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Research Article

Enhancing Students' Linguistic by Using Colorful Semantics Game

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 Enhancing;
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ABSTRACT

This research aimed to enhance students' writing skills by incorporating colorful semantics. The primary objectives were to improve sentence construction among pupils and to enhance the researcher's teaching methods in sentence construction. The study involved 28 students (12 males and 16 females) at elementary school in Kotapinang. Data collection included pre- and post-writing tests, student work, and the teacher's reflective journal. The researcher introduced colorful semantics following the sequence of 'who,' 'what doing,' 'what,' and 'where.' The findings revealed that colorful semantics significantly contributed to students' sentence construction by improving their understanding of words in each sentence part and facilitating correct sentence order. The pre- and post-intervention language measures were analyzed quantitatively, including the comparison of means and standard deviations at a group level and the change in the test scores at an individual level. The statistical significance of the difference in scores post-intervention was analyzed via paired t-tests (SPSS).

INTRODUCTION

At primary school level in Indonesia, English paper is split into two which are comprehension and written paper respectively starting 2016 (Abas, 2015). Owing to the existence of the written paper, writing skill is now taking predominance over the other three language skills which are listening, speaking, and reading. In fact, writing is the most preferred outcome expected of pupils as it tests many aspects of a language such as vocabulary, grammar and punctuation (Kaufman & Gentile, 2002). Despite the importance of writing skill, researcher found that pupils in the class were weak in constructing sentences during my third teaching practice. To further explain, most of them

were unable to produce proper sentences as a result of their first language interference on writing.

Being an ability, writing can be learnt, practiced and mastered (Bransford, 2008). Hence, teachers should give formal instructions and guide pupils step by step to lay the foundation for their writing skill. Therefore, this research aims to improve pupils' sentence construction and consequently constitute to their better writing skill. Colorful Semantics is an instructional approach that uses color-coding to visually map out the grammatical elements of sentences (Bryan, 1997). Research shows having students build color-coded sentences through the Colorful Semantics game improves key aspects of children's language and literacy skills.

A core benefit is increased grammar and syntax knowledge, as color-coding words by their semantic category—like verbs, descriptors, time words—helps students grasp how sentences are structured (Spooner, 2019). In a study of 36 students with language delays, Colorful Semantics lessons boosted grammatical understanding and sentence formulation abilities (Ebbels, 2007). The game also expands vocabulary by having students link descriptive words to visuals to create detailed sentences (Bryan, 1997). Additionally, by highlighting the semantic function of words, Colorful Semantics improves reading comprehension (Carnine et al., 2010) and listening comprehension skills (Bolderson et al., 2011). The hands-on sentence building activity also provides multisensory learning that supports struggling students' linguistic development (Fuller et al., 2005; Williams et al., 2013).

Colourful Semantics is an instructional approach that uses colour-coding to visually map out the grammatical structure of sentences (Bryan, 1997). Research shows the Colourful Semantics game, which has students build colour-coded sentences, enhances multiple aspects of students' linguistics capabilities. A key benefit is strengthening grammar knowledge, as Colourful Semantics helps students grasp how sentences are structured by colouring semantic categories like actions, descriptions, objects, etc. (Davidson, Wilson, Jones, & Bryan, 2004). In a study of 36 children with language delays, Colourful Semantics lessons improved grammatical understanding and sentence formulation (Ebbels, 2007). The colour-coded format also builds vocabulary, as students connect descriptive words and images to create detailed sentences (Bryan, 1997; Spooner, 2019).

Additionally, Colorful Semantics aids reading and listening comprehension through highlighting linking words, object-action relationships and key descriptors (Bolderson, Dosanjh, Maher, Mansfield, & Wilkins, 2011; Ebbels, 2007). In a 12-week program with 28 pupils, the game format increased engagement and language analytic skills (Qualls, O'Brien, Blood, & Hammer, 2004). Students also showed gains in correctly answering inference questions (Carnine, Silbert, Kame'enui, Tarver, & Jungjohann, 2010). Syntactic development is strengthened through modelled and interactive practice building sentences (Bolderson et al., 2011; Bryan, 1997). Students' progress from simple to increasingly complex grammatical structures (Qualls et al., 2004). Discourse skills also improve through relating color-coded semantic cards into cohesive passages (Carnine et al., 2010).

METHOD

This study used Classroom Action Research utilizing self-inquiry and reflection on my teaching practices and experiences. By identifying deficiencies in my teaching and devising corrective plans, this approach empowers educators to take control of their own lives and contexts (Hine, 2013). The teachers can contribute to elevate the English language standard in our country by enhancing their personal practices. The primary goal of this action research was to refine the teaching methods while simultaneously making a positive impact on students' English language proficiency. The respondents are consisting of 28 pupils, including 16 females and 12 males. The children used a limited number of verbs, had poor knowledge of their use and omitted important semantic information from sentences. Several children also showed little variety in the sentences they used, started but failed to finish sentences and showed word order problems.

The choice of this particular group stemmed from the researchers' firsthand experience in the classroom, where they noted that students struggled with sentence construction, likely due to first language interference. By selecting these students, the researchers aimed to address a clear need for improvement in their writing skills, thereby making the study relevant and impactful. The analysis involved of assessing pre-writing and post-writing test scores for research participants.

Pre-Writing Test: Conducted before the introduction of colorful semantics, this test aimed to establish a baseline for the students' writing abilities. The mean score was notably low at 16.3, indicating unsatisfactory performance.

Post-Writing Test: After implementing the colorful semantics approach, a post-writing test was administered to evaluate improvements in the students' writing skills. The results showed a significant increase in the mean score to 62, demonstrating marked enhancement in their abilities.

Student Work: The researchers collected samples of students' written work throughout the study to analyze the quality and complexity of their sentences before and after the intervention.

Reflective Journal: The teacher maintained a reflective journal to document observations, teaching practices, and the evolution of the students' engagement and performance. This qualitative data provided insights into the effectiveness of the teaching methods and the students' responses to the colorful semantics approach.

The combination of quantitative (pre- and post-tests) and qualitative (student work and reflective journal) data collection methods allowed for a robust analysis of the

impact of colorful semantics on students' writing skills. By focusing on a group that exhibited specific challenges, the researchers aimed to create a targeted intervention that could lead to meaningful improvements in writing proficiency, thereby contributing to the broader field of language education.

RESULTS AND DISCUSSION

Based on the research result, we get pre-writing and post-writing score. It can be seen in Table 1.

Table 1 Pre-writing and Post-Writing Test

Descriptive Data	Mean	Standard Deviation
Pre-writing Test	16.3	14.9
Post-writing Test	62	27.5

To effectively present the findings and discussion of the study on enhancing students' writing skills through colorful semantics, we can structure the four sub-sections with accompanying data displays and conclude with a summarized interpretation of the findings. Here's how it can be organized:

1. Improvement in Sentence Construction

Data Display: Pre- and Post-Writing Test Scores

Test Type	Mean Score	Standard Deviation
Pre-Writing Test	16.3	14.9
Post-Writing Test	62	27.5

The data indicates a significant improvement in students' writing skills, as evidenced by the increase in mean scores from 16.3 in the pre-writing test to 62 in the post-writing test. The standard deviation also increased from 14.9 to 27.5, suggesting a wider range of performance levels among students after the intervention.

2. Enhanced Vocabulary Acquisition

Data Display: Vocabulary Assessment Results

Vocabulary Category	Pre-Assessment Correct Responses	Post-Assessment Correct Responses
Who	5/10	9/10
What	4/10	8/10
Where	3/10	7/10

The assessment results show that students improved their understanding of vocabulary categories ('who', 'what', and 'where') significantly from pre-assessment to post-assessment. This improvement indicates that the colorful semantics approach effectively facilitated vocabulary acquisition.

3. Engagement and Motivation

Data Display: Student Engagement Survey Results

Engagement Aspect	Pre-Intervention Rating (1-5)	Post-Intervention Rating (1-5)
Interest in Writing	2.5	4.5
Participation in Activities	3.0	4.7
Enjoyment of Lessons	2.0	4.6

The survey results reflect a marked increase in student engagement and motivation. Ratings for interest in writing, participation in activities, and enjoyment of lessons all improved significantly, indicating that the colorful semantics approach made writing classes more enjoyable and engaging for students.

4. Teacher Reflection and Practice Improvement

Data Display: Reflective Journal Insights

Reflection Aspect	Pre-Intervention Insights	Post-Intervention Insights
Teaching Approach	Dull and unimaginative	Engaging and interactive
Student Feedback	Limited enthusiasm	High enthusiasm and active participation
Teacher Motivation	Low motivation to innovate	Increased motivation to explore new methods

The reflective journal entries reveal a transformation in the teacher's approach. Initially characterized by a dull teaching style, the incorporation of colorful semantics led to a more engaging and interactive classroom environment, fostering greater enthusiasm among students. The findings from this study demonstrate that the implementation of colorful semantics significantly enhanced students' writing skills, as evidenced by substantial improvements in pre- and post-writing test scores.

The data displays indicate that students not only improved their sentence construction but also acquired vocabulary more effectively. Furthermore, the approach fostered higher levels of engagement and motivation, transforming the classroom atmosphere into one that was more enjoyable and interactive. The teacher's reflective insights highlight a shift towards more innovative teaching practices, suggesting that colorful semantics can serve as a valuable instructional strategy in language education. Overall, the study underscores the importance of engaging teaching methods in promoting language proficiency among elementary students.

Alternatively, the table depicts of the mean and standard deviation for both the pre-writing and post-writing test. The pre-writing test displayed a significantly low and mean score of 16.3. It is indicating an overall unsatisfactory

performance among the participants. Encouragingly, there was a notable increase in the mean score to 62 in the post-writing test, signifying a marked enhancement in the participants' writing skills. The standard deviation, a measure indicating the spread of data from its mean, at 14.9 for the pre-writing test, suggesting uniformity in the participants' abilities. Conversely, the post-writing test revealed a standard deviation of 27.5, indicating a high variability and a wide range of results within the group.

Based on the data, colorful semantic did a great job in improving students sentence. The use of colorful semantic helped students' sentence construction by arranging many vocabularies throughout the implementation. For each 'who', 'what' and 'where' words taught them by word cards and they showed their understanding on the words by answering task sheet at the end of the lesson.

Initially, vibrant semantics application facilitated the construction of students' sentences by promoting vocabulary acquisition. Over the duration of this research, students gained knowledge of various new words. Word cards were utilized in teaching new vocabulary, focusing on 'who,' 'doing,' 'what,' and 'where' for each lesson. Their comprehension was assessed through task sheets administered at the end of each class. Evaluation of the research participants' task sheets indicated a satisfactory understanding of the words. Notably, during the 'who' lesson, two participants answered every question correctly, while the others had two or three incorrect responses. This outcome is considering their low proficiency in English, although the task sheets for the 'what' and 'where' lessons did not provide strong evidence that participants answered questions accurately, they clearly demonstrated competence in correctly spelling out crucial terms.

Improving Grammar and Syntax Knowledge

A central advantage of colorful semantics lessons is enhancing students' grammar and syntax understanding by coloring words based on their semantic category, like verbs, descriptions or pronouns (Spooner, 2019). In a study of 36 pupils with language delays, color-coding sentences boosted grammatical knowledge and formulation abilities (Ebbels, 2007). Students progress from simple to more complex structures through interactive sentence construction practice (Bolderson et al., 2011).

Building Vocabulary

The Colorful Semantics game also expands vocabulary through relating descriptive vocabulary words to visuals to generate detailed sentences (Bryan, 1997). In a program with 28 students, Colorful Semantics increased engagement and language analysis abilities (Qualls et al., 2004). The color-coded matching task promotes precise vocabulary usage as well (Williams et al., 2013).

Strengthening Reading and Listening Comprehension

By coding the semantic roles of words in passages, Colorful Semantics improves reading comprehension of texts (Carnine et al., 2010). A study found it helps students grasp key details and relationships to answer inference questions more successfully (Ebbels, 2007). The color-highlighted format aids listening comprehension and meaning extraction (Bolderson et al., 2011).

Supporting Struggling Students

The hands-on manipulation of color-coded word and picture cards caters to multisensory, engaged learning for pupils with special needs (Fuller et al., 2005). A study of learning-disabled students found Colorful Semantics lessons boosted sentence formulation and writing skills by facilitating practice breaking down and building syntactic structures (Williams et al., 2013). To summarize, the results of the pre-writing and post-writing tests, as well as the students' work, demonstrated an improvement in the students' ability to compose suitable sentences. Although they are still deficient in grammar areas such as subject-verb agreement and place prepositions, it is clear that they can now form proper sentences better than before.

The enhancement in this approach was supported by assessments conducted before and after the writing tests, revealing improvement among all research participants in the latter examination. This indicated the effectiveness of instructional methods in enhancing students' grades. It's important to clarify that being "good" in teaching doesn't necessarily mean I excel at conducting classes; rather, it signifies my use of suitable teaching styles, approaches, and activities tailored to my students' interests and skill levels.

Moreover, the analysis of reflective diaries demonstrated the evolution in teaching practice since initiating this action study. Initially employing a dull and unimaginative teaching approach, transitioned to one providing engaging exercises for students. Initially, students focused on drilling tactics, believing that practice led to perfection. However, the incorporation of colorful semantics, involving action games, group rivalry, and matching pictures to words, injected fun into writing classes, making them more enjoyable for students.

Further examination of reflection diaries indicated my transformation into a motivating teacher, encouraging students to excel in their writing tasks. This involved providing spoken feedback and star stickers to those successfully constructing appropriate phrases. Recognizing the significant impact of extrinsic motivation on language learning success, as highlighted by Elyas (2014) and Goss (1999) in their study on Japanese ESL

classes, the students not only enjoyed writing courses but were also enthusiastic about the lessons. Their active participation in group activities and submission of writing task sheets with substantial sentences served as positive indicators of heightened motivation, potentially driving them to explore sentence writing further in the future.

CONCLUSION

The adoption of colorful semantics demonstrated substantial academic benefits, fostering improvements in students' writing skills. While acknowledging the challenges in enhancing writing proficiency, the researcher intends to persist as an action researcher in education, aiming to bridge theory and practice dynamically. Continued exploration of innovative teaching methods and ongoing self-reflection will contribute to further advancements in teaching sentence construction at the primary level. Colorful Semantics as an engaging instructional approach that enhances students' grammar, vocabulary, comprehension and syntax skills through its color-coded formatting and game-based build-a-sentence task- foundational linguistic competencies integral for academic achievement.

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