

How can we improve students' English handwriting at Pakshikha Central School?

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ABSTRACT

This research aims to examine the efficacy of intervention strategies used to improve students English handwriting at Pakshikha central school. It is conducted through random sampling of students from grade eight to twelve consisting of one hundred and twenty four respondents.

The research is carried out through mixed method using the tools viz survey questionnaire and handwriting sample (copy task). The analysis is carried out using Microsoft excel spreadsheet-calculating the mean score. The mean score is then analyzed using four-point Likert scale comparing pre and post data. The correlation between efficacy of intervention strategies and their improvement in English handwriting is then summarized. The findings demonstrate that intervention strategies adopted are efficient and shows significant improvement. Subsequently, a recommendation based on the finding are suggested for policy and practice.

I. INTRODUCTION

In the current situation of evaluation, handwriting has been considered as one of the most important skills that every child require. It is one of the elements of assessment upon which students are graded. No matter how well the students have expressed their ideas, if the handwriting is illegible, evaluators undermine their learning opportunities and deemed academically poor (Association, n.d.). Students are expected to have a handwriting that is clear, clean and of the same size with proper word spacing which impresses the readers. Many educators have suggested that there are rich benefits of legible handwriting. According to Feeder and Majnemer (2007), "legible handwriting refers to the readability of the written text taking into account, elements such as letter formation, size, alignment, and letter spacing." Good handwriting helps to communicate ideas clearly and effectively what is written. It has positive impacts on grades and also it motivates the students to study. Therefore, this

research attempts to study the effectiveness of intervention strategies adopted to improve the English handwriting of students at Pakshikha Central School.

Reconnaissance Situational analysis

Pakshikha Central School under Chhukha Dzongkhag is located 12 km, South East of Gedu town. The campus covers an area of 11.4 acres with classes ranging from PP-XII. The school receives class VI graduates from cluster schools namely; Aleykha Primary School, Bongo Primary School, Chungkha Primary School, Getana Primary School, Ketokha Primary School, Meretsemo Primary School and class XI students from Kamji Central School, Chumithang Middle Secondary School, and on request cases few students from various schools across the country. Students were taught letter formation uniformly in their early schooling. However, as they progress higher with their grades, it is given lesser attention due to which English handwriting is found to be deteriorating. As teachers focus more on content delivery and coverage of syllabus, very less or no time is given for improving the English handwriting of the students.

II. LITERATURE REVIEW

Handwriting is a complex skill that is not often taught directly. Rubin & Henderson (1982) compliments that writing with the legible handwriting is a difficult skill, yet there are some who spend less time in formal teaching. Harris (1993) also supports that writing is a process that occurs over a period of time and handwriting can be improved through continuous writing practices. Improving the students' handwriting is not the responsibility of only the English teachers but of all the teachers (Flower, 1979).

It is not the task of writing that is deemed so intimidating, but more so the feedback and assessment of that writing by instructors or peers

(Kasper & Petrello, 1998). The researchers also strongly agree that the handwriting of children can be improved when the learners' interests are acknowledged and when they are given frequent constructive feedbacks. Case-Smith (2002) reveals that when children's handwriting is poor, teachers interpret the responses as incorrect and frustrates for not making effort to be neat. According to Rubin & Henderson (1982), Brigg's study of implications of poor handwriting confirms that the quality of handwriting can mean the difference between passing and failing the examinations even when the quality of content remains similar.

III. PROBLEM STATEMENT

Upon pre-survey, it was found out that over 60% of the sampled participants do not have legible handwriting. It was also supported by the responses from teachers (50%). Students hardly practice handwriting and they themselves do not understand what they have actually written. Therefore students with a poor handwriting finally land up scoring low marks no matter how good they are in studies. Correct letter formation, poor word alignments, insufficient word spacing, inconsistent letter size, incorrect letter heights, letter distortions, ambiguous letter forms etc. are some of the prominent problems the students are challenged with. This has made the readers frustrated especially teachers. Some of the children are not able to read their own handwriting which is a serious concern. One of the negative impacts of poor handwriting is lack of confidence to participate in any writing tasks.

Action Research Question:
How can we improve students' English handwriting at Pakshikha Central School?

Methodology

The research was carried out using mixed mode using the following tools

Use of Survey questionnaire as a quantitative approach

The selection of the study area was intentional, focusing on to the students of the school that we are serving. A total of 124 students from classes VIII –XII were randomly selected and were asked to fill up a designed questionnaire to glean the information against the intended research topic.

They were briefed on filling norms and no scientific sampling technique is involved to collect data. Data collected are based on the expression of individual respondents and authors have no prejudice on the outcome of the research.

Observation of the actual handwriting samples as the qualitative approach.

This part of the methodology includes identification of the handwriting problem existing with students. All the participants were given a paragraph to be copied within a stipulated time of ten minutes. The written samples were collected and analyzed based on tall letters, tail letters, letter formation and word spacing. After a month and half of implementing the intervention strategies, the participants were asked to copy the same text giving them the same stipulated time.

Action plan

In order for the research team to focus on the actions for the desired outcome and communicate with others, an action plan is presented in the appendix.

Base-line Data Analysis

Analysis Tools

The data analysis is done through simple basic statistical tools using Microsoft Excel Spreadsheet. The mean and standard deviation is generated to interpret the data collected.

The table 1 below is the Likert's scale to be used to interpret the level of agreement of the survey questionnaire.

Strongly Agree	3.25 - 4.00
Agree	2.50 - 3.25
Disagree	1.75 - 2.50
Strongly Disagree	1.00 - 1.75

Table 1: Likert Scale

The following analysis is based on the data collected from 124 student participants through the distribution of a survey questionnaire and observation of their actual handwriting sample. A sampling of data has been done randomly so as to be convenient to intervene as necessary.

The series of graphs used below are generated using Microsoft Excel spreadsheet to analyze the data collected.

Table 2 below shows the level of agreement for the statement, "I can easily read my handwriting".

Mean	3.65
Standard Deviation	0.48

Table 2: I can easily read my handwriting.

From the above result, student participants strongly agree that they can read their handwriting easily ($= 3.65 \pm 0.48$). It is also observed that 100% of student participants agree and strongly agree with the statement. However, only 64.5% of the participants strongly agree with the statement and the remaining 35.5% just agree. It clearly indicates

that their self-esteem is high regarding the readability of their own handwriting.

The table 3 below shows the level of agreement on the statement, "My friends can easily read my handwriting". It shows that they agree with the statement ($= 3.06 \pm 0.63$).

Mean	3.06
Standard Deviation	0.63

Table 3: My friends can easily read my handwriting

It is also found that 21 student participants (17%) disagree and out of which the highest number of student participants (13) is from lower classes (VIII) and remaining (8) student participants disagree from the higher classes (X, XI & XII). Upon observation from their sample writing, maximum student participants have a problem with letter formation (70.06%), Tail letters (49.97%), Tall letters (45.27%), and word spacing (41.12%) contributing the illegibility of their handwriting.

Table 4 below presents the level of agreement for the statement, "My teacher often reminds me to improve my handwriting". It tells that they agree with the statement ($= 2.58 \pm 0.88$). More than half of the student participants ($= 71, 57.26\%$) responded they receive constant reminder from teachers to improve their handwriting.

Mean	2.58
Standard Deviation	0.88

Table 4: My teacher often reminds me to improve my handwriting

However, there is a contradiction between the statement, "My friends can easily read my handwriting" and "My teachers reminds me often to improve my handwriting". Respondents agree both the statements ($= 3.06 \pm 0.63$) and ($= 2.58 \pm 0.88$) respectively. However, it is observed that the latter statement is sparsely distributed with ($= 0.88$). It

also indicates that definition of legibility of teacher differs from the perception of student participants.

The level of agreement on the statement, "I know what legible handwriting is about" is shown in table 5 below.

Mean	2.96
Standard Deviation	0.75

Table 5: I know what legible handwriting is about

It reveals that the respondents are aware of what legible handwriting is ($= 2.96 \pm 0.75$). However, there are responses sparsely distributed ($= 0.75$) about the mean. 70.16% of the respondents ($= 97$) says that they are aware of what legible handwriting is and 30.84% ($= 27$) student participants are unaware of it.

Table 6 below is the response received from the student participants for the statement, “I score good marks because of my good handwriting”. It is clear that handwriting does not determine passing and failing in the examination ($= 2.47 \pm 0.83$).

Mean	2.47
Standard Deviation	0.83

Table 6: I score good marks because of good handwriting

It also reveals that 54.03% of the respondents agree and 45.97% disagree with the statement, but the number of respondents strongly disagreeing ($= 18$) is double than that of strongly agreeing ($= 9$). The imbalance in two extreme scales has influenced the mean ($= 2.47$) which is evident from the deviation about the mean ($= 0.83$).

The level of agreement of the statement, “My teacher uses different methods to improve my handwriting” in table 7 below shows that they agree ($= 2.60 \mp 0.99$).

Mean	2.60
Standard Deviation	0.99

Table 7: My teacher uses different methods to help me improve my handwriting

57.87% ($= 73$) of the respondents agree and 41.13% ($= 51$) of respondents reveal that teachers do not use different methods to improve their handwriting, which is further supported by the high deviation about the mean ($= 0.99$).

The data below in table 8 tells that respondents don't participate in writing tasks not because of their poor quality of handwriting ($= 2.38$).

Mean	2.38
Standard Deviation	0.89

Table 8: I confidently participate in writing tasks because of my good handwriting

69 student participants (55.65%) disagree and 55 respondents (44.35%) agree with the statement resulting in a large deviation about the mean ($= 0.89$).

As compared to the number of respondents strongly agreeing (32), half of the respondents strongly disagree (16) for the statement, “I need a separate period to practice handwriting” resulting in high deviation ($= 0.98$) as shown in the table 9 below.

Mean	2.75
Standard Deviation	0.98

Table 9: I need a separate period to practice handwriting.

62.10% (77) and 37.90% (47) of the respondents agree and disagree respectively which attributes to the mean (= 2.75), agreeing with the statement.

Student participants responded that their teacher does not provide with printed hand-outs to limit their writing, which is evident from the table as shown in table 10 below (= 2.06 ± .89).

Mean	2.06
Standard Deviation	0.89

Table 10: My teacher provides me the printed hand-outs so I don't write much

Only 8 and 23 student participants out of 124 strongly agree and agree respectively with the statement attributing to the high deviation (= 0.89) about the mean and disagreement (70%) to the statement, “My Teachers provide with printed hand-outs so I don't write much”.

The level of agreement for the statement, “English teachers are responsible for improving students' handwriting” is as shown below in table 11 (= 2.02 ± 1.12).

Mean	2.02
Standard Deviation	1.12

Table 11: English teachers are responsible for improving students' handwriting

66.13% (= 82) and 33.87% (= 42) disagree and agree respectively with the statement contributing to low mean (= 2.02). Significantly large difference in the number of respondents

strongly disagree (57) and strongly agree (18) attributing to the highest deviation overall (= 1.12). The figure 1 below shows the overall analysis of the response to all 10 questions from 124 respondents.

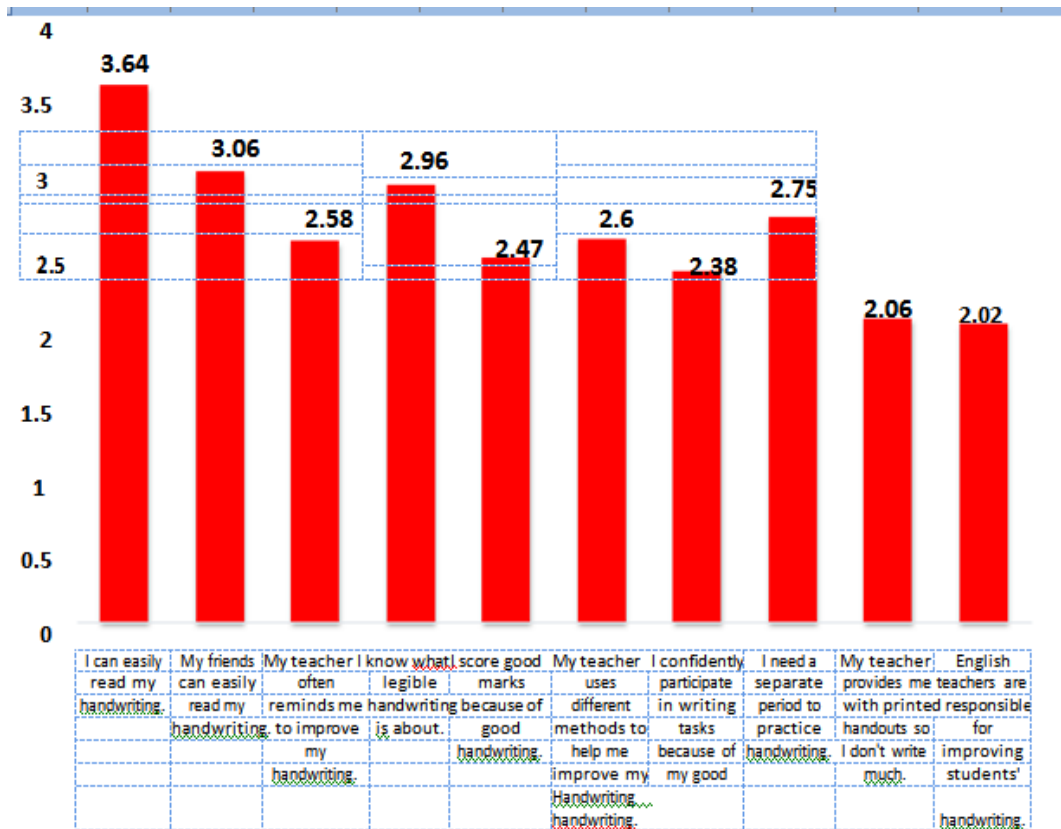


Figure 1: Overall analysis

Out of 10 statements, the statement “I can easily read my handwriting” scored the highest mean (= 3.64 ± 0.48). They generally agree with the five statements, viz “My friends can easily read my handwriting” (= 3.06 ± 0.63), “I know what legible handwriting is about” (= 2.96 ± 0.75), “I need a separate period to practice handwriting” (= 2.75 ± 0.98), “My teacher uses different methods to help me improve my handwriting” (= 2.60 ± 0.99), and “My teacher often reminds me to improve my handwriting” (= 2.58 ± 0.88). The deviation about the mean is generally high as the mean level of agreement declines with the statement. It is evident that there is a varied responses unevenly distributed within two extreme rating scales (Strongly disagree and strongly agree).

Remaining four statements are rated under disagree as per Likert’s scale range. The

descending mean are “I score good marks because of my good handwriting” (= 2.47 ± 0.83), “I confidently participate in writing tasks because of my good handwriting” (= 2.38 ± 0.89), “My teachers provides with printed hand-outs so I don’t write much” (= 2.06 ± 0.89), and “English teachers are responsible for improving students’ handwriting” (= 2.02 ± 1.12). We observe ascending deviation while mean decreases.

Baseline sample handwriting analysis

The written sample has been collected from the student to validate the legibility of the handwriting. Figure 2 below shows the written sample handwriting analysis collected from the target group for observation.

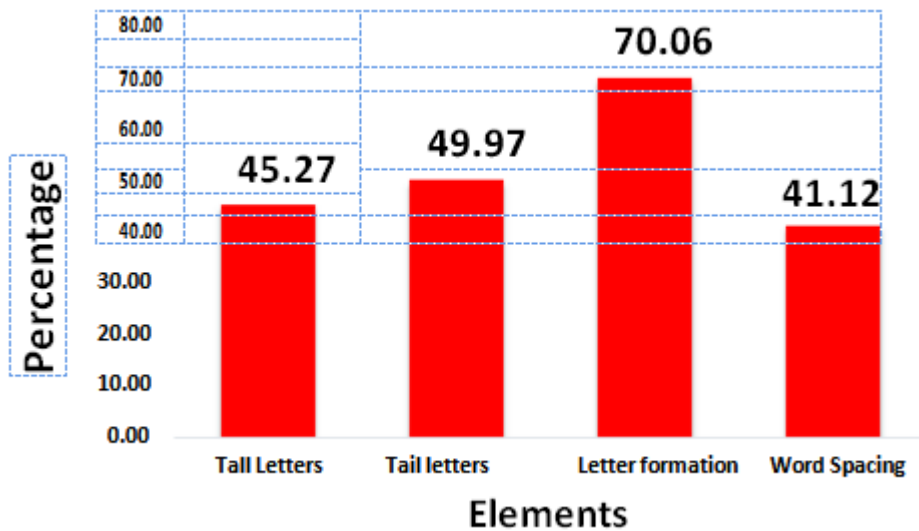


Figure 2: Written sample analysis

Upon observation, it is found that maximum number of student respondents' handwriting has problem with letter formation – confusion of letter “e” and “c” (70.06%) followed by tail letters (49.97%), tall letters (45.27%), and word spacing (41.12%) attributing to eligibility of handwriting.

Intervention strategies

Base on the findings of the baseline data, the following intervention strategies, were adopted for a duration of a month and a half.

Introduction of letter cases

Orient students with two types of letters cases; viz upper case and the lower case letters.

i) Upper case letters: letters written in capital letters are called upper case letters.

Example: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Student participants will be distributed with the handwriting notebook and practice the upper case letters.

ii) Lowercase letters: Letters written in small letters are generally called lower case letters.

Example: a b c d e f g h i j k l m n o p q r s t u v w x y z

The same strategy will be adopted in i) with the target group and furthermore, identify tall, tail and middle letters accordingly.

1. Lowercase letters are further subdivided into **THREE** types:

i) **Tall letters:** Those letters which touch the upper line are called tall letters.

Example: b, d, f, h, k, l, and t.

ii) **Tail letters:** Those letters hangs below the line.

Example: g, j, p, q, and y.

iii) **Middle letters:** Those letters which lie in between the lines.

2. **The spacing between letters of the word and the word spacing.**

The target group were oriented to keep the distance between two words approximately of their forefinger or pointing finger.

3. **Provide constructive feedbacks (Both verbal and written)**

A constant reminder were made for necessary changes upon observing any of the elements such as letter formation, tail letters, and tall letters were unintentionally written both during the practice session and notebook correction.

4. **Pangram Sentence practice**

Student participants were made to practice pangram sentences e.g. **A quick brown fox jumps over the lazy dog.** Practicing pangram sentences would orient to all letters of the English alphabet.

Post-data analysis

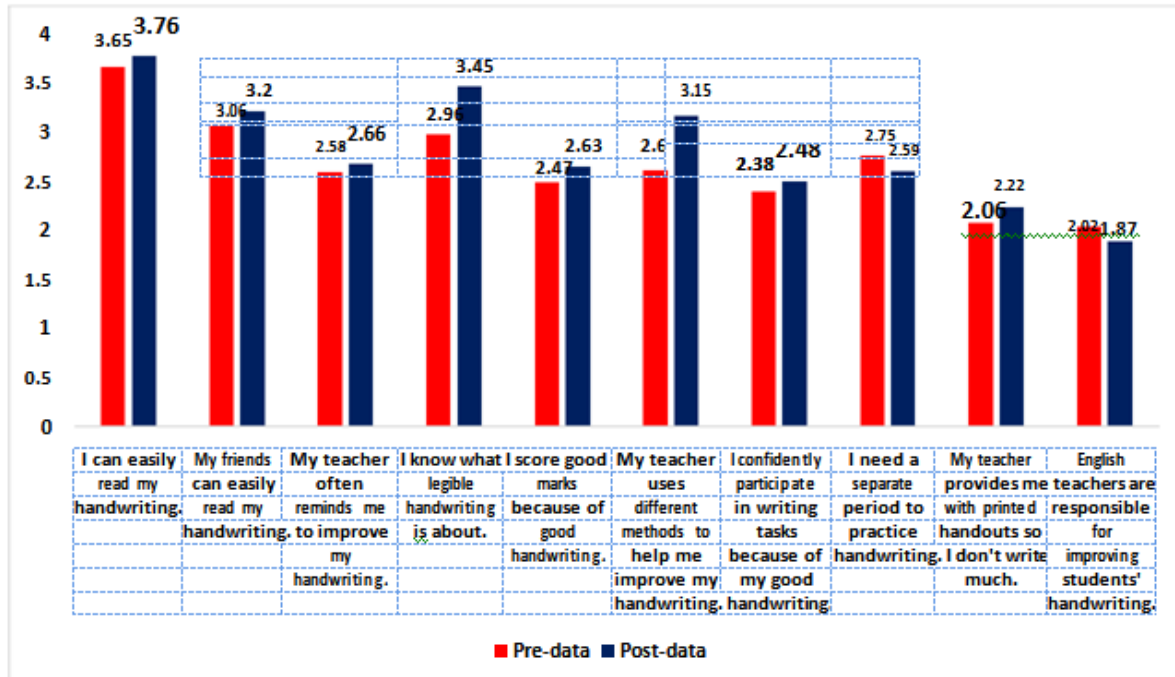


Figure 3: Comparison of pre-data and post-data

From figure 3 shown above, there is a significant improvement seen in almost all the parameters. Amongst all the statements, seven statements are agreed by the respondents. The statement “I can easily read my handwriting” scored the highest mean ($= 3.76 \pm 0.43$), followed by “I know what legible handwriting is about” ($= 3.45 \pm 0.55$), “My teacher uses different methods to help me improve my handwriting” ($= 3.15 \pm 0.73$), “My teacher often reminds me to improve my handwriting” ($= 2.66 \pm .87$), “I score good marks

because of my good handwriting” ($= 2.63 \pm 0.75$), and “I need a separate period to practice handwriting” ($= 2.59 \pm 1.01$).

The disagreement was observed for the following statements, “I confidently participate in writing tasks because of my good handwriting” ($= 2.48 \pm 0.81$), “My teacher provides me with printed handouts so I don't write much” ($= 2.22 \pm 0.92$), and “English teachers are responsible for improving students' handwriting” ($= 1.87 \pm 0.99$).

Post written sample analysis

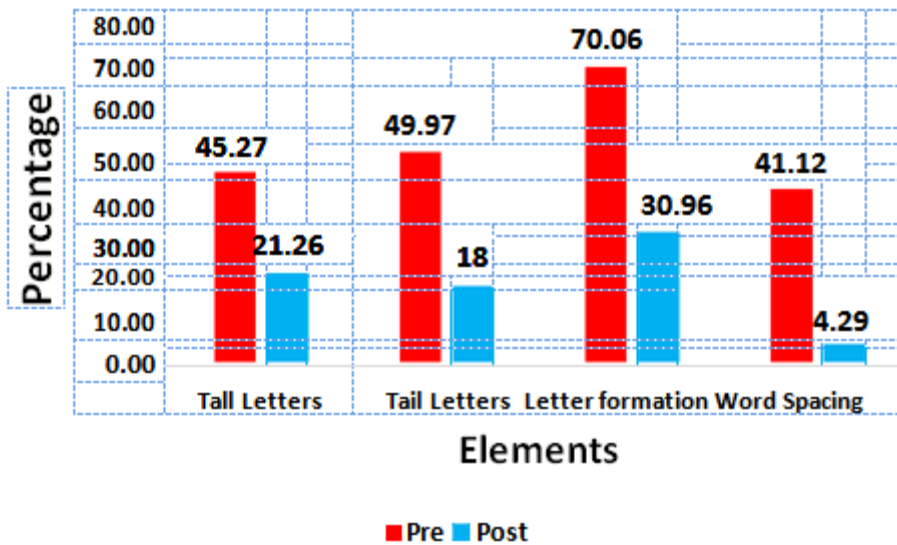


Figure 4: Comparison between pre and post written handwriting sample

The comparison between pre-written and the post-written sample of handwriting is shown in the above figure 4. The problems for all the elements such as tall letters, tail letters, letter formation and word spacing has declined significantly after intervention strategy.

Positive impact of the intervention is evident from the decline in percentage of students' handwriting sample analysis.

Pictorial presentation of written sample

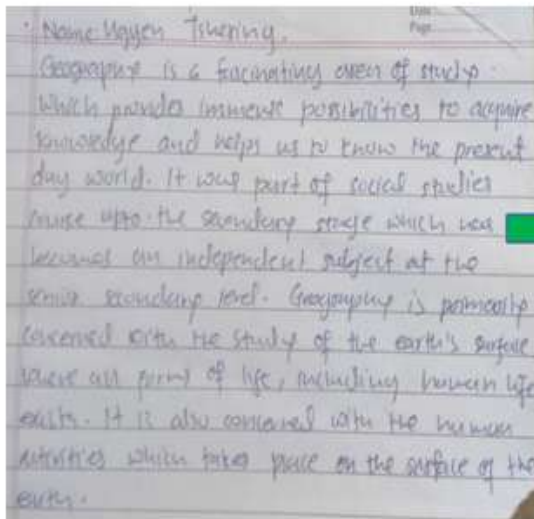


Figure 5: Pre- intervention

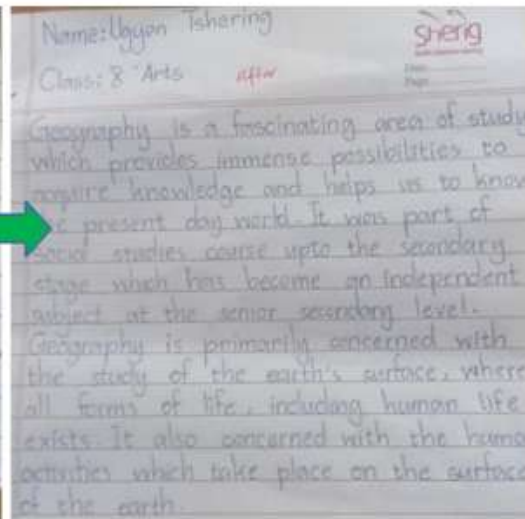


Figure 6: Post- intervention

Invisible Trade: It is the other part of a current account that records trade in services such as insurance, banking and so on. Hence, it is recorded in the balance of payments account for import and export of services. The difference between invisible exports and invisible imports is called balance of invisible trade. This too can be favourable or unfavourable depending upon the amount of services imported by a nation.

- Kar Singh Rai
X'D

Figure 7: Pre- intervention


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Kar Singh Rai
X'D

Figure 8: Post- intervention

Page No: _____
Date: _____

Name: Ujjayanti Puri



Geography is a fascinating area of study which provides immense possibilities to acquire knowledge and helps us to know the present day world. It was part of social studies course upto the secondary stage which has become an independent subject at the senior secondary level. Geography is primarily concerned with the study of the earth's surface, where all forms of life, including human life exists. It is also concerned with the human activities which take place on the surface of the earth.

Figure 9: Pre- intervention

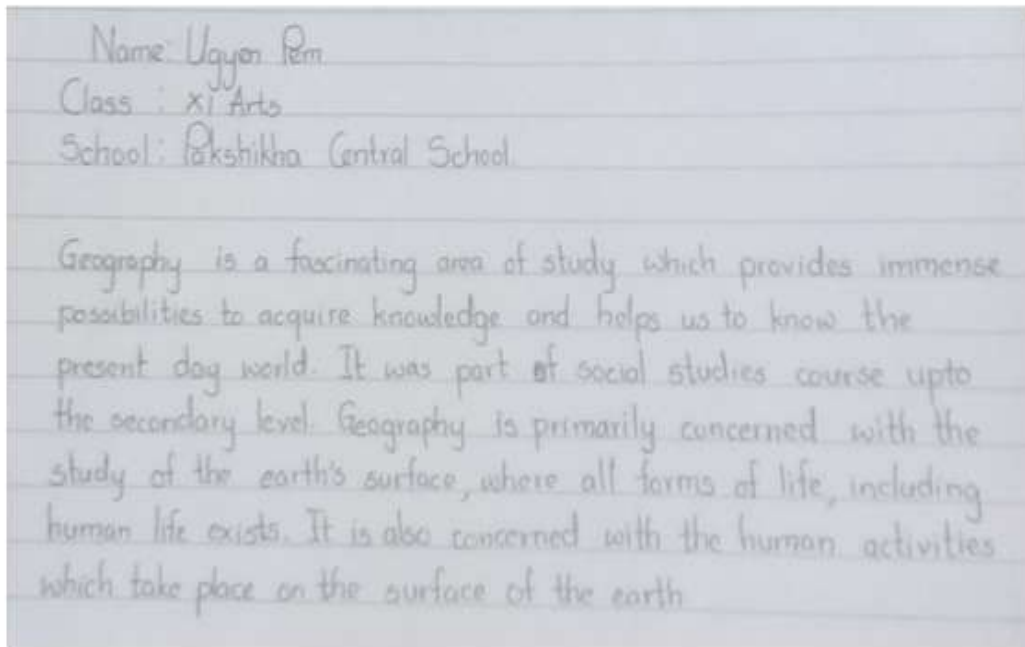


Figure 10: Post- intervention

IV. DISCUSSION

The data shows that intervention strategies adopted by the researchers were effective for the improvement of their handwriting, evident by the increase in average mean by 2.97% for the statements, “I can easily read my handwriting” and 5.79% for the statement, “My friends can easily read my handwriting”.

The statement, “My teacher uses different methods to improve handwriting” has surged-up by 19.13%. The data also reveals that it is important for the students to know what legible handwriting is with the increase in average mean by 15.29% for the statement, “I know what legible handwriting is about”.

It is not the task of writing that is deemed so intimidating, but more so the feedback and assessment by instructors and/or peers (Kasper & Petrello, 1998). Concurrently, the data strongly agrees that the handwriting of children can be improved when the learners' interests are acknowledged and when they are given frequent constructive feedbacks.

The increase in average mean for the statement, “I score good marks because of good handwriting” by 6.27% concurs with idea stated by Case-Smith (2002) and Rubin & Henderson (1982) that the quality of handwriting can mean the difference between passing and failing the examinations even when the quality of content remains similar.

However, there is increase in the mean of the statement, “I confidently participate in writing tasks because of good handwriting” by 4.12% from the pre-data analysis but the increased mean disagrees with the statement. Therefore, it is clear that quality of their handwriting does not determine their confidence to participate in any of the writing tasks.

The mean of the statement “Teachers provide me with printed hand-outs so I don't write much” has surged-up by 7.48% during the post analysis as compared to that of pre-data analysis but, has remained within the same scale of the Four point Likert scale. It shows that teachers are providing enough writing practices without providing them printed hand-outs, otherwise students would write

less thereby affecting their handwriting. Harris (1993) supports that writing is a process that occurs over a period of time and handwriting can be improved through continuous writing practices.

Concurrently, the statement, "English teachers are responsible for improving students' handwriting" scored the lowest mean (= 1.87). This is very much in line with the findings of Flower (1979) that improving children's English handwriting is the responsibility of all the teachers teaching in English medium.

Ethical Considerations:

- 1) In the process of conducting this research, the subjects taking part were not harmed physically or emotionally.
- 2) The information collected were confidential and privacy of the subjects was highly respected.
- 3) The questionnaire was distributed to those respondents who were willing to respond.
- 4) No sensitive issues were raised.

V. RECOMMENDATIONS

It was observed that the intervention strategies were very much effective and students' handwritings were improved significantly. Therefore the team would like to recommend the following to the concerned stakeholders

1. The school could conduct one-day professional development program on intervention strategies for the improvement of students' English handwriting.
2. All the subject teachers are equally responsible for improving students' handwriting and should include handwriting as one of the criteria in the formative continuous assessment along with the continuous constructive feedback.
3. The schools can allocate a separate period for handwriting practice.
4. Providing readymade printed notes to the students are discouraged.

VI. LIMITATIONS

1. This research is limited to the certain grades of students of Pakshikha Central School only and the results may vary according to the class levels and location of the schools.
2. The data collection was done through distribution of survey questionnaire and the findings are completely based on their perception.
3. Our research is based on the standard script, New Approach for Primary Education (NAPE) introduced in Bhutan during the 1980s and may vary with the font style the schools practice.

VII. CONCLUSION

We ventured through an action research on improving students' English handwriting. The researchers are the teachers of the same school and are concerned about the poor quality of the students' handwriting and unanimously decided to work on this important aspect of students' learning and development of knowledge.

Firstly, the researchers through the qualitative and quantitative data collected from one hundred twenty-four students proved that they have a poor quality of handwriting. This was followed by various intervention strategies that were implemented at all levels. After one month of applying the intervention strategies to improve the handwriting of the students, post data collection was done using the same qualitative and quantitative survey tools that were used in the beginning. In the final analysis, the researchers found positive impacts of the intervention strategies on the students' handwriting.

The researchers look forward to sharing the findings of the research to all the teacher colleagues of this school where the important doable recommendations will be highlighted. This would benefit the school in improving the overall quality of students' learning, effective communication and thereby enhancing the academic growth of the students.

The researchers would like to thank all the participating students and teachers who involved directly as well as indirectly during the entire course of the action research. The school also would like to thank the school administration for their gracious approval for conduct of the research.

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Questionnaire for respondents

Dear students,

We are conducting action research on the topic: How to improve student’s handwriting. The research team would like to request individual of you to kindly provide us with the honest response for each statement.

The team assures to maintain the confidentiality of your responses under any circumstances.

Demographic information:

Class:

Gender: Male/Female (Please put **TICK** mark)

Direction: Please **TICK** the most appropriate against each statement. (**SA**= Strongly Agree, **A**= Agree, **D**= Disagree, **SD**=Strongly Disagree)

#	Items	SA	A	D	SD
1	I can easily read my handwriting.				
2	My friends can easily read my handwriting.				
3	My teacher often reminds me to improve my handwriting.				
4	I know what legible handwriting is about.				
5	I score good marks because of good handwriting.				
6	My teacher uses different methods to help me improve my handwriting.				
7	I confidently participate in writing tasks because of my good handwriting.				
8	I need a separate period to practice handwriting.				
9	My teacher provides me with printed handouts so I don't write much.				
10	English teachers are responsible for improving students' handwriting.				

Thank you for your participation.