DAVAO RESEARCH JOURNAL

https://davaoresearchjournal.ph P-ISSN 2244-4432 E-ISSN 2984-7125

The Magic of Multi-Sensorial Learning: Enhancing the Letter Formation among Kindergarten through Rainbow Writing

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Submitted: 23 Aug 2024
Revised: 21 Sep 2024
Accepted: 06 Jan 2024
Published: 05 Mar 2025

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ABSTRACT

Letter formation is recognized as a crucial aspect in early literacy, prompting this study to determine the effectiveness of rainbow writing in enhancing the letter skills of kindergarten pupils. A quasi-experimental research design was utilized, with the control group receiving traditional instruction and the experimental group receiving rainbow writing as an intervention. The pre-test results indicated that the respondents in the control group got a grade of 83.13% and the experimental group with 77.08% which did not meet the expectation of a passing score. Post-test results however, revealed a minimal improvement in the student's performance with a grade of 86.30% in the control group indicating a very satisfactory remarks and the experimental group's performance significantly improved compared to the control group 96.88% indicating an outstanding remarks. This study has important implications for educators and early childhood education (ECE) institutions seeking to address the enhancement of letter formation among kindergarten pupils with the use of rainbow writing for it provides a rich and memorable learning environment for young learners through tracing and writing letters using various colors, children can enhance their muscle memory and proprioception, making the process of letter formation more memorable and meaningful.

Keywords: Auditory learning, kindergarten, kinesthetic-tactile learning, multisensory learning theory, rainbow writing, visual learning

How to cite: Lumor, G. M. D., Orgada, F. J. D., Mendez, M. L. S. P. (2025). The Magic of Multi-Sensorial Learning: Enhancing the Letter Formation among Kindergarten through Rainbow Writing. *Davao Research Journal*, 16(1), 18-28. https://doi.org/10.59120/drj.v16i1.295

INTRODUCTION

Forming letters accurately and efficiently are fundamental skills young children should have to learn to read and write (Graham and Harris, 2016). According to Anders and Guzzetti (2020), the earlier a child is exposed to literacy, the more successful a student will become. If a child struggles with literacy, it will hinder him or her in all other subjects (Njoroge and Gathigia, 2018). In addition, one of the first exposure to literacy learning that children will have is to recognize and form letters (Byrne, 2014). Alphabet knowledge is usually taught through formal reading and writing instruction (Treiman, 2013). Instruction in reading and writing typically begins in a child's first year of primary school, generally around the age of six (Gerde et al., 2019). In contemporary times, children are increasingly learning to recognize and form letters during their toddler and preschool years, typically between the ages of two and five (Lewis et al., 2014). Children learn most effectively through diverse instructional approaches. When instruction is meaningful and purposeful, children are more likely to learn and achieve success (Bergman et al., 2019).

Rainbow writing is a practical approach to enhancing letter formation skills in kindergarten (Collante et al., 2020). It is part of the multisensory approach in early childhood education, which incorporates a tactile and visually stimulating activity that encourages young children to use different senses simultaneously, such as touch and sight, to reinforce their learning experience (Rostan, 2020) and also stimulates different areas of the brain promoting better retention and recall of learned concepts (Simmons and Singleton, 2018). In rainbow writing, children trace letters using different colored markers or crayons, creating multiple layers of writing that reinforce muscle memory and visual recognition (Tkach and Gallagher, 2020). This repetitive practice helps to solidify proper letter formation and improves overall penmanship (Ozmen, 2016). A study by Barratt-Pugh (2021), has shown that when letter formation is linked to rainbow writing, young learners exhibit higher engagement and motivation in their writing tasks.

Rainbow writing provides a rich and memorable learning environment for young learners. By tracing and writing letters using various colors, children can enhance their muscle memory and proprioception, making the process of letter formation more memorable and meaningful (Wolsey et al., 2017). Schott (2015), stated that this technique also facilitates the visual differentiation of letters and helps the children recognize and reproduce the correct formation of each letter. The vibrant and visually stimulating method of Rainbow writing engages children effectively, enhancing their participation and motivation in the learning process within a research context. When someone is familiar with a subject, they are more likely to remember it and expound on it (Paguyan and Taoc, 2022). It fosters a positive attitude toward learning and provides opportunities for individual expression, which motivates creativity in early childhood education (Davis et al., 2013).

For literacy development to be acknowledged, more research needs to be conducted that explores explicitly an effective intervention in enhancing the letter formation skills of young learners. Some studies only focus on formal reading and writing instruction in primary school and neglect the crucial early childhood education period where the children are exposed to letter recognition and formation (Allen, 2015). Limited studies have also explored the impact of motor skills development in improving letter formation skills in kindergarten, especially in children with below-average motor skills and poor hand-eye coordination (Battaglia, 2018). Some studies have explored general approaches to early writing skills, such as pencil-and-paper exercises. However, the potential of multisensory techniques like rainbow writing to impact letter formation significantly has yet to be adequately investigated (Fox, 2023). Therefore, there is a need for empirical evidence on young learners' engagement and motivation levels when using rainbow writing for letter formation, as well as its impact on their overall penmanship and retention of learned concepts (Jones, 2015). Addressing this gap is essential for developing evidence-based strategies that align with the developmental needs and learning preferences of young learners (Cardino, 2020).

To become a productive and reliable research study, the researcher will establish a general objective of determining the effectiveness of rainbow writing in enhancing letter formation

among kindergartners in Cateel Central Elementary School. The specific objectives were as follows: To determine the level of the pre-test scores between the control and experimental groups in terms of letter formation among kindergartners in Cateel Central Elementary School. To determine the significant difference in pre-test scores between the control and experimental groups in terms of letter formation. To determine the level of the pre-test scores between the control and experimental groups in terms of letter formation among kindergartners in Cateel Central Elementary School; and to determine the significant difference in post-test scores between the control and experimental groups in terms of letter formation.

This study seeks to provide significant insights into the efficacy of rainbow writing in improving letter formation in kindergarten. Based on its findings, it aims to offer practical recommendations for educators, parents, and policymakers (Ozmen, 2016). Ultimately, improving letter formation in kindergarten can have a long-lasting impact on children's literacy development and academic success (Thomas, 2020). Understanding the relationship between letter formation and rainbow writing can provide educators with evidence-based strategies to support young learners in developing their writing skills (Collante et al., 2020). Improving letter formation in kindergarten has broader societal implications by fostering literacy development and academic success from an early age (Brown et al., 2015).

This study is grounded in the Multisensory Learning Theory, also known as VAKT (Visual-Auditory-Kinesthetic-Tactile) which implies that students learn most effectively when information is presented through varied modalities (Moustafa, 1999; Murphy, 1997). Engaging multiple senses during instruction can also enhance learning and skill development (Smed et al., 2014). The definition of this theory is rooted in the idea that different individuals have different learning styles and preferences (Dantas, 2020). In other words, this theory integrates sensory activities where the students can see, hear, and touch educational materials during the teaching-learning process (Dantas, 2020). According to Murphy in 1997, some of the example activities that represent the four modalities in learning are tracing, hearing, writing, and seeing. Based on this principle, learners' understanding and retention of the material improve when they are exposed to information through different sensory modalities (Murphy, 1997). In addition, by incorporating various sensory experiences into the learning process, educators can cater to the diverse needs of their students (Gardner, 2023). By combining sensory input, multisensory learning provides a richer and more comprehensive learning experience (Stein et al., 2014). Some educational programs have effectively adopted multisensory learning theory in various educational contexts and subjects (Alenizi, 2019). One example is Wilson Elementary School. There was a dramatic increase in standardized test scores from the 20th and 30th percentiles to the 50th, 60th, and even 70th percentiles in math and science (Moustafa, 1999). Another study about the Impact of Multisensory Language Instruction on Reading Skills in ESL Learners(Korkmaz and Karatepe, 2018) indicated that using visual, auditory, and kinesthetic strategies improved phonological awareness, decoding abilities, and overall reading proficiency in ESL students. Educational researchers have also observed that multisensory activities can accelerate students' ability to associate letters or words with corresponding sounds. Employing multimedia activities to engage students represents an effective strategy for enhancing their reading proficiency (Taljaard, 2016). A study conducted in 2018 utilizing fMRI technology, which assesses brain activity through changes in blood flow, revealed that children exhibiting superior literacy skills demonstrated heightened interactivity among various brain regions. It indicates that reading is a comprehensive brain function, underscoring the importance of adopting multisensory approaches in future literacy instruction. For older students, multisensory activities are also beneficial in teaching complex reading skills such as critical thinking and advanced comprehension. Even minor activities involving multiple senses can cultivate the integration of the entire brain during reading and writing tasks (Pawlowski, 2019). This research underscores that there is no universal method for teaching literacy that suits all students equally. Different students respond variably to diverse instructional activities, emphasizing the efficacy of multisensory learning as the optimal approach to reach all students effectively (Dalton, 2019). It is essential to carefully observe what works and does not work for your students and actively seek out activities that resonate with struggling

 DOI: https://doi.org/10.59120/drj.v16i1.295

students (Zacharias, 2015). In addition, according to Harvard professor Dr. Howard Gardner, traditional concepts of learning and intelligence are overly restrictive, as individuals can possess proficiencies across various forms of intelligence. Teaching students in alignment with their intellectual strengths can facilitate their comprehension of challenging subjects.

MATERIALS AND METHODS

Research locale and duration

The study occurred at Cateel Central Elementary School on Castro Avenue, Poblacion, Cateel, Davao Oriental. The kindergarten classrooms were in Building 19, beside Building 17, and in front of Building 20. The researchers, conducted the study in this school for based on the Kindergarten-Loyalty adviser there are a lot of pupils who struggle in letter formation in this specifically on her section. Additionally, the intervention or data gathering from the respondents lasted 10 sessions, with a minimum of 50 minutes per session.

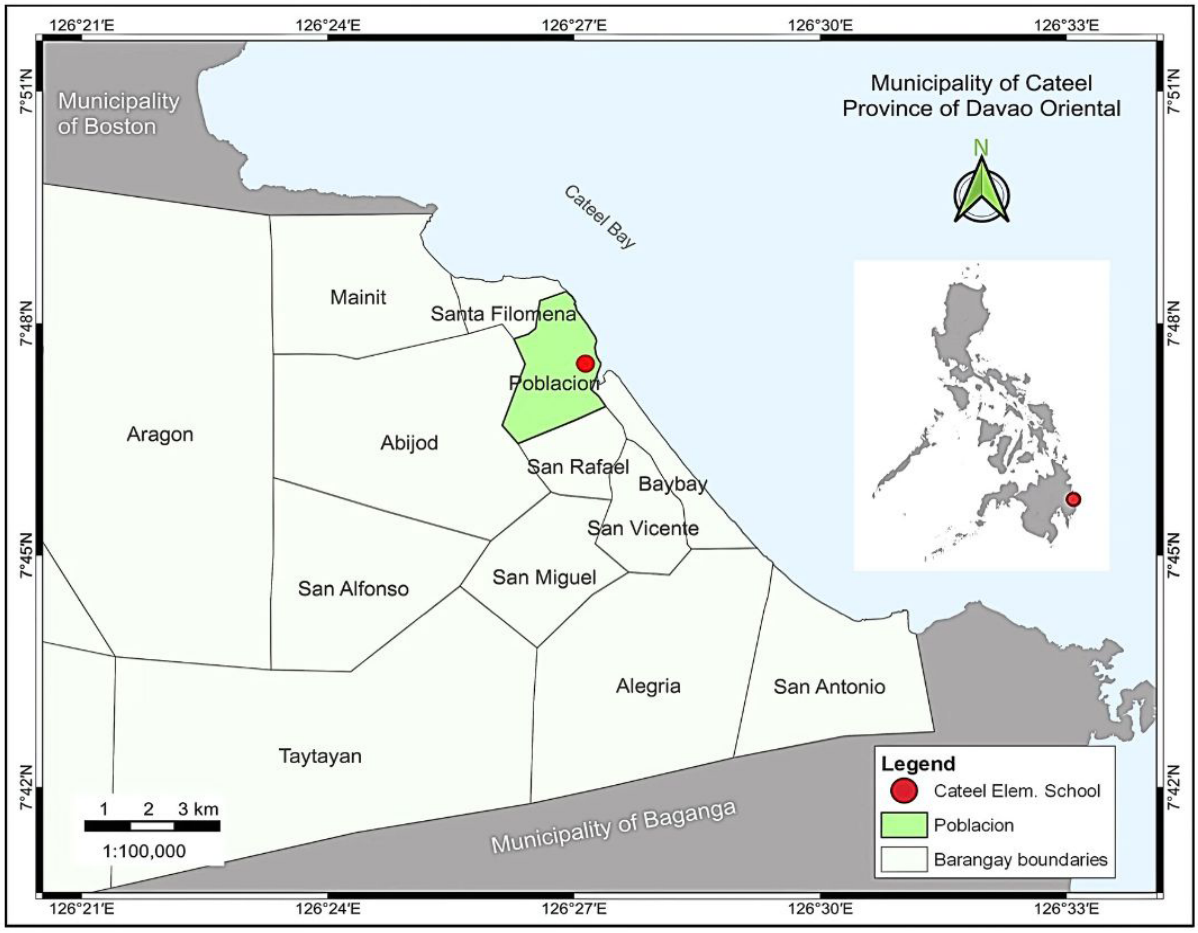

Figure 1. Map showing Cateel Central Elementary School.

Research design

The study utilized a quantitative research design, specifically a quasi-experimental design where the respondents were divided into two groups, namely the control group, which was subjected to traditional teaching, and the experimental group, which was the subject of rainbow writing in order to enhance letter formation among kindergarten pupils. A quasi-experimental design is a design that is intended to prove a causal connection between an independent and dependent variable (Thomas, 2022). As a scientific research method, it involves manipulating one or more independent variables while controlling other potentially affecting factors to observe and measure the effects on the outcomes of interest (Langcuyan et al., 2024). Moreover, it allowed for the implementation of the rainbow writing intervention in a real-world setting while maintaining some control over variables. It enabled the comparison of the letter

formation outcomes of the intervention group with those of a control group that did not receive the intervention. It was a feasible and ethical approach in kindergarten for this study to gather meaningful data on the effectiveness of rainbow writing in enhancing letter formation skills.

Respondents of the study

The respondents of the study were kindergarten pupils at Cateel Central Elementary School. This meant that the pupils in Kindergarten-Loyalty, both in morning session with 20 pupils and the afternoon session with 20 pupils as well, were all the study respondents. Moreover, the respondents were grouped as experimental and control groups using tossing a coin. In both sessions, those students who got below 22 correct English alphabet letters were the respondents.

Data gathering procedure

The first step the researcher did was to seek an ethical clearance from the Research Ethics Office (REO). The next step was a letter requesting permission was sent to the principal of Cateel Central Elementary School. The research matters were discussed with the advisers of the two selected sections and the pupils, who confirmed their approval to participate in the study's data collection. Afterwards, the researcher created a researcher-made worksheet and was responsible for reproduction for distribution. Next, the researcher administered the pre-test worksheet to the control and experimental groups of all the pupils in Kindergarten-Loyalty both the morning and afternoon session. After identifying which group was the experimental and control group through a tossed coin the researcher spent 10 sessions with a minimum of 50 minutes per session in Kindergarten-Loyalty. The control group, which was in the morning session, received a traditional teaching approach is where the respondents utilized a paper and pencil in forming the letters. In contrast, the experimental group, which was in the afternoon session, received instructions on how to use rainbow writing as an intervention. The researcher provided each pupil the materials needed. In implementing this technique the alphabets were divided into three groups; straight lines, combination of straight and slanting lines, and combination of straight and curved lines. During its implementation, the researchers guided each pupil in forming the alphabets accurately while the teacher observed at the back and afterwards discussed about the intervention. The researchers also communicate to the teacher about the results and improvements the students have done. Upon the completion of the study, the printed materials of the pupils were compiled into a booklet and was given to the teacher. The sixth step, the researcher administered the post-test in both control and experimental groups at the end of the instructions. Lastly, the post-test worksheets were collected, and the data was tabulated by the assigned statistician for the reliable interpretation of data resulting from the intervention implemented. After receiving the data result with its remarks, the researchers presented a concise and clear discussion. The researchers followed the following steps to produce a valid and reliable research output.

Respondents of the study

The study respondents were kindergarten pupils at Cateel Central Elementary School. This meant that the pupils in Kindergarten-Loyalty, both in morning and afternoon sessions, were all the study respondents. Moreover, the respondents were grouped as experimental and control groups using tossing a coin. In both sessions, those students who got below 22 correct English alphabet letters were the respondents.

Research instrument

In order to have appropriate data, the researchers administered researcher-made pre-test and post-test worksheets about tracing, writing, and copying the 26 letters of the English alphabet. Both were designed to measure how the students enhanced their letter formation skills. Moreover, the worksheets were anchored in the K to 12 Curriculum, specifically in the Standards and Competencies for Five-Year-Old Filipino Children, which was to trace, copy, and write the letters of the alphabet: straight lines (E, F, H, I, L, T), combination of straight and slanting lines (A, K, M, N, V, W, X, Y, Z), combination of straight and curved lines (B, C, D, G, J, O, P, Q, R, S, U), and rounded strokes with loops (LLKH-00-3).

DOI: https://doi.org/10.59120/drj.v16i1.295

Data analysis

After completing the data-gathering procedure, which was done through the pre-test and post-test design of worksheets, the raw data was tabulated to encode the results. After tabulating the raw data, the researcher pre-observed the test results of the experimental group, especially in the post-test part, compared to the control group. If it was dominated, it meant that there was an initial assumption that the intervention used was quite effective. However, the result was only confirmed as a reliable result to be presented if a systematic interpretation of data was given. The expert used the Statistical Package for the Social Sciences (SPSS), a software program for quantifying data analysis to analyze and achieve reliable, realistic, and proper interpretation of the gathered data. Moreover, the statistical tools used were mean and independent sample-t-tests.

Mean. This statistical tool was used to determine (1) the level of pre-test scores and (3) the post-test scores of the respondents from the two groups. In other words, mean was a tool appropriately utilized to answer objectives 1 and 3.

Table 1. DepEd K-12 grading system.

GRADING SCALE	INTERPRETATION
90-100	Outstanding
85-89	Very Satisfactory
80-84	Satisfactory
75-79	Fairly Satisfactory
75 Below	Did Not Meet Expectations

Independent sample t-test. This statistical tool determined (2) the significant difference in pre-test results between the controlled and experimental groups and (4) the significant difference in post-test scores between the controlled and experimental groups. In other words, the tool mentioned earlier was utilized to answer objectives 2 and 4.

RESULTS

Table 2 presents the level of pre-test scores between the control and experimental groups. Results showed that the respondents, both the control and experimental groups, had a failing grade or did not meet the expectation of achieving a passing score. The pre-test scores of the respondents in the control group obtained an average score of 10.17, with a corresponding grade percentage of 66.95. According to the K-12 Grading Scale interpretation, this indicates that students did not meet the expected standards. In contrast, the experimental group obtained an average score of 13.03, with a corresponding percentage of 71.72, which, similar to the control group, did not meet the expected standards.

Table 2. Level of pre-test scores between the control and experimental groups.

Group	Total score	SD	Mean	Grade percentage	Remarks
Control	26	6.57	17.23	83.13	Satisfactory
Experimental	26	6.24	14.08	77.08	Fairly satisfactory

The difference of pre-test scores between control and experimental group

Based on the results presented in this table, their level of knowledge in answering pre-test scores was not the same without any intervention. Most of the pupils whose academic performance was significantly impacted, particularly in letter formation, are those who did not have the opportunity to be interfered with regarding their learning issues (Peng and Kievit, 2020).

Table 3. Mean comparison between pre-test scores of control and experimental group.

Type of test	Mean	SD	t-value	p-value	Interpretation
Control Experimental	17.23 14.08	6.57 6.24	1.255	0.222	Pre-test scores between the two groups do not differ significantly.

Post-test scores of the control and experimental group

Table 4 shows that there are no similarities in the remarks in both groups regarding enhancing the letter formation in Kindergarten. The experimental group got 96.88, while the control group got only 86.38. It implies that the experimental group exposed to rainbow writing got the highest post-test scores. Several factors affect the results of experiment groups. First, rainbow writing reinforces muscle memory and visual recognition because children trace letters using different colored markers or crayons, creating multiple layers of writing (Tkach and Gallagher, 2020). Second, this repetitive practice helps to solidify proper letter formation and improves overall penmanship (Ozmen, 2016).

Table 4. Level of post-test scores between the control and experimental groups.

Group	Total score	SD	Mean	Grade percentage	Remarks
Control	26	5.66	18.38	86.38	Very satisfactory
Experimental	26	1.56	24.38	96.88	Outstanding

The difference of post-test scores between control and experimental group

The table shows a significant difference in post-test results between the control and experimental groups in terms of enhancing letter formation. Based on the interpretation, it could be stated that after the intervention in rainbow writing to the experimental group during the duration of the lesson, it has been found that this type of intervention is indeed effective because of the higher post-test scores of experimental respondents compared to the control group. The statistical significance between the pre-test and post-test scores, supports this interpretation, underscoring the strategy's effectiveness in facilitating information processing and memory retention (Ligasan and Doysabas, 2024).

Table 5. Mean comparison between post-test scores of control and experimental group.

Type of test	Mean	SD	t-value	p-value	Interpretation
Control	18.92	5.66	-3.353	0.003	Post test scores between the two groups differ significantly
Experimental	24.38	1.56			

DISCUSSION

In Table 2, results presented were affected by many factors, which resulted in their satisfactory performance. First is conventional writing, which begins with children learning to write the letters of the alphabet (Sulzby, 2014). The importance of letter-writing skills is supported by empirical evidence indicating that the ability to write letters is an excellent predictor of early spelling, a word-level writing skill (Puranik et al., 2019). In addition, one of the first exposures to literacy learning that children will have been learning is to recognize and form letters (Byrne, 2014). Once a child can do these, it will help him or her in reading and writing (Campano, 2019). Moreover, if a child does not know the letters of the alphabet, his or her ability to read and write will be significantly hindered (Ehri, 2013). Second, because preschoolers in this study ranged in age from 5 to 6 years old, it was essential to include age as a student-level factor (Puranik et al., 2014). Accounting for children's age was significant for two reasons. First, given that writing requires some fine motor control, younger children may have more difficulty with letter writing than older children, even when other factors related to letter writing are equal (Puranik et al., 2014). Second, we expected that letter-name knowledge would significantly contribute to letter-writing skills (Puranik et al., 2013). The number of strokes in a letter could be a potential factor affecting letter-writing skills, especially when children first learn to write (Puranik et al., 2014). It encompasses each letter's strokes, curves, and lines, dictating their visual appearance and legibility (Goose et al., 2018). Therefore, writing skills can be a permanent learning factor (Dhanya and Alamelu, 2019). Writing is learned in the first year of elementary school (Kodan, 2016). In this period, the shapes of letters are learned first (Brunel, 2020). Then, how these shapes are produced, directions, and

DOI: https://doi.org/10.59120/drj.v16i1.295

writing style are learned, and the last stage of writing forms is started (Duran, 2019). In the continuation of educational life, writing skills continue as a process in which feelings and thoughts are conveyed to independence and continue to be developed (Smith, 2013). Finally, letters differ based on symmetry. Symmetry or correspondence in shape and relative position of parts on opposite sides of a dividing line or median plane could influence letter writing (Puranik et al., 2014). Children learning the Latin alphabet perform better on writing and copying tasks with symmetrical letter forms, such as the letter H, than asymmetrical letter forms, such as J (Treiman and Kessler, 2022). According to Puranik et al. (2015), who examined letter writing in preschool children, reported that 5 of the 10 letters that children foundeasiest to write (A, B, T, I, and P) had high textual frequencies; however, they also reported that the remaining 5 of the 10 letters that were easiest for children to write (O, L, X, H, and E) were not among the most frequently occurring upperletter case in English.

The pre-test results showed that the control group got the higher mean score. It means that they obtained a higher grade percentage on the pre-test itself. Other factors contributed to the higher performance. One factor was the pupils' exposure to letter formation activities (Olao, 2016). Another explanation for the interpretation of the table is the home literacy environment, which significantly supports and fosters a pupil's letter formation skills (Dong et al., 2020). Literacy practices at home enhance children's abilities in letter formation, making these skills more developed. Reade (2017), also posited that the activities parents engage in to encourage their children's literacy skills at home and their general attitudes and beliefs regarding their children's learning comprise the home learning environment (AlAhmar, 2022). Children's learning experiences in letter formation are also influenced by socioeconomic class and parents' skills and interests in literacy. A rich home literacy environment, where parents actively participate in and value literacy activities, positively impact children's early writing skills and ability to form letters accurately (Peixoto, 2022). These findings underscore the importance of a supportive home literacy environment in developing letter formation skills. Tailoring interventions to include parental involvement and addressing socioeconomic factors can significantly enhance children's early literacy development (Dede et al., 2017).

Based on the results shown, there are no similarities in the remarks in both groups regarding enhancing the letter formation in Kindergarten. The experimental group got 96.88, while the control group got only 86.38. It implies that the experimental group exposed to rainbow writing got the highest post-test scores. Several factors affect the results of experiment groups. First, rainbow writing reinforces muscle memory and visual recognition because children trace letters using different colored markers or crayons, creating multiple layers of writing (Tkach and Gallagher, 2020). Schott (2015), stated that this technique also facilitates the visual differentiation of letters and helps the children recognize and reproduce the correct formation of each letter. Second, this repetitive practice helps to solidify proper letter formation and improves overall penmanship (Ozmen, 2016). Moreover, a study by Barratt-Pugh (2021), has shown that when letter formation is linked to rainbow writing, young learners exhibit higher engagementand motivation in their writing tasks. Third, it fosters a positive attitude towards learning and provides opportunities for individual expression that motivates creativity in early childhood education (Davis et al., 2013). Rainbow writing provides a rich and memorable learning environment for young learners. By tracing and writing letters using various colors, children can enhance their muscle memory and proprioception, making the process of letter formation more memorable and meaningful (Wolsey et al., 2017). The study underscores the importance of rainbow writing in enhancing letter formation among kindergarten students, effectively illustrating the principles of multisensory learning theory. Rainbow writing, which involves tracing letters with various colors, engages visual, auditory, and kinesthetic senses, making learning more engaging and aiding in letter shape retention (Wolsey et al., 2017). The repetitive, lcolorful tracing helps students internalize letter forms by seeing and feeling the motions, leading to improved retention and fine motor skill development essential for writing (Pangrazi and Beighle, 2019). Teachers found rainbow writing easy to integrate into existing curricula, reporting noticeable improvements in handwriting and letter formation (Holcomb, 2023). Tactile input can be beneficial,

but it is only sometimes necessary for every activity, including rainbow writing (Greutman, 2019).

Overall, rainbow writing is a promising strategy that supports the multisensory learning theory, enhancing engagement and learning outcomes in early education (Gustafson, 2018). The treated respondents had outstanding remarks on the post-test because throughout the intervention process that utilized rainbow writing as instructional materials, they could express themselves creatively in forming every straight, slanted, and curved line in the alphabet.

The effectiveness of the intervention was supported by (Collante et al., 2020). Rainbow writing is a practical approach to enhancing letter formation skills in Kindergarten. It is part of the multisensory approach in early childhood education, which incorporates visually stimulating activity that encourages young children to use different senses simultaneously to reinforce their learning experience (Rostan, 2020) and also stimulates different areas of the brain, promoting better retention and recall of learned concepts (Simmons and Singleton, 2018). Before the intervention of rainbow writing, the pre-test results were rated fairly satisfactory in performance. However, it goes beyond when the intervention has already been conducted. The experimental group got 96.88, which was interpreted as outstanding. It means that the experimental group has enhanced its letter formation. Moreover, Multisensory Learning Theory, "also known as VAKT (Visual-Auditory-Kinesthetic-Tactile), implies that students learn best when information is presented in different modalities (Mercer and Mercer, 1993; Murphy, 1997) and engaging multiple senses during instruction can enhance learning and skill development (Smeda et al., 2014). Thus, while tactile elements can enhance certain multisensory activities, they are only sometimes crucial, especially in activities like rainbow writing, where visual and kinesthetic inputs are the primary focus (Emily, 2018).

Moreover, Multisensory learning has found significant application in early education, particularly in enhancing letter formation skills among kindergarteners (Rostan, 2020). This approach influences the understanding that children learn best when engaged in activities that stimulate multiple senses simultaneously, and this is done by incorporating visual, auditory, and kinesthetic elements into the learning process (Syofyan, 2018). By incorporating different colors and encouraging children to trace and write letters, rainbow writing stimulates their visual and kinesthetic senses, providing a holistic learning experience (Daly and Beloglovsky, 2014).

Rainbow writing can be utilized in kindergarten to enhance the correct formation of the english alphabet by using colored markers or crayons in writing each letter repeatedly. The materials needed for this are crayons and printed materials of each letter of the alphabet.

CONCLUSION

The foremost goal of this study is to test the effectiveness of rainbow writing in enhancing letter formation, as responded to by kindergarten pupils at Cateel Central Elementary School. Moreover, this quasi-experimental research study focused on the problem of kindergarten pupils having difficulty in forming letters. In studying this observable problem, the researcher found a recommended teaching strategy to help students enhance their letter formation: rainbow writing. Rainbow writing effectively enhances letter formation skills in Kindergarten (Collante et al., 2020). In rainbow writing, children trace letters using different colored markers or crayons, creating multiple layers of writing that reinforce muscle memory and visual recognition formation and improves overall penmanship (Ozmen, 2016).

Every early childhood education institution, such as preschools and kindergartens, both in private and public sectors, can adopt the rainbow writing technique in enhancing their instructional practices through making booklets of the English alphabet. They can implement this technique in showing the pupil how to accurately form each letter. This can also provide more engaging learning experiences to the pupils that will support letter formation skills at an early age for this intervention will help capture the children's attention and motivation, leading to increased participation and engagement in the learning process. The kindergarten teachers can implement rainbow writing by introducing the concept of rainbow writing to the learners

DOI: https://doi.org/10.59120/drj.v16i1.295

first, which is about tracing and writing the letters of the alphabet using different colors, markers, and more, and doing it repeatedly by then, they can facilitate a group and individual practice sessions. The letters of the alphabet will be grouped into three: straight lines, a combination of straight and slanting lines, and a combination of straight and curved lines so the learners can differentiate the letters of the alphabet well and support students in developing accurate and efficient letter formation.

ACKNOWLEDGMENT

We warmly thank everyone who, in any way, contributed to the successful completion of our thesis paper, especially our respondents, who participated in the data gathering. Your cooperation and assistance have been deeply appreciated.

FUNDING SOURCE

The study was self-funded.

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