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DESIGN STRATEGIES FOR CHILDREN'S EDUCATIONAL MATERIALS BASED ON SITUATED COGNITION: A USER–TASK–ENVIRONMENT APPROACH TO EARLY LITERACY

With the continuous improvement of public's educational concept, more and more parents begin to pay attention to children's early education, hoping to promote the early cultivation of children's various abilities. However, there are some problems in current literacy education, such as patterns of premature instruction and superficial practice, which make children fail to achieve the goal of literacy and have a negative impact on their normal learning and growth. As a constituent carrier of children's educational materials, the potential of picture books in the cultivation of literacy interest remains to be tapped. In order to solve the above problems, this study constructs a set of strategies for the design of children's literacy educational materials based on the situated cognition. Through theoretical analysis and case study, this paper analyzes the cognitive characteristics and literacy mechanism of children, and demonstrates the internal consistency of the situational nature of knowledge, the practice of learning and children's learning patterns emphasized by the situational cognitive theory. Building on these findings, this paper proposes three design principles: multi-dimensional interactive experience based on user situation, practical literacy content based on task situation and interesting visual presentation based on environment situation. From these principles, a set of systematic design strategies are extracted, moving from user demand analysis to literacy context anchoring, key touch point screening, visual element transformation, and finally to the weaving of text within specific learning situations. This study provides practical theoretical guidance for the design of children's literacy education materials, broadens the application boundary of situated cognition in the field of design, and provides a new research direction for children's literacy education.

Key words: *Situated Cognition, Children's Educational Materials, Literacy Picturebooks, Cognitive Development in Early Childhood, Picturebook Design.*

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СТРАТЕГІЇ ДИЗАЙНУ ДИТЯЧИХ ОСВІТНІХ МАТЕРІАЛІВ НА ОСНОВІ СИТУАТИВНОГО ПІЗНАННЯ: ПІДХІД «КОРИСТУВАЧ–ЗАВДАННЯ–СЕРЕДОВИЩЕ» ДО РАННЬОЇ ГРАМОТНОСТІ

У міру постійного вдосконалення суспільних освітніх уявлень дедалі більше батьків починають приділяти увагу ранній освіті дітей, сподіваючись сприяти ранньому формуванню різноманітних здібностей у дітей. Однак у

сучасній освіті з навчання грамоти існують певні проблеми, зокрема моделі передчасного навчання та поверхневої практики, які призводять до того, що діти не досягають цілей оволодіння грамотою та чинять негативний вплив на їхнє нормальне навчання й розвиток. Як складовий носій дитячих освітніх матеріалів, потенціал книжок-картинок у формуванні інтересу до грамоти досі залишається нереалізованим. З метою розв'язання зазначених проблем це дослідження вибудовує комплекс стратегій дизайну дитячих освітніх матеріалів для навчання грамоти на основі ситуативного пізнання. За допомогою теоретичного аналізу та кейс-дослідження в цій праці проаналізовано когнітивні особливості дітей і механізм формування грамотності, а також продемонстровано внутрішню узгодженість ситуативної природи знання, практики навчання та моделей навчальної діяльності дітей, на яких наголошує теорія ситуативного пізнання. Спираючись на ці висновки, запропонована модель навчання грамотності структурується навколо взаємозалежних вимірів користувача, завдання та середовища, а також пропонує три принципи дизайну: багатовимірний інтерактивний досвід на основі користувацької ситуації, практичний зміст навчання грамоти на основі ситуації завдання та цікаву візуальну презентацію на основі ситуації середовища. Виходячи з цих принципів, виокремлюється сукупність системних стратегій дизайну, що передбачають послідовний перехід від аналізу потреб користувача до фіксації контексту навчання грамоти, відбору ключових точок дотику, трансформації візуальних елементів і, зрештою, до вплетення тексту в конкретні навчальні ситуації. Це дослідження надає практичне теоретичне підґрунтя для дизайну дитячих освітніх матеріалів з навчання грамоти, розширює межі застосування ситуативного пізнання в галузі дизайну та окреслює новий напрям досліджень у сфері дитячої освіти з грамоти.

Ключові слова: *ситуативне пізнання, дитячі освітні матеріали, книжки-картинки для навчання грамоти, когнітивний розвиток у ранньому дитинстві, дизайн книжок-картинок.*

Problem Statement. As young parents pay more attention to early childhood education, the importance of children's educational materials is self-evident. All aspects of children's abilities are in a critical period of development, among which, literacy ability is the basic ability of children to learn other knowledge and skills, and plays an important role in children's growth and life. Early literacy education can help children better enter the next stage of learning and social life. However, there are still some misunderstandings in literacy education, and there are still some deficiencies in literacy education for preschool children, so it is still necessary to conduct in-depth research on it.

At present, the content of many children's literacy education materials is separated from children's interests and cognitive development characteristics. In order to carry forward the characteristics of traditional culture, some schools rely on traditional texts such as the *Three Character Classic* and *Hundred Family Surnames* as instructional material for children's literacy. These works were produced for learners in very different historical and social conditions and embody the child-rearing practices and moral – ritual norms of premodern societies. As such, they diverge considerably from contemporary social life and cultural environments, and can easily become an additional cognitive and emotional burden for young learners rather than a meaningful literacy resource.

A second problem relates to how literacy expectations are distributed across age groups. Children's cognitive and thinking abilities change markedly with age, and so do their capacities for reading and learning. Nevertheless, many parents enrol their children in intensive early-education programmes before they reach school age, resulting in forms of literacy instruction that are pushed forward in time. Such practices tend to disregard children's actual cognitive readiness. Rather than enhancing their learning capacity, they may reduce children's curiosity, undermine their confidence, and weaken their motivation to engage with print. These tensions in the current landscape of early literacy education highlight the need for closer analysis and for design strategies that are better aligned with children's developmental needs and lived experiences.

Analysis of research. In recent years, research on early literacy has expanded considerably, much of it framed by sociocultural and contextual perspectives. Yet a substantial portion of this work still focuses on learning outcomes, while the design mechanisms of the educational materials themselves receive relatively little systematic attention. Wang, Z., & Shao, Y. (Wang, Z., & Shao, Y., 2025: 12–35), for example, conducted an intervention study on picture-book reading with preschool children and found that this form of engagement improved their comprehension. Their findings suggest that early literacy experiences are gradually built up through specific story contexts and repeated interaction. In a review of classroom practice, Oberman, R. (Oberman, R., 2023: 555–574) notes that picture books are frequently used by teachers as starting points for posing questions and structuring inquiry. However, discussion of how images and written text are organized on the page often remains at the level of practical tips rather than analytical accounts of design.

When attention shifts to the relationship between textual form and visual presentation, multimodal literacy research offers more fine-grained insights. Reyes-Torres, A., & Portales-Raga, M. (Reyes-Torres, A., & Portales-Raga, M., 2020: 94–119) show, drawing on classroom work with picture-book reading and

rewriting tasks, that images, written language, and page layout can be treated as interdependent semiotic resources. In this way, teachers can help children become more alert to the multimodal nature of contemporary texts. Li, M., & Boonmoh, A. (Li, M., & Boonmoh, A., 2025: 1–25) focus on the covers of Caldecott Medal picture books and conduct a multi-modal discourse analysis of composition, colour, and typeface. They argue that these visual features strongly influence whether children choose to pick up a book and whether an initial sense of interest is created.

With the widespread adoption of digital media and interactive technologies, children's reading is increasingly understood as a situated practice. Bus, A., et al. (Bus, A., et al., 2020: 1–20), using meta-analytic methods, argue that digital picture books are most effective when interaction, narrative progression, and comprehension goals are tightly integrated; interface features that are only weakly related to content tend instead to increase cognitive load. In an experimental study with preschool children, Shao, Y.-L., & Shih, Y.-H. (Shao, Y.-L., & Shih, Y.-H., 2020: 312–323) report that interactive e-picture books have clear advantages in fostering oral expression and engagement in reading activities. In classroom settings, Chen, T.-I., et al. (Chen, T.-I., et al., 2023: 1–10) introduce language-focused picture books into reciprocal teaching, and find that picture-book-based activities can enhance students' motivation, reading performance, and language proficiency.

Taken together, existing studies offer important clues but also leave several gaps. Empirical and theoretical work suggests that, in children's learning, educational materials are not merely channels for linguistic input; they act as mediating artefacts between the child, the learning task, and the surrounding environment. Visual resources such as images, written language, colour, and layout shape how children construct meaning, while interactive and digital formats locate reading within concrete, manipulable situations. From a design perspective, however, most discussions remain at a high level of abstraction. Few studies translate these insights into application-oriented frameworks that can guide design work, or provide fine-grained accounts of how particular users engage with particular tasks in specific material settings. At the same time, multimodal and technology-focused literature tends to rely on indicators such as reading comprehension, global language proficiency, or learning motivation, and pays relatively little systematic attention to how children experience the linking of word meanings to everyday situations during the process of becoming literate. Moreover, the design logic of educational materials is frequently subsumed under pedagogical approaches or technological systems, rather than examined from the designer's vantage point to infer how the structure and visual language of literacy materials should be organised within actual learning situations.

In response to these limitations, the present study introduces situated cognition theory into the discussion of children's literacy material design. It proposes an analytical framework built around three elements – user (children and their caregivers), task (literacy activities), and environment (everyday life and media ecology) – and, on the basis of the reviewed literature, derives a set of design strategies intended to bring theoretical interpretation into closer alignment with design practice.

Purpose of the article. This article addresses problems in current children's literacy education, in particular the mismatch between literacy content and children's everyday experience and the tendency to overlook children as active learners. Drawing on situated cognition theory, research on children's cognitive development, and design methodology, it proposes a child-centred, systematic approach to the design of literacy materials intended to foster genuine interest in learning.

First, the study examines design strategies for literacy materials for young children. Early literacy learning cannot be reduced to mechanical drills; it needs to be organised in ways that correspond to children's cognitive characteristics. Because existing research on design strategies for early literacy materials is relatively limited, the article develops design principles and methods for literacy materials grounded in situated cognition theory in order to better respond to children's learning needs.

Second, the study seeks to extend the application of situated cognition theory in the design field. Situated cognition links learning activities to specific contexts and understands the development of cognition and thinking as emerging from interaction with the surrounding environment. By applying a theory originating in education and psychology to the design of children's educational materials, the article tests its relevance for design practice and argues for its value in supporting interdisciplinary development.

Research analysis. Building on existing work in children's literacy education and the development of literacy-oriented learning materials, this study examines design strategies for children's literacy picturebooks from the perspective of situated cognition. It revisits the theoretical foundations of situated cognition to consider how different kinds of context shape children's cognition and thinking, and then brings

these ideas into dialogue with research on preschool learners and literacy materials. On this basis, it proposes a set of design principles and methodological steps for literacy-oriented picturebooks.

Because children's cognitive characteristics change markedly with age, the target users in this study are defined as children aged three to six. This group corresponds to the conventional preschool category in educational research and is widely regarded as being in a sensitive period for literacy development. At this stage, children are still in the early phases of brain maturation and respond strongly to external stimuli; their attention span is short and it is difficult for them to sustain concentration over long periods. Emotion plays a major role in shaping their behaviour, their thinking is largely egocentric, and perspective-taking skills are only beginning to emerge. At the same time, as their scope of activity widens, they show a strong curiosity about new things, increasingly rich imagination, and a pronounced competitiveness. Through daily interactions with their surroundings, they spontaneously imitate the speech and behaviour of adults and gradually acquire basic social competence. This age-specific user profile serves as a concrete reference for subsequent design decisions in the study.

Against this background, a critical look at current children's literacy education reveals two core problems. First, the content of many literacy products is disconnected from children's interests, from their physical and psychological characteristics, and from contemporary social and cultural life. In practice, this often means that "practical value" is privileged in a narrow sense, while young learners are left to carry additional cognitive and emotional burdens. Second, many parents embrace the idea of "advanced" education, prioritising early exposure to large amounts of written language while paying insufficient attention to children's status as active subjects and to their actual cognitive readiness. Pushing down the age of literacy instruction and simply increasing the volume of characters to be learned does not necessarily strengthen children's literacy competence; in many cases, it weakens their interest in reading and learning.

In this context, the notion of context becomes central. Here, context refers to the people, places, and objects involved in the interaction between individuals and their environment, and thus to the specific conditions under which social behaviour arises. Situated cognition theory posits that knowledge is inherently contextual: it only acquires meaning when interpreted within the concrete situations in which it is produced and used. Learning, on this view, is a process of cultural adaptation that depends on social interaction and collaboration; forms of learning that are detached from learners' real lives are unlikely to be meaningful. Building on this, the theory's core elements may be summarised in two parts: user context, which comprises the individual and group attributes of users, and external context, which consists of tasks and environments.

Because situated cognition is embedded in models of individual cognitive activity within dynamic systems, the theory also distinguishes three interrelated cognitive stages: perceiving the current situation, forming an integrated understanding of that situation, and anticipating and planning for future situations. Drawing together these theoretical strands, the study argues that situated cognition provides a reasonable and productive basis for the design of children's literacy materials. Two points are particularly relevant: the use and evolution of written characters are closely linked to social life. Everyday situations, often without explicit instruction, create phonological and semantic contexts that allow preschool children to unconsciously learn, understand, and internalise ways of combining characters, gradually developing the intuitive language sense characteristic of native speakers; As a learning medium with images and texts, children's educational materials can convey information through illustrations and texts. Through scene design, such materials can meet children's needs for both reading and play, thereby making literacy activities more engaging.

Based on the above analysis, this study constructs a design strategy for children's literacy picture books grounded in situational cognitive theory, including three design principles and a five-step design process.

Presentation of the main material. This section outlines the design strategy system, which consists of two parts: design principles and operational methods.

The design principles are formulated based on situated cognition theory and the physical and psychological characteristics of preschool children.

Principle of multi-dimensional interactive experience based on user context. Preschool children are in an early literacy stage in which they tend to treat character forms as visual symbols to be memorized, rather than as linguistic units whose meanings can be understood. Therefore, the design of character-learning picturebooks should first stimulate children's interest and participation, instead of simply increasing the number of characters they are asked to memorize. Multidimensional interactive experience can be developed through multi-sensory stimulation, structural unfolding, and the tactile qualities of materials. By providing multiple interaction paths and reading postures, it extends the duration of children's contact with the page. In terms of structural treatment, key compo-

nents such as letters or radicals can be used as organizing elements, transforming flat layouts into spatial constructions that can stand up, fold, or be pulled out. Through actions such as pushing, pulling, folding, and rotating, children "build" the character forms, so that the process of learning characters comes closer to the experience of assembling a toy. *Alphabet in Motion: How Letters Get Their Shape* (Fig. 1) uses pop-up structures and three-dimensional assembly to show how letters evolve from basic modules into complete forms. Concise cultural and historical notes are added to the pages, linking the manipulation process to the origins and contexts of the letterforms and providing a useful reference for the structuring and information organization of interactive character-learning picturebooks.

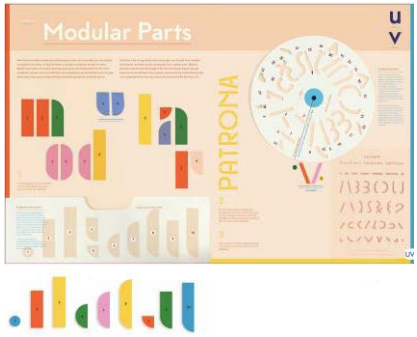

Fig. 1. «Alphabet in Motion: How Letters Get Their Shape»

Practical literacy content principles based on task context. Literacy activities need to return to the real situations in which children use written language, so that they can understand information in both everyday life and learning. The content of picturebooks is better grounded in real-life experience. Everyday slogans, station names, shop signs, and notices that are visible in daily settings can be incorporated into literacy materials. In familiar environments, children encounter new words and, through repeatedly searching for and pointing to them, gradually come to understand their meanings. *Search & Find: Around the Neighborhood* (Fig. 2) takes everyday neighborhood life as its background and sets "looking around the neighborhood" as the core task, bringing locations such as the supermarket, post office, and park together on the pages. The pages provide search instructions and text prompts that guide children to locate targets in the illustrations, read the corresponding words, and relate them to the characters' actions. In this way, the steps of "finding the place and completing the activity" are closely tied to the process of learning the words. Such task design turns simple memorization into a practical process of solving contextual problems and strengthens children's understanding of how written language corresponds to environments, scenes, and actions.

Fig. 2. «Search & Find: Around the Neighborhood»

The principle of interesting visual presentation based on environmental situations. Environmental context is mainly divided into physical context and social context, which affect users' sensory experience in physical space atmosphere, social and cultural resources. Therefore, in order to be closer to the real social situation and considering that children like to imitate, we can present real characters that children are familiar with in educational materials, such as parents and playmates, so that children can play different roles in the reading age, learn different literacy content, cultivate their social skills, and increase their connection with the society so that they can adapt to the society faster. For example, in *My First Book of Chinese Words* (Fig. 3), the author uses the English A-Z alphabet structure to match one English letter with the corresponding Chinese word on each page, supplemented by Chinese characters, pinyin and rhyming four-line poems. The illustrations focus on everyday moments such as family meals, tea drinking, and lantern viewing, so that children repeatedly see and read the related words in familiar scenes. Cultural notes at the bottom of the pages explain how these words are used in festivals, food practices, and etiquette, guiding children to link language learning with concrete social situations and helping them both recognize characters and deepen their understanding of family interaction and cultural practice.

Fig. 3. «My first book of Chinese words: An ABC rhyming book of Chinese language and culture»

User research: analysing children's needs.Character-learning picturebooks are used by two groups: the children who read them directly, and the parents or teachers who make the key decisions at the stages of purchase and selection. For preschool children, naturalistic observation and short interviews can be used. The focus is on recording their dwell time, pointing behaviour, and emotional responses while they browse the picturebooks, and, where necessary, combining this with interviews with parents. For parents, semi-structured or in-depth interviews are appropriate for understanding their evaluations of existing picturebooks, their purchasing motivations, and the difficulties they encounter in use. These findings help sort out children's interests and obstacles in the literacy process and provide a basis for subsequent content selection and interaction design.

Observational tracking: identifying literacy situations. After recording a child's activities throughout a day, the written environments they encounter can be roughly grouped into leisure and entertainment, school learning, and family life. These spaces contain written information such as safety slogans, building names, bus stop signs, and place names. In the early design phase, observation and interviews need to be combined to identify the situations in which children stay longer and show more positive emotions. From these, scene types with clear emotional preferences can be selected to inform the task contexts and visual backgrounds in the picturebook.

Context analysis: identifying literacy touchpoints. A complete contextual activity usually involves specific participants, places, and objects. Designers can start from factors such as the frequency with which written language appears and the situations in which it is used, in order to identify key touchpoints in the context that children are most likely to notice and use for communication, such as bus stop names, classroom door plates, and common notices. These touchpoints can then be set as priority targets for recognition.

Visual translation: extracting contextual elements. Real-life situations are dynamic, whereas educational materials rely on two-dimensional static images, so a key design challenge is how to translate dynamic literacy experiences into an accessible visual language. Guided by the principle of playful environmental context, the extraction of contextual elements needs, on the one hand, to preserve key objects, backgrounds, and light–color relationships that can evoke everyday memories, enabling children to quickly match the illustration to real-world scenes. On the other hand, it is necessary to examine whether the degree of graphic simplification, colour combinations, and character design fits the visual preferences and cognitive level of this age group, so as to avoid excessive information load.

Integrating text: presenting literacy education materials. Once the image components have been largely determined, the textual content of the educational materials needs to be developed in parallel. The core goal is for the use of words to be seen and enacted in specific situations, rather than presented as isolated lists of vocabulary items. During design, the text can be organised around family dialogues, task instructions, or short stories, with target words naturally embedded in character speech and action descriptions. As children follow the storyline, they repeatedly see and read these words, gradually understanding their meanings and uses and moving from mechanical memorisation to meaningful learning supported by context.

Conclusion. This paper starts from several persistent problems in children's literacy education, including the use of overly advanced content, formalistic teaching routines, and material design that is detached from children's everyday experience. Situated cognition theory is taken as the main lens to rethink these issues, and the logic of children's literacy learning is reorganised around the triad of user, task, and environment. By revisiting and analysing relevant studies, the paper argues that the situated character of knowledge and the practical, activity-based nature of learning are closely linked to preschool children's cognitive development. This line of argument provides a conceptual foundation for designing literacy materials that are explicitly informed by situated cognition. Building on this foundation, this paper advances design principles centered on the user, the task, and the environment. At the practical level, a five-step design process – comprising user research, contextual observation, touchpoint identification, visual translation, and text integration – translates these theoretical propositions into concrete decisions.

The work presented here is mainly conceptual and design-oriented. No prototype products have yet been developed, and no empirical validation has been carried out. The principles and strategies put forward should therefore be read as working hypotheses from a design perspective rather than as ready-made solutions. Their usefulness still needs to be examined in real classrooms and home settings. Future studies could take the strategies outlined in this paper as a starting point, redesign selected children's educational materials, and then examine their impact through a combination of methods, such as non-participant observation, interviews with parents, and analyses of children's behavioural data during literacy activities.

BIBLIOGRAPHY

1. Wang Z., Shao Y. Picture book reading improves children's learning understanding. British Journal of Developmental Psychology. 2025. Vol. 43, № 1. P. 12–35.
2. Oberman R. From invitation to destination: A systematic literature review of the use of picturebooks in inquiry-based education. British Educational Research Journal. 2023. Vol. 49, № 3. P. 555–574.
3. Reyes-Torres A., Portalés-Raga M. A multimodal approach to foster the multiliteracies pedagogy in the teaching of EFL through picturebooks: The Snow Lion. Atlantis. 2020. Vol. 42, № 1. P. 94–119.
4. Li M., Boonmoh A. A multimodal discourse analysis of English picture book covers in attracting reading interest among Chinese young learners: A case study of Caldecott Award winners. Manusya: Journal of Humanities. 2025. Vol. 28, № 1. P. 1–25.
5. Bus A., Kucirkova N., Ten Braak D., Ciesielska M. Which Interactive Features in Children's Digital Picture Books Promote Reading Comprehension? A Meta-Analysis. Early Education and Development. 2025. P. 1–20.
6. Shao Y.-L., Shih Y.-H. The effects of interactive electronic picture books on young children's oral expression skills. International Journal of Education and Practice. 2024. Vol. 12, № 2. P. 312–323.
7. Chen T.-I., Chung H.-C., Lin S.-K. The effect of applying language picture books in reciprocal teaching on students' language learning motivations. SAGE Open. 2023. Vol. 13, № 4. P. 1–10.
8. Anderson, K. Alphabet in motion: How letters get their shape. Somerville: Katherine Small Gallery, 2025. 35-36 c.
9. Kidsbooks Publishing. Search & find: Around the neighborhood. Phoenix: Kids Books LLC, 2022. 1-2 c.
10. Wu, F. L. My first book of Chinese words: An ABC rhyming book of Chinese language and culture. North Clarendon: Tuttle Publishing, 2013. 7-8 c.

REFERENCES

1. Wang, Z., & Shao, Y. (2025). Picture book reading improves children's learning understanding. *British Journal of Developmental Psychology*, 43(1), 12–35. https://doi.org/10.1111/bjdp.12479
2. Oberman, R. (2023). From invitation to destination: A systematic literature review of the use of picturebooks in inquiry-based education. *British Educational Research Journal*, 49(3), 555–574. https://doi.org/10.1002/berj.3856
3. Reyes-Torres, A., & Portalés-Raga, M. (2020). A multimodal approach to foster the multiliteracies pedagogy in the teaching of EFL through picturebooks: The Snow Lion. *Atlantis*, 42(1), 94–119. https://doi.org/10.28914/Atlantis-2020-42.1.06
4. Li, M., & Boonmoh, A. (2025). A multimodal discourse analysis of English picture book covers in attracting reading interest among Chinese young learners: A case study of Caldecott Award winners. *Manusya: Journal of Humanities*, 28(1), 1–25. https://doi.org/10.1163/26659077-20252810
5. Bus, A., Kucirkova, N., Ten Braak, D., & Ciesielska, M. (2025). Which Interactive Features in Children's Digital Picture Books Promote Reading Comprehension? A Meta-Analysis. *Early Education and Development*, 1–20. https://doi.org/10.1080/10409289.2025.2571978
6. Shao, Y.-L., & Shih, Y.-H. (2024). The effects of interactive electronic picture books on young children's oral expression skills. *International Journal of Education and Practice*, 12(2), 312–323. https://doi.org/10.18488/61.v12i2.3680
7. Chen, T.-I., Chung, H.-C., & Lin, S.-K. (2023). The effect of applying language picture books in reciprocal teaching on students' language learning motivations. *SAGE Open*, 13(4), 1–10. https://doi.org/10.1177/21582440231218857
8. Anderson, K. (2025). *Alphabet in motion: How letters get their shape*. Somerville: Katherine Small Gallery, 35-36.
9. Kidsbooks Publishing. (2022). *Search & find: Around the neighborhood*. Phoenix: Kids Books LLC, 1-2.
10. Wu, F. L. (2013). *My first book of Chinese words: An ABC rhyming book of Chinese language and culture*. North Clarendon: Tuttle Publishing, 7-8.

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