Effectiveness of Tracing Activities in Improving Basic Three Pupils' Writing Skills at Evangelical Presbyterian Primary School in the Tamale Metropolis

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ABSTRACT

The purpose of this study was to determine the effectiveness of tracing activities in improving Basic Three (3) pupils' writing skills at E.P. Primary School in the Tamale Metropolis, Northern Region, Ghana. An experimental research design was used. Pre-intervention, intervention, and post-intervention stages were employed to assess pupils' handwriting skills. The population was seventy-two (72), and thirty-seven (37) pupils were randomly selected for the study. A pre-intervention test diagnosed the extent of the problem, identifying strengths and weaknesses to inform interventions. A post-test was conducted to evaluate the effectiveness of tracing activities in enhancing writing skills. A simple percentage count was used to analyze the results. Findings revealed that 31 out of 37 pupils failed to score the pass mark of 15 out of 30 in the pre-intervention test. However, after the intervention, 29 pupils achieved 15 or more in the post-test. This demonstrates significant improvement in writing abilities among Basic Three pupils at E.P. Primary School following the implementation of tracing activities. The pupils' performance in the post-test further confirmed the intervention's effectiveness.

Keywords: Tracing, Handwriting, Pre-Intervention, Intervention, Post-Intervention

INTRODUCTION

The Focus of the Study

Writing is not as simple as it seems to be. Writing is a mental effort demanding and thus a time-consuming one: it is far from being a simple matter of transcribing language into written symbols; it is a thinking process in its own right. It demands conscious intellectual effort which usually has to be sustained over a considerable effort of time (Kumburu, 2018). According to Khan & Sharma (2020), writing is important because it's used extensively in higher education and the workplace. If students don't know how to express themselves in writing, they won't be able to communicate well with teachers, peers, or just about anyone else. Also, Lukuwi and Seni's (2022), study has begun to show that writing leads to improved reading achievement, and reading leads to better writing performance.

Handwriting is the act of forming letters and words on a page using a writing tool, such as a pen or pencil. Handwriting is an important skill and the early development of handwriting lays the foundation for writing development (Thomson et al. 2016). At times, in examinations, people with legible and efficient handwriting are awarded some marks (Rajarshi, 2014).

Handwriting places the earliest constraints on writing development (Thomson et al. 2016). Children who experience difficulty mastering this skill may avoid writing and develop a mindset that they cannot write, leading to arrested writing development (Edwards, 2018). If children cannot form letters with reasonable legibility and speed, they cannot translate the language in their minds into written text (Edwards, 2018). Practicing of addressing poor handwriting is centered largely on issues relating to form and quality. It involved what was called the synthetic method of writing in which horizontal lines, vertical lines, oblique, and curves were mastered and combined in letters which in turn were used in writing words (Mutwarasibo, 2014).

Research has shown that tracing is an activity that strengthens handwriting by helping children recognize the shape a letter takes while also practicing the appropriate size of the letter and correct formation of the letter (Wistrom, 2016). Tracing letters is an ideal gateway to mastering the size, slant, and formation of letters. Tracing also provides children with the opportunity to further refine their fine motor skills and concentrate on forming artistic letters (Leo, 2019). It has also been shown that tracing improves handwriting for children as young as preschool (Wistrom, 2017).

Statement of the Problem

Handwriting skills are essential to academic success. Learners who have problems with their handwriting can make it difficult for teachers to read and understand written work, which can lead to lower grades and reduced academic achievement (Salls et al, 2017). Handwriting difficulties have a profound impact on a child's academic success and self-esteem. Proficiency in handwriting is significantly correlated with academic achievement and is a predictor of general learning abilities. Poor handwriting may also lead to lower academic attainment; children who find handwriting more difficult and effortful may become fatigued more quickly than their peers and may be less able to demonstrate their knowledge and comprehension through written assignments (Rashid et al. 2020). Learners in different countries, including Ghana, have challenges with handwriting.

The majority of primary school students in Ghana showed poor handwriting abilities. This had an impact on their academic performance in areas like math and English. The study suggested giving students more opportunities to improve their handwriting abilities (Amos & Abigail, 2019). Struggling with handwriting can lead to a self-fulfilling prophecy in which students avoid writing, come to think of themselves as not being able to write, and fall further and further behind their

peers (Goyen & Duff, 2020). It was therefore worthy for this study to be conducted to examine the use of tracing activities to improve Basic Three (3) pupils' handwriting skills at E.P. Primary in the Tamale Metropolis. During a month of teaching observation at E.P. Primary School in the Tamale Metropolis of the Northern Region, it was observed that many of the Basic Three (3) pupils had serious difficulties in writing. In collaboration with the class teacher, the study attempts to use tracing activities to improve the pupils' writing abilities.

Research Objective

To determine the effectiveness of tracing activities in improving the basic three pupils' writing abilities at E.P. Primary School in the Tamale Metropolis.

METHODOLOGY

Research Approach

Research approach is a plan and procedure that consists of the steps from broad assumption to detailed methods of data collection, analysis, and interpretation (Thompson et al. 2016). Quantitative research approach was used to classify variables in the study. Quantitative research is the method of employing numerical values derived from observations to explain and describe the phenomena that the observations reflect (Taherdoost, 2022). It also applies the empirical evaluations, intending to determine to what degree a norm or standard is fulfilled in a particular policy or program.

Research Design

A research design is the researcher's plan of how to understand some group or phenomenon in its context (Ary et al., as cited in Subbey, 2023). Based on that theory, this study employed an

experimental research design to determine the effectiveness of tracing activities in improving Basic Three (3) pupils' writing skills at E.P. Primary School in the Tamale Metropolis. For our purposes, there are two ways to set up experiments: pre- and post-test, and post-test only. Pre- and post-tests are commonly referred to by the name "before and after" experiments (Roni, et al. 2019).

The setting of the Study

This study was conducted in E.P. Primary C in Tamale. The school is located in Kaladan and shares boundaries with Mahaliya Islamic School.

Target Population

The target population for the study was pupils at the selected school. The target population was fifty-seven (57), consisting of twenty-four (24) males and thirty-three (33) females.

Sample Size and Sample Technique

The study employed a simple random sampling technique to sample thirty-seven (37) respondents, which included sixteen (16) males and twenty-one (21) female participants of Basic three (B3) in E.P Primary School for the study. Simple Random Sampling is the "simplest and most common method of selecting a sample, in which the sample is selected unit by unit, with equal probability of selection for each unit at each draw" (Singh, 2017, p. 71).

Data Collection Procedure

Teacher-made tests were used to ascertain pupils' performances in writing before, during, and after the intervention. Kumar & Lal (2024), a teacher-made test is an assessment created by an instructor to evaluate students' understanding of a particular subject or topic. The test enables the researchers to gather information and know the extent of the problem during the intervention process (Solhauge et al, 2020). This was made up of a Pre-test, where pupils were tested to diagnose their handwriting difficulties before implementing the intervention, and a post-test was conducted after the intervention to ascertain the effectiveness of the intervention on the handwriting skills of pupils in E.P. Primary School.

RESULTS

Table 1: **The Demographical Characteristics of Respondents**

Gender of Learners	**Frequency**	**Percentage (%)**
Males	16	43.2
Females	21	56.8
Total	37	100
Ages of Learners	Frequency	Percentage (%)
8 – 10	6	16.2
10 -12	19	51.4
15 +	12	32.4
Total	**37**	**100**

Source: Field Survey, 2024

From Table 1, 16 (43.2%) of the participating learners were males, while a high number of 21 (56.8%) of the participating learners were female out of the total population of thirty-seven (37) participants. Also, 6 (16.2%) of the participating learners were 8 – 10 years old. 19 (51.4%) of

them out of the total population of thirty-seven (37) were within the age range of 10 – 12. Again, 12 (32.4%) were 15 years and above. This demographic breakdown reveals a higher representation of females among the participants and a predominant concentration in the 10 – 12 age range.

Pre-Intervention Stage

The pre-intervention data serve as a baseline for comparisons and help inform the development of effective interventions during the later stages of the research process. During this stage, the researchers observed the teaching and learning process of the basic three class teacher and realized that most of the learners were finding it very difficult to write what was on the board, and also, marking and going through their exercise books several times made me confirm that they were having problems with handwriting. To confirm the facts gathered through observation, the study decided to conduct a test. The pupils were supposed to write the sentence five times in their books. Explanation was given to pupils to be certain of what was to be done. Half an hour was allowed for pupils to write the sentence. The books were collected and scored a total mark of 37.

Table 2: **Pre-Intervention Test Scores**

Scores	**Number of Pupils**	**Percentage (%)**
0 – 4	22	59.5
6 – 14	9	24.3
15 – 18	5	13.5
19 – 25	1	2.7
Total	**37**	**100**

Source: Field Survey, 2024

Table 2 indicates that the majority of the participants, 22 (59.5%), had below the pass marks, ranging from 0 – 4. Also, 9 (24.3%) of the pupils scored below the pass marks, ranging

from 6 – 14. Again, 5 (13.5%) of the participating learners had the pass marks ranging from 15 – 18. Only one learner scored among the highest marks, ranging from 19 – 25 during the pre-intervention test. Based on the above data analysis, one can confidently say that the basic three pupils' writing abilities at E.P. Primary School in the Tamale Metropolis are very poor and nothing to write home about, resulting in their poor academic performance. This finding confirmed the observation of the researchers through grading E.P.'s basic three pupils' class exercises and homework. Also, Rajarshi (2014), one's ability to write a way that is both legible and efficient affects school performance and academic advancement because writing is the primary means for students to communicate and display what has been learned to their teacher. At times, in examinations, people with legible and efficient handwriting are awarded some marks.

Intervention Stage

After marking the pupils' work, the researchers realized that most of the pupils wrote their words closely together without spacing them. Also, the letters and words were not legible and bold enough, making it very difficult to read. In addition to that, the researchers took notice of every problem mentioned previously in the pre-intervention. As a result of these revelations, the researchers designed an intervention based on early preparatory tracing activities. This was to last for three weeks. The researchers met the pupils three times a week for forty minutes each meeting.

On the first day, the researchers took learners through the following early writing skills. We guided learners on (1) how to hold a pencil correctly and firmly; (2) how to keep the book/paper on which they will write firmly and straight on the desk; and (3) Students were taught how to position themselves well on the desk.

On the second day, the researchers took the learners through joining dots/tracing dots. We made the learners join the dots in the sand and trace the dots, and also, they did it by writing in the air. Weak learners were helped when the researchers held their hands and directed them to trace the dots in the sand. On this day, learners tackled the activities with vigor and enjoyment. On the third day, we offered writing materials to learners, and they were asked to scribble vertically and horizontally freely. This was done to help build learners' fine motor skills and prepare them for writing activities. After this activity, already drawn pattern books were shared with learners and asked to trace the same patterns in their books. After the day's activity, the researchers gave learners homework by asking them to write their names thirty times in their books. The study employed observation and tests at this stage.

Post-Intervention Stage

This is a phase that occurs after the implementation of an intervention. It involves analyzing the outcome or the effect of the intervention and assessing its impact on the desired outcome. This stage typically includes evaluating the effectiveness of the intervention, identifying any necessary adjustments or improvements, and documenting the findings. At this stage, we decided to conduct a test again after the intervention process for all thirty-seven pupils taking part in the study. The researchers wrote a sentence boldly and legibly on the chalkboard, and learners were instructed to write the sentence in their writing books. While they were writing, the researchers were moving around to make sure learners were doing the right thing. Forty minutes were allowed.

A post-test was conducted by the researchers to analyze and observe the authenticity of the intervention strategies. This was done using the same test that was organized at the pre-intervention phase. A sentence was written on the chalkboard clearly and neatly for pupils to write. For example,

Mr. Ibrahim Abdul-Soaboor is writing on the board. Half an hour was allowed for pupils to write the sentence. The books were collected and scored a total mark of 37.

Table 3: Post-Intervention Test Scores

Scores	Number of Pupils	Percentage (%)
0 – 4	2	5.4
6 – 14	6	16.2
15 – 18	10	27
19 – 25	19	51.4
Total	**37**	**100**

Source: Field Survey, 2024

Table 3 shows the results of the pre-test after the intervention. It can be seen that a lesser number of the participants, 2 (5.4%) out of the total number of 37, had below pass marks, ranging from 0 – 4. In addition, 6 (16.2%) of the pupils scored below the pass marks, ranging from 6 – 14. Also, 10 (27%) of the participating learners had the pass marks ranging from 15 – 18. The majority of the learners, 19 (51.4%) out of the total number of 37 participating learners, scored the highest marks, ranging from 19 – 25, during the post-intervention test. Based on the above data analysis of the post-test results, one can confidently say there is a massive improvement in E.P. Basic three pupils' handwriting skills after going through the intervention process, as against the performance of the pre-intervention and pre-test scores. This can be used to confirm that tracing activities can be used to improve the effectiveness of Basic Three (3) pupils' writing skills at E.P. Primary School. Research has also shown that tracing is an activity that strengthens handwriting by helping children recognize the shape a letter takes while also practicing the appropriate size of the letter and correct formation of the letter (Wistrom, 2016). Tracing letters is an ideal gateway to mastering the size, slant, and formation of letters. Tracing also provides children with the opportunity to

further refine their fine motor skills and concentrate on forming artistic letters (Leo, 2019). It has also been shown that tracing improves handwriting for children as young as preschool (Wistrom, 2017).

DISCUSSIONS

These data provide important insights concerning the effectiveness of tracing activities in improving Basic Three (3) pupils' writing skills at E.P. Primary School in the Tamale Metropolis, Northern Region, Ghana. The pre-test results indicated that out of the total participants of 37, the majority of the learners, 31 (83.8%), had the pass marks, ranging from 0 - 14, below the pass marks, ranging from 15-25. While 6 (16.2%) of the participants scored above the pass marks, ranging from 15 – 25. Based on the pre-test results, the study concluded that the basic-three pupils of E.P Primary School were having problems with their handwriting, resulting in their poor academic performance. This finding confirmed the researcher's observation made through grading E.P.'s basic three pupils' class exercises and homework. Again, in line with this finding, Rajarshi (2014) indicated that one's inability to write a way that is both legible and efficient affects school performance and academic advancement because writing is the primary means for students to communicate and display what has been learned to their teacher.

Also, the post-test results after implementing the intervention revealed that 8 (21.6%) participants scored marks ranging from 0 – 14, which is below the pass marks of 15 – 25. Also, 29 (78.4%) of the participants had the pass marks ranging from 15 – 25. Analysis of the pre-test results shows a massive improvement in E.P.'s basic three pupils' handwriting, indicating the success of the intervention activity. This finding is in agreement with Wistrom (2016), indicating that tracing

is an activity that strengthens handwriting by helping children recognize the shape a letter takes while also practicing the appropriate size of the letter and correct formation of the letter.

Conclusion

Action research was undertaken among Basic Three pupils of E.P Primary School, Tamale-Ghana on writing skills to ascertain the effectiveness of tracing activities in improving Basic Three (3) pupils' writing skills. A simple random sampling was used for thirty-seven participants in the study. A conclusion was derived from the findings of the study. It can be concluded that 31 of the participating learners out of the total number of 37 failed to score the pass mark of 15 out of 30 marks in the pre-intervention test. However, after the implementation of the intervention, 29 of the participating learners had a pass mark of 15 and above marks in the post-intervention test. This indicates a massive improvement in Basic Three pupils of E.P Primary School writing abilities after the implementation of tracing activities and this was observed through their performance in the post-intervention test scores.

Recommendations

Firstly, the Ghana Education Service (GES) should reverse the early-grade educational curriculum to make writing its centerpiece. Also, GES should provide the basic schools in the Metropolis with adequate teaching and learning materials to improve the teaching and learning of writing skills in the schools. Lastly, this study can be replicated using a large sample to validate the findings and make generalizations.

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