern was found when teachers explained concepts by using formal definitions before providing concrete examples. For instance, in explaining fractions, a teacher stated, "A fraction is the division of two numbers where the upper number is called the numerator and the lower number is called the denominator." Although this explanation is mathematically correct, it remains too abstract for primary school students if it is not connected to concrete objects or daily experiences. In the observed classroom discourse, explanations became clearer when teachers used familiar analogies, such as dividing a pizza, cake, paper, or other objects into equal parts.

The fourth category was limited humanistic-cultural feedback. Some feedback utterances focused mainly on correctness and error, for example, "That is wrong," "You were not listening," or "Why are you still confused?" Such feedback may correct students' answers, but it may also reduce their confidence and willingness to participate. In contrast, feedback that acknowledged students' effort, such as "Your first step is correct; let us check the next part together," appeared more supportive and inclusive. This type of feedback reflects the values of mutual respect, togetherness, and ethical communication that are central to Huma Betang and Belom Bahadat.

To provide a comparative description, Table 1 summarizes the recurring patterns found in the data and the proposed repositioned forms of teachers' instructional language.

Table 1. Comparative Analysis of Actual and Repositioned Instructional Language Transcripts.

Category	Empirical Pattern Found in the Data	Cognitive or Pedagogical Issue	Repositioned Instructional Language
Verbose procedural direction	Teachers combined several instructions in one long utterance, including page references, task numbers, exceptions, and confirmation questions.	Students may lose important information before processing it completely.	Instructions should be divided into short, sequential steps using verbal markers such as "first," "second," and "third."
Instructional ambiguity	Teachers used vague references such as "this part," "like before," or "do it properly" without clear explanation.	Students may guess the teacher's intention and become uncertain about what to do.	Teachers should mention the exact task, example, page, step, or expected answer format.
Abstract verbalistic explanation	Teachers introduced formal definitions before giving concrete examples	Students may find it difficult to connect abstract concepts with their existing cognitive schemata	Teachers should begin with concrete objects, daily experiences, or visual analogies before introducing formal terms.
Limited humanistic-cultural feedback	Some feedback emphasized error without affirming students' effort or dignity.	Students may feel embarrassed, anxious, or reluctant to participate.	Feedback should be constructive, respectful, and inclusive, in line with Huma Betang and Belom Bahadat values.

The data in Table 1 indicate that the main problem in teachers' instructional language does not only lie in vocabulary choice, but also in the organization, clarity, concreteness, and emotional tone of classroom discourse. Teachers' utterances that are long, ambiguous, and abstract may increase unnecessary cognitive burden. Conversely, instructional language that is concise, sequential, concrete, empathetic, and culturally grounded may help students follow learning activities more effectively.

Discussion

a. Mitigating Cognitive Load via Teacher Verbal Structuring

The empirical findings regarding procedural direction and conceptual explanation confirm that the structure of a teacher's discourse plays a pivotal role in facilitating students' comprehension of instructional directions. Within the framework of Cognitive Load Theory (CLT), the actual classroom discourse data indicate that overly protracted, verbose, and unstructured instructions may force children's limited working memory to exert excessive cognitive effort. Consequently, students' working memory capacity may be used primarily to decipher the teacher's communicative intent rather than to process the core curricular content, thereby increasing extraneous cognitive load. This finding is consistent with recent studies showing that instructional clarity can support learning by reducing cognitive load, improving information processing, and strengthening students' learning motivation(Serki & Bolkan, 2024; Oschwald et al., 2025).

Based on theoretical analysis, the repositioning of instructional language to optimize working memory can be achieved through two primary linguistic strategies. First, the application of verbal chunking or information segmentation. From a cognitive psychology perspective, elementary school students have limited capacity to process too many novel units of verbal information simultaneously. When instructors deliver protracted instructions without adequate pauses, the initial verbal message may become distorted due to the Transient Information Effect. Through verbal chunking, complex explanations are partitioned into brief sentences lasting a maximum of 10–15 seconds, followed by strategic pauses of 3–5 seconds to allow students sufficient time to encode information. As illustrated in Table 1, instructions concerning opening a textbook, completing tasks, and skipping difficult problems can be streamlined into three linear and progressive steps. This process is in line with recent findings that segmentation and well-structured instructional presentation can reduce cognitive load and support learning efficiency (Çeken & Taşkın, 2022;Liu, 2024)

Second, the optimization of verbal signaling or linguistic markers. This strategy involves the deliberate use of cue phrases by the teacher to direct students' selective attention toward the most critical curricular elements. The integration of linguistic markers such as "first," "second," "pay close attention to this part," "the critical step is," or "the keyword here is" functions to help students identify relevant information and reduce unnecessary processing. In this way, extraneous load can be minimized, and students are not required to exhaust their remaining working memory capacity by speculating about the teacher's core intent. This is consistent with recent research emphasizing that signaling and instructional clarity help learners focus on essential information and organize learning materials more effectively (Çeken & Taşkın, 2022; Serki & Bolkan, 2024)

Beyond sentence structuring, the theoretical discussion also demonstrates that the explanation of abstract concepts needs to be anchored to concrete experiences. In the

repositioned model for fractional concepts, the use of a pizza analogy helps students construct a visual representation or mental imagery before being introduced to formal technical terms such as numerator and denominator. This strategy aligns with recent studies on elementary mathematics learning which show that verbal, symbolic, pictorial, and real-life representations can support students' understanding of fraction concepts (Yuliandari et al., 2024;Iyamuremye et al., 2025).Therefore, concrete analogies and familiar everyday contexts are essential for helping primary school students connect abstract concepts with existing cognitive schemata.

b. The Humanistic and Ethno-Pedagogical Dimension: Integrating the *Huma Betang* Philosophy

The repositioning of instructional language should not be limited to cognitive efficiency and technical clarity. Teachers' discourse also needs to consider the humanistic dimension of classroom interaction. In primary school classrooms, language does not only transmit information; it also shapes students' feelings of safety, confidence, and willingness to participate. Instructional communication is therefore not merely a process of delivering messages, but also a relational process that involves students' cognitive and affective engagement (Myers et al., 2014).

In the context of Central Kalimantan, the Huma Betang philosophy can serve as an ethnopedagogical foundation for developing inclusive instructional language. Huma Betang represents values of togetherness, equality, harmony, tolerance, mutual respect, and cooperation in social life. These values are relevant to classroom communication because teachers' utterances can either create distance or build collective participation. Therefore, instructional language should not only be clear, but also inclusive and respectful(Syahrin & Mustika, 202;Dakir, 2017).

The principle of Penyang Hinje Simpei strengthens this inclusive dimension. Penyang Hinje Simpei emphasizes harmonious communal life, solidarity, equality, and togetherness in diversity. In classroom discourse, this value can be translated into the use of inclusive pronouns such as "we" and "us." For example, the expression "Let us solve this challenge together" positions learning as a shared effort rather than a one-way command from teacher to students. This linguistic choice reduces the distance between teacher and students and helps construct a sense of collective ownership in learning(Abubakar et al., 2021).

The value of Belom Bahadat is also important in teacher feedback. Belom Bahadat emphasizes ethical conduct, politeness, mutual respect, and the preservation of human dignity. In instructional interaction, this value can be applied through reflective and constructive feedback. Instead of saying, "That is wrong, you were not listening," a teacher may say, "I appreciate your courage in trying to answer. Your first step is already correct; let us look together at the part that needs improvement." This type of feedback allows correction to remain part of learning while avoiding language that humiliates students(Dakir, 2017).

The integration of Huma Betang, Penyang Hinje Simpei, and Belom Bahadat shows that instructional language has both pedagogical and cultural functions. Pedagogically, it helps students understand classroom directions through concise, sequential, and concrete utterances. Culturally, it introduces local values of togetherness, respect, harmony, and ethical conduct into everyday classroom communication. This makes teachers' language an instrument for both cognitive guidance and character formation.

Overall, the findings suggest that effective instructional language for primary school teachers should possess five main characteristics: concise, sequential, concrete, empathetic, and culturally grounded. These characteristics allow teachers to reduce unnecessary cognitive load, minimize ambiguity in classroom discourse, and strengthen humanistic local-wisdom-based values in primary school learning.

The main contribution of this study lies in its integration of Cognitive Load Theory, instructional communication, and Huma Betang-based ethnopedagogy. Unlike previous studies that examine teacher clarity, cognitive load, or local wisdom separately, this study positions teachers' instructional language as both a cognitive scaffold and a cultural-humanistic instrument. The proposed characteristics of effective instructional language concise, sequential, concrete, empathetic, and culturally grounded provide a practical framework for improving classroom communication in primary schools.

This study, however, has several limitations. It was conducted in one primary school, SDN 1 Menteng, involving six teachers; therefore, the findings cannot be generalized to all primary school contexts. In addition, the study focused mainly on teachers' verbal utterances and did not quantitatively measure students' learning outcomes, information retention, or emotional engagement. Students' responses, non-verbal interactions, classroom power relations, and the long-term influence of Huma Betang values on character development were also not examined in depth.

Future studies should involve more schools, teachers, and grade levels to examine whether similar patterns appear in broader contexts. Mixed-method, experimental, or classroom intervention studies may also be conducted to investigate the effects of repositioned instructional language on students' comprehension, participation, motivation, and achievement. Overall, effective instructional language should not only reduce unnecessary cognitive load, but also support students' emotional safety and cultural belonging. Thus, instructional language should be understood as a pedagogical, cognitive, and cultural practice that helps students learn with clarity, confidence, and respect.

CONCLUSION

The repositioning of teachers' instructional language in primary schools is not merely a technical matter of vocabulary selection, but rather an urgent need to align pedagogical interactions with the cognitive architecture and psychological needs of children aged 7–12. Classroom verbal practices that tend to be verbose and abstract are proven to elevate extraneous cognitive load, which obstructs students' working memory through the Transient Information Effect. Through a linguistic reconstruction based on verbal chunking, verbal signaling, and a humanist-inclusive approach, teachers can mitigate extraneous cognitive load while optimizing germane load. Moving beyond that, this repositioning acts as an ethnopedagogical medium that revives the noble values of the *Huma Betang* philosophy and *Belom Bahadat* from an early age. The teacher's language thus becomes a cultural instrument that shapes students who are intellectually sharp and noble in character within the framework of local wisdom.

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