

WHAT CAN YOU SEE: A MULTIMODAL ANALYSIS OF KNOWLEDGE CONSTRUCTION IN ENGLISH TEXTBOOK

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ABSTRACT

This study investigates how knowledge is constructed in an English textbook through a multimodal perspective grounded in Kress and van Leeuwen's (2006) theory of visual communication and informed by systemic functional views of meaning-making (Halliday, 1994). Framed by the inquiry "What Can You See?", the research explores how visual and verbal elements interact to shape the organization, sequencing, and presentation of knowledge in primary-level English language learning materials. Rather than treating images as supplementary decorations, textbooks are approached as multimodal meaning-making environments in which images, layout, typography, and written language collaboratively structure how learners encounter, categorize, and interpret new concepts (Jewitt, 2009). Adopting a qualitative descriptive approach, the study analyzes selected units from a widely used primary English textbook to identify recurring patterns in visual representation and their relationship to knowledge types. The analysis reveals that knowledge is predominantly constructed through concrete visual categorization and structured textual reinforcement. Illustrations emphasize clear participant boundaries, frontal orientations, simplified backgrounds, and stable visual configurations that support recognition and conceptual grouping. Textual components function to guide labeling, identification, and short definitional statements, reinforcing foundational linguistic concepts through repetition and structured sequencing. Drawing on the Revised Bloom's Taxonomy (Anderson & Krathwohl, 2001), the findings indicate that the textbook primarily facilitates factual and conceptual knowledge, with cognitive processes centered on remembering and understanding. Tasks and visual prompts are designed to encourage recognition, naming, matching, and basic comprehension, while higher-order processes such as analysis, evaluation, or creation appear minimally within the examined units (Kan et al., 2023). The interaction between visual and verbal modes suggests that images function as central organizing frameworks that anchor linguistic knowledge in observable, classifiable, and concrete forms. In this configuration, knowledge is not merely transmitted but visually structured to shape how learners cognitively engage with language content. By examining knowledge construction through multimodal interaction, this study contributes to broader discussions on how instructional materials structure learning experiences in English language education. The findings highlight the importance of deliberate visual-textual integration in curriculum design and material development, emphasizing that multimodal configurations actively influence the types of knowledge foregrounded and the cognitive engagement promoted in classroom contexts.

Keywords: knowledge construction, multimodality, Bloom's taxonomy, English textbook, visual-verbal interaction

ABSTRAK

Penelitian ini menginvestigasi bagaimana sebuah pengetahuan dikonstruksi di dalam buku teks bahasa Inggris melalui perspektif multimodal yang didasarkan pada teori komunikasi visual Kress dan van Leeuwen (2006) serta diinformasikan oleh pandangan linguistik fungsional sistemik mengenai proses pembentukan makna (Halliday, 1994). Dibingkai oleh pertanyaan utama "Apa yang Dapat Anda Lihat?", penelitian ini mengeksplorasi lebih jauh bagaimana elemen-elemen visual dan verbal saling berinteraksi untuk membentuk organisasi, pengurutan, dan penyajian pengetahuan dalam materi pembelajaran bahasa Inggris pada tingkat dasar. Daripada sekadar memperlakukan gambar sebagai ornamen atau dekorasi tambahan semata, buku teks dalam studi ini didekati sebagai lingkungan pembentukan makna multimodal di mana gambar, tata letak, tipografi, dan bahasa tertulis secara kolaboratif menyusun bagaimana peserta didik menemukan, mengkategorikan, dan menafsirkan konsep-konsep baru di dalam proses belajar (Jewitt, 2009). Dengan mengadopsi pendekatan deskriptif kualitatif, studi ini menganalisis beberapa unit terpilih dari buku teks bahasa Inggris sekolah dasar yang sangat umum digunakan guna mengidentifikasi pola-pola yang berulang dalam representasi visual serta hubungannya dengan jenis-jenis pengetahuan. Hasil analisis tersebut mengungkapkan bahwa pengetahuan sebagian besar dikonstruksi melalui kategorisasi visual yang konkret dan penguatan tekstual yang terstruktur. Ilustrasi yang digunakan menekankan batasan partisipan yang sangat jelas, orientasi frontal, latar belakang yang disederhanakan, serta konfigurasi visual yang stabil yang secara langsung mendukung pengenalan dan pengelompokan konseptual siswa. Komponen tekstual berfungsi untuk memandu proses pelabelan, identifikasi, dan pernyataan definisi yang singkat, yang pada akhirnya memperkuat konsep linguistik dasar melalui pengulangan dan pengurutan yang terstruktur rapi. Mengacu pada kerangka Taksonomi Bloom yang Direvisi (Anderson & Krathwohl, 2001), temuan ini menunjukkan bahwa buku teks tersebut utamanya memfasilitasi pengetahuan faktual dan konseptual, dengan proses kognitif yang berpusat pada aspek mengingat dan memahami. Berbagai tugas dan petunjuk visual secara khusus dirancang untuk mendorong pengenalan, penamaan, pencocokan, dan pemahaman dasar, sementara proses kognitif tingkat tinggi

seperti analisis, evaluasi, atau penciptaan muncul secara sangat minimal di dalam unit-unit yang diteliti (Kan et al., 2023). Interaksi antara mode visual dan verbal menunjukkan bahwa gambar berfungsi sebagai kerangka pengorganisasian utama yang menambatkan pengetahuan linguistik dalam bentuk yang dapat diamati, diklasifikasikan, dan bersifat konkret. Dalam konfigurasi seperti ini, pengetahuan tidak hanya sekadar ditransmisikan kepada siswa, tetapi distrukturkan secara visual untuk membentuk bagaimana peserta didik secara kognitif terlibat langsung dengan konten bahasa. Dengan menguji konstruksi pengetahuan melalui interaksi multimodal ini, penelitian ini berkontribusi pada diskusi akademis yang lebih luas mengenai bagaimana materi instruksional menyusun pengalaman belajar dalam ranah pendidikan bahasa Inggris. Temuan penelitian ini menyoroti pentingnya integrasi visual-tekstual yang direncanakan secara matang dalam desain kurikulum dan pengembangan materi, serta menekankan bahwa konfigurasi multimodal secara aktif memengaruhi jenis pengetahuan yang dikedepankan dan keterlibatan kognitif yang dipromosikan dalam konteks pembelajaran di ruang kelas.

Kata kunci: konstruksi pengetahuan, multimodalitas, taksonomi Bloom, buku teks bahasa Inggris, interaksi visual-verbal

INTRODUCTION

Textbooks play a central role in shaping how knowledge is introduced, organized, and understood in classroom settings. In English language teaching (ELT), particularly for young learners, textbooks often function as the primary source of input, determining not only what is taught but also how learning is structured and sequenced (Syairofi et al., 2023; Tomlinson, 2011). These materials act as a curriculum blueprint that guides both teachers and students through the complexities of a new language. As such, the organization of textbook content influences how learners engage with and process information, gradually shaping their ways of thinking (Bogaerds-Hazenberg et al., 2021). Furthermore, the pedagogical choices made by textbook authors can either facilitate or hinder the transition from everyday language to academic discourse. This central role necessitates a deeper investigation into the structural and representational choices embedded within these educational tools.

Previous research on ELT textbooks has largely examined cognitive demand through frameworks such as Bloom's Revised Taxonomy, consistently indicating a dominance of lower-order thinking skills. These studies often highlight a prevalence of tasks focused on remembering and understanding, with limited opportunities for higher-order engagement like evaluation or creation (Arsana et al., 2025; Li et al., 2025; Kwangmuang et al., 2021). Similar patterns have been identified in the Indonesian context, where elementary-level textbooks tend to prioritize memorization and procedural tasks over more complex cognitive processes (Hamdun et al., 2022; Septiana et al., 2020; Sainyakit, 2023). While these studies provide important insights into task complexity, they primarily focus on cognitive levels without addressing the underlying semiotic mechanisms. Consequently, there remains a need to explore how knowledge is constructed through the interaction of multiple modes rather than just linguistic instructions. This broader perspective is essential to understand the full cognitive impact of instructional materials on young learners.

At the same time, research in multimodal discourse analysis has explored how verbal and visual elements interact to produce meaning in educational texts (Kress & van Leeuwen, 2006; O'Halloran, 2008; Jewitt et al., 2021). These studies have successfully mapped the various ways that images and text can complement or contradict one another in a classroom setting. However, existing research often examines multimodal meaning independently from learners' cognitive developmental stages, resulting in a limited understanding of how such representations support or constrain actual thinking processes (Hidayat et al., 2023; Rafelina & Hermawan, 2022; Ghouschi, 2021). This separation between multimodal analysis and cognitive development creates a significant gap in explaining how textbook design actively structures learners' cognition. Without integrating developmental theories, it is difficult to determine if a visual-verbal configuration is truly effective for its target audience. Therefore, a more holistic approach is required to bridge the gap between semiotic analysis and developmental psychology.

This issue is particularly significant for early-grade learners, who are transitioning toward the concrete operational stage of cognitive development. At this stage, children rely heavily on structured and concrete representations to support classification, pattern recognition, and basic logical reasoning (Piaget, 1952; McLeod, 2018; Sanghvi, 2020). Their learning is therefore highly dependent on how information is presented, organized, and anchored in visible reality. Visual elements, in this context, are not merely decorative but function as essential components that support meaning-making and reduce cognitive load (Mayer, 2021; Sweller et al., 2011; Bezemer, 2021). By providing a concrete reference for abstract words, these visuals help students manage their limited working memory during the decoding process. Effective

integration of verbal and visual modes can thus facilitate the development of stable cognitive schemas necessary for early language acquisition (Weninger, 2021; Moylett, 2022).

Despite the widespread use of internationally published ELT textbooks in Indonesian classrooms, such as *Rise and Shine*, limited research has examined how these materials construct cognitive representations through multimodal design. While these global textbooks are often perceived as high-quality, their specific alignment with the cognitive needs of Indonesian primary students remains under-explored. More importantly, few studies have integrated Systemic Functional–Multimodal Discourse Analysis (SF-MDA), grounded in Systemic Functional Linguistics (Halliday & Matthiessen, 2004), with cognitive developmental theory to explain this phenomenon. This integration is vital to understand how verbal and visual resources jointly organize knowledge for young learners in a structured way. There is a pressing need to analyze whether the multimodal affordances of such books actually support the cognitive milestones expected in the early years of schooling.

Addressing this gap, the present study analyzes the cognitive representations in the *Rise and Shine* Grade 1 English textbook using an SF-MDA framework. It focuses on how verbal and visual modes interact to construct meaning and how these representations align with the cognitive characteristics of early-grade learners. By examining specific segments like the scope and sequence and unit openers, the study seeks to uncover the dominant patterns of knowledge construction. It further interprets these patterns through the lens of Piaget's concrete operational stage and Bloom's Revised Taxonomy. By integrating linguistic, visual, and developmental perspectives, this study contributes to a more comprehensive understanding of how multimodal textbook design supports the formation of foundational thinking processes. Ultimately, the findings aim to provide valuable insights for textbook developers and educators in selecting materials that are cognitively appropriate for young EFL learners.

RESEARCH METHOD

This study employs a qualitative descriptive design using document analysis to systematically interpret meaning-making patterns in an ELT textbook. The analysis is framed by Systemic Functional–Multimodal Discourse Analysis (SF-MDA), which integrates Systemic Functional Linguistics and visual grammar to explore how meaning is realized across semiotic channels to support learner cognition. The primary data source is the *Rise and Shine* Grade 1 English textbook, selected for its sophisticated multimodal design and its relevance to learners transitioning toward Piaget's concrete operational stage of cognitive development.

Data were collected through purposive sampling, focusing on the Scope and Sequence pages and the Unit 5 opener, "Nature Around Us". These sections represent both macro-level organization and micro-level multimodal interactions. During collection, verbal elements such as instructions and clauses were identified alongside visual components like layout, color, and spatial composition, then organized into a systematic coding framework.

Analysis was conducted in three interconnected stages: (1) verbal data analysis using the SFL transitivity system; (2) visual data examination using visual design grammar; and (3) integration of both modes to identify patterns of factual, conceptual, and procedural knowledge mapped onto Bloom's Revised Taxonomy. Finally, these patterns were interpreted in relation to Piaget's theory to evaluate how the textbook's information "packaging" aligns with the mental maturity and classification abilities of early-grade learners.

RESULT AND DISCUSSION

This section presents the findings of the analysis of the Scope and Sequence page and the Unit 5: Unit Opener page. While the analysis was conducted on the entire parts of the selected book pages, only selected excerpts are presented to illustrate the dominant patterns identified. The excerpts being presented in this section are: verbal and visual analysis of Unit Opener: Unit 5, integrated meaning from both pages (Scope and Sequence and Unit 5: Unit Opener page), and the integration of verbal and visual meaning in both pages to map the cognitive representations presented in the book.

Multimodal Integration in Scope and Sequence

The Scope and Sequence page serves as the foundational roadmap for the learner's journey throughout the academic year. The analysis identifies a deliberate structure designed to categorize and stabilize new linguistic information. By examining the interplay between verbal processes and visual layouts, this

section uncovers how the textbook prepares the student's mind for systematic knowledge acquisition. The following findings detail the degree of coherence found within this organizational framework.

To illustrate how multimodal meaning is constructed, a focused example from the Welcome Unit is presented. The analysis begins with the identification of verbal processes using the transitivity system, followed by an examination of visual elements based on representational and compositional features. These elements are then interpreted in relation to each other to identify patterns of integrated meaning. The results of this analytical process are summarized in Table 1, which demonstrates how verbal and visual modes interact in constructing structured cognitive representations.

	Vocabulary 1	Grammar 1	Vocabulary 2	Grammar 2	My sounds	Communication	Global Citizens	My Everyday English	Project
Welcome to class and share	Numbers 1-10; colours: black, blue, brown, green, orange, pink, purple, red, white, yellow	Hi / Hello! What's your name? I'm / My name's (I/My)	Classroom objects: bag, book, chair, clock, desk, pencil	It's (a clock) It's (brown)	a, b	Classroom instructions	Let's be friends!	Asking about age How old are you? I'm (old)	A plant pot
1. Meet friends, meet things	Days: foot, car, shirt, elephant, rabbit, rabbit, body bear, train	What's this? It's (a cat)	Adjectives: big, small, new, old	It's (old)	t, d	Describing toys	I share toys Toys: table, chair, music, book, plane	Sharing toys Can I play? Yes! Let's play!	A class toy swap
2. All kinds of families	Family: cousin, brother, dad, grandad, granny, mum, sister, uncle	Who's this? This is my (dad)	Pets: bird, cat, dog, fish	I've got (a bird). I've got (two) (fish/dogs)	g, c	Describing family members and pets	I celebrate all families Family and friends: cousin, friend, neighbour, pet	Thanking family and friends This is for you. Thank you!	A family circle
3. Amazing bodies	Body parts: arms, ears, eyes, feet, hands, legs, mouth, nose	I've got (three) (eyes)	Actions: dance, hop, jump, run	I can (jump). I can't (dance)	m, n	Describing abilities	I play with friends Actions: climb (your handle), climb (your rope), touch (your feet), move your body	Giving game instructions (show your hands) Well done!	A class talent show
4. Let's eat up!	Food: banana, bread, chicken, chicken, milk, vegetables, strawberry, tomato	I like (chicken) I don't like (chicken)	More food: ice cream, sandwiches, pizza, sandwiches	Do you like (chicken)? Yes, I do / No, I don't	h, ch	Asking about food	I like different foods Food: pizza, rice, salad, soup	Asking for food Can I have (a pizza)? Please! Here you are!	A class lunch
5. Welcome aboard!	Animals: duck, fox, frog, lizard, mouse, owl, rabbit, snake	What can you see? I can see (a frog)	Insects: ant, bee, butterfly, ladybird	Is it (an ant)? Yes, it is / No, it isn't	s, f	Asking about animals	I explore nature Where animals live: flower, grass, pond, tree	Exploring the park Let's find (a butterfly)	A park collage
6. Let's dress up!	Clothes: shirt, jumper, pajamas, skirt, shoes, shorts, T-shirt, trousers	I'm wearing (a blue shirt)	Feelings: cold, hot, happy, sad	I'm (happy)	sh, j	Describing clothes and feelings	I appreciate special clothes Clothes: coats, hat, jeans, skirt	Inviting friends to a party Come to my party! Wear (a big hat)	A special costume doll
Goodbye	Happy holidays! Here's a great book! Goodbye! See you soon!								
Seasons	Autumn: apple, chestnut, fire, leaf, pumpkin, tree, it's windy! Winter: boots, gloves, hat, lights, scarf, snow, it's snowy! Spring: chocolate, chick, egg, flower, lamb, rabbit, it's sunny! Summer: beach, picnic, sun hat, sunglasses, sunny, swimming costume, it's sunny!					Learning experiences	Describing toys we don't need Making your own identity card Creating a clothes timeline		

Figure 1. Scope and Sequence Page

Table 1. Integrated Multimodal Meaning of Scope and Sequence Page

Integrated Multimodal Meaning		
Verbal Meaning	Visual Meaning	Integrated Findings
Dominance of relational processes (identification, attribution, and ownership).	Dominance of symbolic and classificatory conceptual representation.	Both verbally and visually, meaning is constructed through practices of identification, attribute association, and grouping of basic concepts.
The emergence of material processes in the function of actions and instructions.	No prominent narrative representation or action vectors were found.	Actions are represented linguistically in the form of instructions or activities, without visual support in the form of narrative action representations.
The emergence of mental processes (affection and perception) in certain units.	Consistent visual interaction patterns: offer, frontal, eye-level, and close distance.	Internal experiences and attitudes are represented textually, while visuals maintain an informative position with direct engagement through perspective and distance.
The realization of factual, conceptual, and procedural knowledge in various units.	The hierarchy of information is built through color, font size, and element placement.	The knowledge structure constructed verbally is reinforced by a systematic and layered visual organization.
Distribution of cognitive processes at the levels of remembering, understanding, and applying.	Unit numbers serve as markers for the sequence of learning.	Layered verbal cognitive representations align with visual structures that show the stages and sequence of learning.
The language structure is formulaic and based on direct practice.	The layout emphasizes category grouping and pattern consistency.	The learning approach is constructed as a structured system based on categories with consistent and controlled language patterns.

The Scope and Sequence page exhibits high coherence between verbal and visual modes to establish a stable curricular foundation. The dominance of relational processes and symbolic representations anchors

primary learning concepts in a recognizable framework, creating a consistent "cognitive map" for learners. By limiting visual action vectors and maintaining an informative "offer" framework for mental processes, the textbook minimizes cognitive distractions, positioning students as recipients of structured knowledge. This hierarchical organization aligns with the remembering, understanding, and applying levels of Bloom's Taxonomy, providing a predictable pathway for concrete operational learners.

Multimodal Integration in Unit 5: Unit Opener

The Unit 5 Opener page serves as the thematic gateway to the topic of "My House," utilizing specific multimodal cues to engage the learner. Unlike the abstract nature of the Scope and Sequence, this page brings the language to life through concrete imagery and task-based instructions. The analysis reveals a harmonious relationship between what the student is asked to do and what they see on the page. This section explores how these representations form a directed framework for initial thematic engagement.

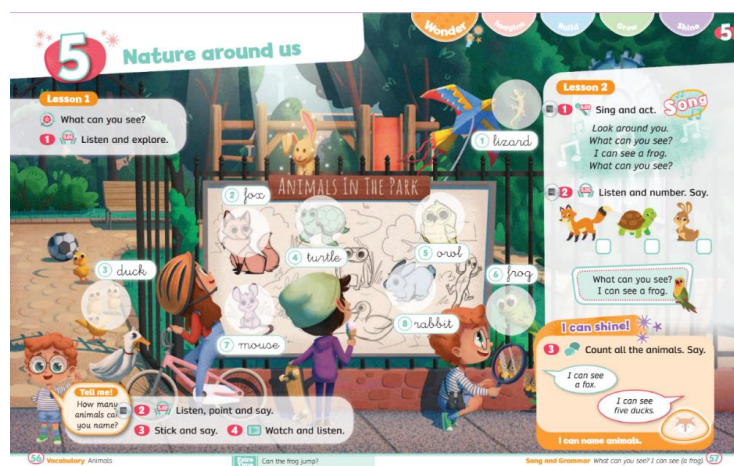


Figure 2. Unit Opener: Unit 5

Table 2. Integrated Multimodal Meaning of Unit Opener: Unit 5 Page

Integrated Multimodal Meaning of Unit Opener: Unit 5 Page		
Verbal Meaning	Visual Meaning	Integrated Findings
Verbal meaning is dominated by relational and mental (perceptual) processes through structures of identification, observation, and quantification of animals.	Visual meaning is dominated by classificational conceptual configurations, especially through numbered animal boards arranged systematically.	Both verbally and visually, meaning is constructed through practices of identifying, grouping, and counting objects in a structured manner. Linguistic structures are supported by visual numbering and grouping systems.
Interrogative sentences demand cognitive activities such as observation, naming, and counting in the form of guided tasks.	Clear and numbered representations of animals provide concrete references without the dominance of narrative action.	The linguistic demands to observe, name, and count are supported by an organized visual arrangement, so the cognitive tasks align with the available visual structure.
Material processes appear in the form of language actions such as counting, naming, and following instructions, which realize procedural knowledge.	Illustration provides concrete stimuli through easily recognizable representations of animals in a park context.	Language guides learning actions, while visuals provide objects that can be directly observed and counted, so both form a learning practice based on observation and action.
The language structure is formulaic and task-oriented.	The layout emphasizes the grouping of categories and the hierarchy of information through size, position, and degree of prominence.	A simple and directed linguistic structure is reinforced by systematic visual organization, so that learning is presented in a structured and sequential pattern.
The distribution of cognitive processes is at the understanding and applying levels in the revised Bloom's Taxonomy.	The visual configuration provides concrete objects that support the process of observation and task execution.	Cognitive representation verbally, both at the comprehension and application levels, is supported by visuals that allow direct identification and execution of tasks within an organized framework.

The integration within the Unit 5 opener demonstrates a task-oriented functional harmony. Linguistic demands to observe and count are systematically mirrored by classificational visual configurations, creating a directed framework for thematic engagement. Formulaic language and imperative clauses position learners as active participants in observation, while the visual layout directs cognitive energy toward intended pedagogical targets through established information hierarchies. These concrete representations directly support cognitive processes at the "understanding" and "applying" levels in the verbal data.

Synthesis of Dominant Cognitive Representations

The final stage of the analysis synthesizes the data to identify the overarching patterns of cognitive representation within the textbook. By mapping the linguistic and visual findings against established developmental frameworks, we can observe the textbook's pedagogical intent. The following table provides a comprehensive overview of how these elements converge to meet the developmental needs of the target audience.

Table 3. Dominance Cognitive Representations

Cognitive Representations of 'Rise and Shine' Grade 1 English Textbook	Verbal Process Dominance	Types of Knowledge	Bloom's Level of Taxonomy	Characteristics of Cognitive Developmental Stage
	Relational Process	Procedural Knowledge (realized through guided instructional tasks)	Primarily understanding and structured application	Logical thinking about concrete objects
	Visual Meaning Dominance			Conservation of number (counting task)
	Conceptual representation			Classification
	No gaze-interaction			Seriation
	Low to medium-composition			No abstract reasoning

Table 3 provides a thorough synthesis of the primary cognitive representations in the Rise and Shine Grade 1 textbook by combining verbal, visual, and cognitive development frameworks. Linguistically, the dominance of relational processes indicates that meaning is constructed by identifying and attributing objects. The visual conceptual configurations reinforce this focus by using systematic grouping and structured composition. Together, these multimodal elements realize procedural knowledge by directing students to perform tasks such as counting, naming, and classifying concrete entities. This representation closely aligns with the characteristics of Piaget's early concrete operational stage, supporting logical thinking, number conservation, and seriation abilities.

Cognitive-Multimodal Alignment in Early ELT Materials

The representational structure of Rise and Shine Grade 1 is dominated by relational processes and classificatory visual configurations that stabilize reality for young learners. By connecting entities with attributes rather than complex causal events, the textbook helps students build essential technical vocabulary (Lim et al., 2022) while constructing a predictable, organized world. This "entity-based" approach provides a secure scaffold that reduces cognitive overload during the initial stages of language acquisition (Weninger, 2021).

From a developmental perspective, these multimodal patterns align with the cognitive milestones of children entering the concrete operational stage. Systematic visual grouping and relational identification facilitate the transition from intuitive perception to rule-based reasoning, specifically strengthening classification and seriation abilities (McLeod, 2018; Sanghvi, 2020). The intentional use of

"offer" type visuals and multimodal redundancy minimizes "narrative noise," ensuring that cognitive load remains manageable (Bezemer, 2021). This objective positioning encourages students to be systematic observers of facts rather than participants in fluctuating social narratives (Jewitt et al., 2021).

In conclusion, the textbook's design represents a calculated multimodal intervention that effectively "packages" information into digestible units. By synchronizing visual and verbal modes into a unified "pedagogical palette" (Hestian & Anwar, 2023), the book enables learners to allocate more working memory to decoding new phonemes and syntax (Mayer, 2021; Sweller et al., 2011). Every multimodal choice serves as a functional tool for cognitive support, providing a robust framework calibrated for the maturity of its target audience.

CONCLUSION

This study concludes that cognitive representations in Rise and Shine grade 1 are predominantly conceptual and procedural, aligning with the "Remembering," "Understanding," and "Applying" levels of Bloom's Revised Taxonomy. Linguistically, the prevalence of relational processes provides a stable framework for classification, while instructional imperative clauses ground language in goal-directed action. By deliberately limiting higher-order cognitive complexity, the textbook effectively stabilizes foundational linguistic schemas through a controlled system of hierarchical visual and textual representation.

These findings reflect the characteristics of early concrete operational learners who require structured representations to build internal scaffolding and manage cognitive load. Multimodally, the verbal and visual modes operate in a reinforcing relationship, where visuals clarify and anchor instructional frameworks to prevent "narrative noise". This simplicity is a strategic developmental intervention essential for establishing early language routines. Future materials should maintain this multimodal synchronization to ensure instructional design remains calibrated to the cognitive maturity of young EFL learners.

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