The Use of Colourful Semantics in Improving Sentence Writing Skills among Level One Pupils

Jia Ming Yee, Nurfaradilla Mohamad Nasri
Faculty of Education, Universiti Kebangsaan Malaysia
Email: p130299@siswa.ukm.edu.my, nurfaradilla@ukm.edu.my

Abstract
Developing strong sentence writing skills from an early age is crucial for effective communication and language mastery. However, many primary school pupils in Malaysia struggle with constructing grammatically correct and meaningful sentences in Malay. This paper examines the use of the colourful semantics approach as a strategy to enhance Malay language sentence writing skills among Level One pupils. Although previous studies have demonstrated the effectiveness of this approach in English language instruction, its application in Malay language teaching remains largely unexplored. Drawing on scaffolding theory, cognitive load theory, and visual learning theory, this paper analyses how colourful semantics—which employs colour-coding, symbols, and visual representations—can address specific challenges in sentence construction among young learners. Additionally, the paper explores factors influencing sentence writing skills, such as limited vocabulary, grammar proficiency, attitudes, and understanding of stimulus materials. Strategies like the SKOP and SALAK techniques for constructing correct sentence structures are also examined. By integrating theoretical foundations with practical instructional strategies, this study offers valuable insights for educators seeking effective methods to develop pupils' sentence writing competencies from an early age, ultimately fostering stronger language skills and communication abilities essential for academic and personal success.
Keywords: Colourful Semantics, Sentence Writing Skills, Primary Education, Malay-Language Learning, Visual Learning Strategies.

Introduction
In the field of linguistics or language learning, proficiency in listening, speaking, reading, and writing are four essential skills that form the foundation of good language proficiency. Among these skills, writing skills play a crucial role in enabling individuals to convey their thoughts and knowledge clearly and effectively in text form during non-verbal communication. In the increasingly digital global context, writing skills are also important for creating effective interactions in professional and socially complex environments. Therefore, the development of writing skills in schools and awareness of the importance of these skills in everyday life are crucial to ensure individuals can function effectively in an advancing and evolving society. This helps them become critical readers, effective writers, and empowered communicators in this digital era.

The revelation that 280,985 primary school pupils in Malaysia still lack proficiency in reading, writing, and arithmetic is a concerning issue that requires immediate attention (Wan Azrain, 2024). These foundational skills are not only crucial in the learning process but also serve as pillars for the development of excellent and competitive human capital. The failure of pupils to master these skills from the early stages of schooling will impede their ability to acquire knowledge and absorb information effectively. This, in turn, can hinder their full potential development and adversely affect their academic performance and future achievements.

For most pupils, especially at the early stages of schooling, such as Level One pupils in Chinese National-Type Schools (SJKC), the writing process often poses a significant challenge. Research conducted by Nurhidayah and Wan Muna Ruzanna (2023) indicates that the primary issues faced by pupils at this stage include difficulties in constructing and writing grammatically correct and meaningful words, phrases, and sentences in Malay language. This is mainly due to their weak foundation in literacy, particularly in reading and spelling skills. Weak mastery in this aspect significantly affects pupils' ability to write effectively. Without a strong foundation in literacy, the writing process becomes a daunting and boring task, thereby reducing pupils' interest and motivation towards writing.

Pupils face difficulties in producing grammatically correct and structurally sound sentences, due to various factors, including the dominant influence of their mother tongue in their environment. According to Mohd Saiful and Nor Azwahanum (2021), non-native speakers of the Malay language tend to translate directly from their mother tongue when writing Malay sentences. This phenomenon results in structural errors and inappropriate word choices during sentence construction. Additionally, low reading interest among pupils also contributes to this issue. Pupils who read less Malay-language materials will have limited vocabulary mastery, affecting their ability to generate ideas and express them accurately in writing (Aman Shah, Zamri & Mohammed Azlan, 2021). Therefore, it is evident that the lack of exposure to grammatically correct sentence examples and the cultivation of reading habits from an early stage are factors contributing to the low proficiency in writing sentences among Level One pupils.

To address these challenges, colourful semantics is one method that can be employed to enhance sentence writing skills among Level One pupils. Originating from the United Kingdom, particularly in the field of speech and language therapy, colourful semantics was developed by Alison Bryan in the early 1990s as an approach to develop speaking and writing skills in children. The use of colourful semantics in language teaching and learning can make the learning process more enjoyable and meaningful. This is because the approach utilizes colours to represent words and phrases in sentences according to their meaning and function (Main, 2021). By associating meaning with different colours, pupils can understand the role of each sentence component more easily and clearly. This can help them construct meaningful and structured sentences more effectively. Therefore, the use of colourful semantics in language teaching is seen as a method with the potential to enhance the effectiveness of teaching and learning processes. This approach not only helps pupils understand sentence structure and meaning more clearly but also fosters their interest and motivation in language learning.

While colourful semantics has demonstrated effectiveness in English, its application to the Malay language remains under-researched. This study seeks to fill this gap by examining how colourful semantics can be effectively integrated into Malay language instruction, providing educators with a novel strategy to enhance sentence writing skills among young learners. By integrating scaffolding theory, cognitive load theory, and visual learning theory, this study investigates whether colourful semantics can enhance Malay language sentence-writing skills among Level One pupils. The findings are anticipated to contribute to the field of early language education by providing new strategies to address fundamental writing challenges. Ultimately, this study offers insights that could support teachers in developing more effective instructional approaches for young learners, fostering essential language skills for their academic and personal success.

Scaffolding Theory

The theory of scaffolding refers to an approach used in teaching and learning where the teacher or more skilled individual provides temporary support to learners to help them master new skills or concepts. According to Wood, Bruner and Ross (1976), scaffolding requires the teacher to control task elements initially beyond the pupils' capabilities, allowing them to focus and complete elements within their competency range. In this regard, the teacher needs to break down tasks into smaller and more manageable parts. Through this, the scaffolding process enables pupils to solve problems, perform tasks, or achieve goals that may be beyond their individual efforts. This is because scaffolding is employed to address challenges encountered by pupils in the learning process to facilitate discovery learning (Jatisunda, Suciawati & Nahdi, 2020).

Scaffolding as a supportive interaction is characterized by three main features: dependency, intersubjectivity, and responsibility transfer. In terms of dependency, the teacher needs to provide appropriate support according to the needs and abilities of the pupils. Intersubjectivity helps pupils recognize their success in mastering new tasks or solving problems with the assistance they receive. When pupils can eventually perform specific tasks without assistance, support is gradually withdrawn, and responsibility for task execution is fully transferred to them. This is because these pupils have surpassed their Zone of Proximal Development (Ersani, Suwastini & Artini, 2021). Therefore, it is evident that the theory of scaffolding aims to promote self-directed learning by providing the necessary tools, strategies, and guidance initially, before gradually withdrawing support as pupils become more proficient and confident.

During the scaffolding teaching process, teachers support pupils' adaptation, as needed, in three ways: (i) assisting pupils in building competency through enhanced understanding, (ii) engaging pupils in learning while supporting their socio-emotional needs, and (iii) helping pupils develop and implement autonomy as learners (Meyer & Turner, 2002). Thus, the scaffolding approach not only helps pupils master new skills and concepts but also supports their cognitive, social, and emotional development. It creates a conducive learning environment by providing necessary support until pupils become more confident and capable of learning independently. The interactions throughout this process also foster a closer relationship between teachers and pupils.

Cognitive Load Theory

The cognitive load theory focuses on the limited capacity of human working memory to process information at any given time. Working memory is a part of short-term memory responsible for storing and manipulating information to perform cognitive tasks such as learning, problem-solving, and decision-making. However, the amount of information or components that can be processed simultaneously in working memory is limited. Any problem requiring the storage of many items in short-term memory can result in excessive cognitive load (Sweller, 1988).

Excessive cognitive load impedes effective learning because it exceeds the individual's working memory capacity limit. This situation can cause new information to fail to be processed and integrated well into existing knowledge schemas. Therefore, unnecessary cognitive load should be reduced from learning materials to maximize working memory capacity for truly essential cognitive processes (Skulmowski & Xu, 2022). Past study by Gillmor, Poggio and Embretson (2015) has shown that reducing unnecessary cognitive load in assessment items can increase confidence in assessing pupils' knowledge and subsequently improve pupils' performance. Hence, it is crucial for teachers to consider the limits of human working memory capacity when designing instructional materials. Irrelevant cognitive load to learning objectives should be minimized to maximize pupils' opportunities to process and master new skills and concepts more effectively.

Effective strategies for reducing cognitive load include organizing learning content in meaningful sequences, delivering information gradually, and manipulating presentation methods so that pupils can focus on the most relevant aspects. According to Phillips and Wiesbauer (2022), two important components to help pupils manage cognitive load related to learning new materials are self-paced learning rates and content adaptation to pupils' needs. This concept is applied in the flipped classroom model, where pupils can adjust their learning experiences to reduce cognitive load based on their comprehension levels. Additionally, high-achieving pupils can skip parts they understand while low-achieving pupils can review difficult-to-understand content.

By reducing excessive cognitive load, pupils can utilize their working memory more effectively to construct new knowledge schemas and reinforce learning. This facilitates mastery of complex skills and concepts, enhances knowledge transfer, and supports more effective problem-solving. Therefore, the cognitive load theory provides important guidelines for designing optimal learning activities and environments.

Visual Learning Theory

The visual learning theory focuses on how humans acquire, process, and retain information through the sense of sight. Visual learners have a high tendency to learn through visual stimuli. They heavily rely on the sense of sight in the learning process and understanding of new information. According to Zulianti and Asari (2022), the key characteristics of visual learners are that they learn more easily when they have access to visual images consisting of combinations of colours, lines, and shapes. Additionally, visual learners' notes typically include sketches, symbols, lines, colours, and other visual elements that act as memory aids. Therefore, the use of visual aids such as diagrams, charts, and infographics is among the efficient ways to assist pupils' understanding, especially for complex concepts (Tzenios, 2020).

By providing visual representations of the material presented, these aids can enhance pupils' ability to link new information with existing knowledge.

Visual learning helps pupils develop visual thinking, a learning style in which they better understand and retain information when ideas, words, and concepts can be associated with visual images. Past research by Raiyn (2016), shows that visual learning yields better results compared to traditional teaching methods, especially in developing higher order thinking skills (HOTS) in pupils at the primary and secondary school levels. Therefore, integrating visual elements into the teaching and learning process can enhance delivery effectiveness and support the construction of relevant knowledge and skills in the 21st century. Such an approach meets the needs of most contemporary learners who tend to respond better to visual stimuli compared to traditional teacher-centred methods.

Colourful Semantics

Colourful semantics is a visual sentence construction approach that uses colour coding, symbols, and signs to enhance comprehension and writing skills among children. This method aims to strengthen understanding of questions starting with question words, increase sentence complexity, enrich vocabulary, and encourage the improvement of grammatically correct sentence writing (Carter & Coleman, 2020).

The implementation of colourful semantics involves using distinct colours, symbols, and signs to represent each important component in sentence construction such as subject, verb, object, prepositions, and so on. Such a visual approach helps pupils understand sentence sequence and structure more clearly and stimulates the learning of new vocabulary through engaging presentations. Past research by Kee and Tay (2017), shows that the use of colourful semantics has helped pupils in sentence construction through effective vocabulary learning. These pupils were able to construct English sentences with the correct sequence despite some grammatical and spelling errors. However, overall, pupils were able to produce more organized sentences.

Furthermore, past research by Dharshini and Azlina (2021), also indicates that the use of interactive tools in colourful semantics, such as colour-coded Dominoes, significantly enhances pupils' engagement and understanding in English sentence writing contexts. This tool serves to create a dynamic and interactive learning environment where pupils can actively participate in their sentence construction. By visually representing the roles of words in a sentence through distinct colours, colour-coded Dominoes help reinforce the Subject-Verb-Object (SVO) structure, making it easier for pupils to grasp essential grammatical concepts.

Moreover, colourful semantics has also been found to significantly enhance semantic development and morphosyntactic skills in children. This approach was found to improve their focus and ability to recall the sequence of pictures or visual information presented. Consequently, they could generate sentences with more accurate grammar based on the visual stimuli and eventually practice this skill in spontaneous speech (Christopoulou et al., 2021). Therefore, it is evident that colourful semantics is a highly potential teaching and learning strategy to develop sentence writing skills among pupils, especially at the early stages of schooling. This engaging visual approach can enhance motivation and learning

effectiveness while building a strong foundation for mastering more complex language skills in the future.

Use of Colour in Teaching and Learning

The use of colour in teaching and learning is an effective strategy to enhance interaction and pupils' understanding of learning materials. According to Bibi, Mumtaz and Saqulain (2019), colour is an instrument that can be used in various settings for various purposes because it can attract attention to targets and make concepts clearer. In the school context, educators often use colour to enhance pupils' academic learning. For example, red is the colour frequently used by teachers to mark errors in pupils' notebooks because it can draw attention to mistakes and facilitate understanding. Therefore, the use of colour in teaching and learning is an effective approach to enhance interaction, understanding, and learning effectiveness among pupils.

Colour in Writing

In the context of writing, the use of colour plays an important role in aiding the understanding of sentence structure and reinforcing writing skills. According to Carter and Coleman (2020), colour can be applied in implementing colourful semantics to facilitate the understanding of sentence structure. For example, the colour orange is used to represent the subject, yellow is used to represent the verb, and green is used to represent the object. Additionally, there are five more types of colours that can be used for expansion, where blue is used to represent place, brown is used to represent time, purple is used to represent reason, pink is used to represent target, and black is used to represent manner. With the use of colour in writing, pupils can understand sentence structure more clearly and acquire various elements in sentences in more detail. Therefore, the use of colour in writing is an effective strategy in enhancing writing skills and understanding sentence structure among pupils.

Sentence Writing Skills

According to Andrew, Rozita Radhiah and Roselan (2019), sentence writing skills refer to the ability to generate and translate ideas into meaningful and grammatically correct sentences. The level of sentence writing skills of a pupil is influenced by various factors, including their experience and exploration of knowledge, ideas, environment, and observation. Pupils' exposure to sources of knowledge, whether inside or outside the classroom, also plays a significant role in developing sentence writing skills. Through reading materials such as books, magazines, newspapers, and others, they can enrich their vocabulary and develop an understanding of the structure and style of good sentence writing.

The use of effective writing skills learning strategies also helps improve the quality of pupils' sentence writing. This is because effective teaching and learning activities can not only enhance pupils' writing skills but also foster independence and responsibility for self-directed learning (Noor Habsah & Yahya, 2018). Therefore, to develop solid sentence writing skills among pupils, extensive exposure to sources of knowledge and the application of appropriate teaching and learning strategies are crucial. Only through continuous effort can pupils sharpen these skills to become confident and effective communicators in conveying ideas through writing.

Factors Influencing Sentence Writing Skills

Sentence writing skills are a crucial foundation in language mastery and effective communication. However, various factors can influence the level of these skills among pupils. Among the key factors commonly identified are limited vocabulary mastery and grammar proficiency. Weak vocabulary mastery poses a barrier for pupils to articulate ideas clearly and precisely. This is particularly experienced by non-native speakers of the language, such as non-Malay pupils learning Malay. They often struggle to select and use appropriate vocabulary, thereby affecting the quality of their writing (Noor Habsah & Yahya, 2018). Additionally, low grammar proficiency also negatively impacts the ability to construct grammatically correct and meaningful sentences. This is because the influence of the mother tongue language can lead pupils to translate sentences literally from their first language to the target language, thus affecting the quality of the sentences produced (Revathi, Dahlia & Nasir, 2022).

Pupils' attitudes and interests toward writing exercises are also contributing factors that influence sentence writing skills. Some pupils tend to copy sentences without deep understanding, lack interest in engaging in writing activities, or are unwilling to practice this skill (Zamri et al., 2021). The absence of interest and positive attitudes toward the writing process can hinder the development of their writing skills. Therefore, educators must cultivate pupils' interest and positive attitudes toward writing exercises and provide pupils with a deeper understanding of the importance and benefits of writing. This will help increase their involvement and achievements in developing sentence writing skills.

Furthermore, a lack of understanding of stimulus materials, question requirements, and basic aspects of sentence construction are also factors that challenge pupils in the sentence writing process. Understanding stimulus materials and question requirements is crucial to enable pupils to write relevant and meaningful sentences. However, some pupils face difficulties in understanding and interpreting stimulus materials such as texts, images, or given situations. As a result, they tend to copy questions without deep understanding, thus producing low-quality sentence writing (Che Zanariah & Fadzilah, 2021).

Moreover, a lack of mastery of basic writing skills also acts as a barrier to sentence writing skills. Some pupils are found to be weak in distinguishing between uppercase and lowercase letters, constructing proper sentence structures, using punctuation, correct spelling and affixes, and constructing active sentences (Abdul Rasid, 2021; Halida & Zamri, 2021). Weaknesses in these basic aspects make it difficult for pupils to produce quality and meaningful essay writing. Therefore, continuous efforts are needed to address the root causes at the basic level and implement effective teaching and learning approaches. Only by overcoming these challenges can pupils improve their mastery of sentence writing skills, which is an essential component in overall language mastery.

Strategies for Constructing Correct Sentence Structures

One of the main challenges in teaching and learning Malay language sentence writing skills is helping pupils master the construction of grammatically correct and meaningful sentence structures. To address this issue, educators have explored various effective strategies, including the SKOP technique and the SALAK technique. Both techniques provide systematic guidance to pupils in arranging the essential components of sentence formation.

The SKOP technique is an acronym for the four basic components in constructing simple sentences, namely Subject, Verb, Object, and Expansion. This approach facilitates pupils to remember and understand the necessary elements in forming complete sentences that adhere to grammar rules. By using the SKOP technique, pupils are exposed to a systematic method of constructing sentences, starting with identifying the main subject, followed by the verb, object, and finally including additional information as an expansion. Past study by Saridah and Jamaludin (2021), has shown that pupils are comfortable with using the SKOP technique in constructing simple sentences. Moreover, they also experienced significant improvements in their ability to write sentences correctly after being exposed to this strategy.

The SALAK technique, on the other hand, is an abbreviation for Who, What is done, Location, Tools, and Description. Based on the study by Halida and Zamri (2021), pupils who have achieved proficiency and moderate writing abilities are required to write more detailed sentences using the SALAK format. This approach provides them with opportunities to practice their skills in composing comprehensive sentences and ensure that all necessary aspects of the sentence are explained in detail. For pupils who are still struggling, they are guided to write simpler sentences using the SAK format. This differentiated approach ensures that individual learning needs are appropriately met while allowing room for continuous development.

Conclusion
The scaffolding theory, emphasizing temporary support from teachers to help pupils master new concepts, underscores meticulous interaction in the learning process. The cognitive load theory, focusing on the limits of human working memory capacity, advocates for reducing irrelevant cognitive load to maximize effective learning. Meanwhile, the visual learning theory highlights the importance of using visual elements in learning to enhance information comprehension. Research on colourful semantics demonstrates that this visual approach can improve sentence writing skills by providing clear structure and facilitating understanding of language concepts. Thus, a deep understanding of learning theories and instructional strategies such as colourful semantics provides a solid foundation for the development of effective education in the context of fostering highly competent human capital.

References
Jamian, R. (2021). Permasalahan kemahiran membaca dan menulis bahasa Melayu murid-murid sekolah rendah di luar bandar. *Jurnal Pendidikan Bahasa Melayu*, 1(1), 1-12.

Ali, A. S. S., Mahamod, Z., & Mis, M. Z. (2021). Masalah murid etnik Bajau dalam pembelajaran bahasa Melayu sebagai bahasa kedua. *Borneo International Journal*, 4(3), 26-36.

Emparan, A., Said, R. R., & Baki, R. (2019). Meneroka penggunaan teknik flipped classroom dalam pengajaran kemahiran menulis. *International Journal of Education and Training*, 5(1), 1-8.

Bibi, N., Mumtaz, N. & Saqulain, G. (2019). Effectiveness of colored visual prompts for three word phrase development in intellectually disabled (ID) children. *Journal of Medical & Allied Sciences*, 9(2), 42-47.

Carter, G. & Coleman, M. (2020). *Colourful semantics: A resource for developing children's spoken and written language skills*. London: Routledge.

Hassan, C. Z. C., & Rahman, F. (2021). Pelaksanaan pengajaran dan pembelajaran kemahiran menulis di sekolah rendah. *Jurnal Pendidikan Bahasa Melayu*, 1(1), 67-87.

Christopoulou, M., Voniati, L., Drosos, K. & Armostis, S. (2021). Colorful semantics in cypriot-greek-speaking children with autism spectrum disorder. *Folia Phoniatrica et Logopaedica*, 73(3), 185-194.

Morthy, D. K., & Aziz, A.(2021). The effectiveness of colour-coded dominoes in enhancing simple sentence construction. *International Journal of Academic Research in Progressive Education and Development*, 10(1), 1-12.

Ersani, N. P. D., Suwastini, N. K. A., & Artini, L. P. (2021). Schemes of scaffolding in online education. *Retorika: Jurnal Ilmu Bahasa*, 7(1), 10-18.

Gillmor, S. C., Poggio, J., & Embretson, S. (2015). Effects of reducing the cognitive load of mathematics test items on student performance. *Numeracy*, 8(1), 1-18.

Jatisunda, M. G., Suciawati, V., & Nahdi, D. S. (2020). Discovery learning with scaffolding to promote mathematical creative thinking ability and self-efficacy. *Al-Jabar: Jurnal Pendidikan Matematika*, 11(2), 351-370.

Jawan, & Mahamod, Z. (2021). Kaedah dan cabaran pengajaran terbeza dalam meningkatkan penguasaan membina ayat bahasa Melayu murid sekolah rendah. *Jurnal Dunia Pendidikan*, 3(1), 67-77.

Kee, L. L., & Tay, J. Y. (2017). The use of colorful semantics to improve sentence construction in writing sentences among year four pupils. *Journal of English Education*, 2(1), 43-50.

Main, P. (2021). Colourful semantics: A teacher's guide. *Structural Learning*. https://www.structural-learning.com/post/colourful-semantics-a-teachers-guide

Meyer, D. K., & Turner, J. C. (2002). Using instructional discourse analysis to study the scaffolding of student self-regulation. *Educational Psychologist*, 37(1), 17-25.

Othman, S., & Shaid, N. A. (2021). Isu dan cabaran guru cina dalam pengajaran Bahasa Melayu di sekolah jenis kebangsaan cina. *International Journal of Humanities, Philosophy and Language*, 4(16), 1-15.

Ali, N. H., & Othman, Y. (2018). Strategi pembelajaran kemahiran menulis bahasa Melayu sebagai bahasa kedua dalam kalangan pelajar Melanau daerah Daro. *Jurnal Pendidikan Bahasa Melayu*, 8(2), 33-41.

Husin, N. M., & Mohamma, W. M. R. (2023). Penguasaan kemahiran membaca dan menulis bahasa Melayu murid tahun 1 di SJKC dari perspektif guru. *Jurnal Dunia Pendidikan*, 5(1), 279-292.

Phillips, J., & Wiesbauer, F. (2022). The flipped classroom in medical education: A new standard in teaching. *Trends in Anaesthesia and Critical Care* 42, 4-8.

Raiyn, J. (2016). The role of visual learning in improving students' high-order thinking skills. *Journal of Education and Practice*, 7(24), 115-121.

Suaib, S., & Badusah, J. (2021). Penggunaan teknik SKOP dalam penghasilan ayat. *2nd International Conference on Education, Social Sciences and Engineering* (pp. 440-450).

Skulmowski, A., & Xu, K.M. (2022). Understanding cognitive load in digital and online learning: A new perspective on extraneous cognitive load. *Educational Psychology Review*, 34(1), 171-196.

Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12(2), 257-285.

Tzenios, N. (2020). Clustering students for personalized health education based on learning styles. *Sage Science Review of Educational Technology*, 3(1), 22-36.

Adnan, W. A. (2024). Pelajar lemah 3M, jangan gagah 2M, di mana kesilapan kita?. *Sabah Media*. https://sabahmedia.com/2024/03/17/pelajar-lemah-3m-jangan-gagah-2m-di-mana- kesilapan-kita/

Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry*, 17(2), 89-100.

Zulianti, A., & Asari, S. (2022). Student English achievement and their learning style: A correlation study on English learners exposure. *English Language in Focus*, 4(2), 107-116.