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The Perception of Cursive Writing towards Spelling Accuracy among Year 3 Primary School Students

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ABSTRACT: Cursive writing has always been a part of our life to write. Its inclusion into the KSSR curriculum of Malaysian English classroom has brought about various positive remarks towards learning competency. However, there is an unexplored issue that worth noting focusing on cursive writing application towards improving spelling accuracy. There is limited research on this issue, thus it is worth to be researched. Hence this study aims to analyze the association between gender with application and motivation to use cursive writing for spelling accuracy. It also investigates the significant differences between males and females when focusing on application and motivation to use cursive writing for spelling accuracy. The instrument used is a questionnaire with 9 items. The items are divided into two dimensions, namely application and motivation. A total of 80 students participated in this study. SPSS Software was used to analyse the data given. The results show that there is no statistically significant association between gender, the application and motivation of using cursive writing. The study also found out that the female participants generally have higher application scores compared to male participants. Female participants also tend to have higher motivation scores compared to those male participants. There has been a positive feedback between the idea of cursive writing application towards improving spelling performance. The insertion of cursive writing in the national syllabus is indeed helpful for students to apply it in the classroom for the context of this study

Keywords: Cursive Writing, Spelling Accuracy, Malaysian Classroom, Students

1. Introduction

The addition of cursive writing to the Malaysian English language syllabus for primary schools represents a fundamental pedagogical shift in the country's educational framework. Cursive writing, distinguished by its flowing and interwoven letterforms, has long been discussed by educators and policymakers around the world about its usefulness in modern education (Morin et. al, 2012). In Malaysia, the choice to incorporate cursive writing into the English language syllabus represents a new development to improve students' reading abilities, cognitive development, and academics. It has been long proposed that cursive writing has various benefits for students, especially when it comes to learning language (Doug, 2019).

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While most studies claim that cursive writing is obsolete in the current education system, this view is challenged by new evidence showing the many benefits of cursive writing. A few studies found that cursive helps students in reading, communicating, and their motor skills. Ball (2016) suggests that cursive plays an important role in acknowledging words as they do not lift their pencil from the paper. It helps to allow them to view the word as a whole, rather than looking at a word as a separation based on its alphabets. Although there was much research about the effectiveness of cursive writing on spelling competency among L1 learners, few of them focused on its impact on L2 learners' spelling ability. Thus it is necessary to research the relevance of cursive writing on L2 learners' spelling competency. As most studies focus on spelling accuracy among L1 learners, the question remains unclear whether cursive writing can facilitate L2 learners to achieve spelling accuracy or not. This study looks at cursive writing from another angle, not merely as a tool of communication, but as an innovative way to improve spelling accuracy. In this paper, we want to view the perception of students about cursive writing on L2 learners' spelling competency. It provides insights into the use of cursive writing in primary 3 ESL classrooms in Malaysia. This paper will reveal the perception of primary 3 students about learning cursive writing as well as its role in enhancing their spelling skills.

According to Ochsner (1990), most children learn to print before being introduced to cursive at the age of eight and above. Therefore with little exposure to cursive writing in daily life, the neurological encoding of writing tasks using cursive writing becomes fragile due to lack of practice (Ochsner, 1990). Silverman (2002) emphasized that handwriting can be learned and improved by slowing down learning and allowing sufficient time to create beautifully formed letters. Therefore, it is an aspiration that this study can lead pupils to believe cursive writing can be mastered by all and be used to master spelling as well. Interviews with pupils and teachers unveil that cursive writing is not emphasized as it is not tested. However, Steinmetz (2014) insisted cursive writing is still relevant because it helps in the development of the brain to interpret the word as a whole as it is linked up, rather than into parts. This element can be a useful key to teaching spelling using penmanship, which is cursive writing by taking advantage of its characteristics.

When learners of L2 write in their writing assignments, spelling errors tend to occur. Daffern, Mackenzie & Hemmings (2017) state that the visualization proceeding of any text, the correlation of subject matters in regards to the criteria of consistency, the framework and development of the approaches, one utilizes, to lower the number of spelling errors, and the weaknesses in the manner of techniques of the teaching and learning processes in schools are critical points. Tshomo, Choden, & Sherab (2018) reported that students ought to internalize pronunciation of the spellings of L2 words. Johari (2009) stated that when direct translation occurs, the grammar structures, syntax, and pragmatic elements differ in L2 specifically.

The complexity of the English language, and its syllables' arrangements, in which affect the pronunciation of consonants, vowels, intonation, and stress points. As stated by Russak and Kahn-Horwitz (2015), there is a presence of inconsistent grapheme-phoneme relationships, both in terms of spelling and pronunciation. Lengthy,

multisyllabic words are such kind of errors commonly found in L2 learners of the English language (Pardali & Mizamidou, 2017). Solati, Sazalie, & Che Lah (2009) reiterated that a vital contributing factor to misspelling is the lack of competency in listening skills and identifying the differences in the resonation of the lexical they hear.

Botley and Dillah (2007) investigated spelling errors using Malaysia learner corpus based on students' argumentative essays. In their data, it is found that L1-influenced errors can be seen and therefore it is argued that it may support the view that L1, primarily Malay, may influence the spelling errors made by the students in the sample.

In a study to examine and analyze the categories of spelling errors made by Malay learners, Samuddin and Krish (2018) found that consonant and vowel errors were the most common mistakes made by Malay students; which reflects their poor orthographic awareness and knowledge in English. Both authors also claim that learners were able to produce words that are phonologically acceptable but orthographically inappropriate.

Samuddin and Krish (2018) believe that the influence of L1 has an impact on learners' spelling in L2. Alternatively, Rimbar (2017) conducted a study on 30 Form 1 students in Malaysia to identify the type of errors made in spelling. The author highlights that students tend to replace English phonemes that do not exist in their L2 with ones that exist in L1. Rimbar refers to the ideas of Park (2011) who argued that spelling errors occur when there is an incongruent phoneme between L1 and the English Language (as cited in Rimbar, 2017, p.6). This may suggest why spelling errors occur more when L2 learners deal with words of unfamiliar phonemes.

In sum, although there are many studies on the types of spelling errors among L2 learners, the research on L1 interference of Bahasa Melayu and its impact on learners' spelling in English Language (L2) remains limited. Future studies examining L1 interference would help to understand what about English language spelling that is difficult for L2 learners to grasp.

The objective of this study is as below:

- To analyze the association between gender with application and motivation to use cursive writing for spelling accuracy.
- To investigate the significant differences between males and females when focusing on application and motivation to use cursive writing for spelling accuracy.

Based on the research objectives, we devised a few research questions to be answered at the end of this research. The research questions are:

- Is there an association between gender with application and motivation to use cursive writing for spelling accuracy?
- Are there significant differences between males and females when focusing on application and motivation to use cursive writing for spelling accuracy?

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2. Method

This research is quantitative research which takes on a survey research method. The study aims to understand the perception of students on using cursive writing to improve their spelling accuracy. It is also done to view if there is an association between gender with application and motivation to use cursive writing for spelling accuracy. Furthermore, there is also a need to determine the significant differences between males and females when focusing on application and motivation to use cursive writing for spelling accuracy. To conduct this research, eighty Year 3 pupils studying in a primary government school in Seri Iskandar were selected. Random sampling was applied to get the respondents. For this, the sampling follows Krenjie-Morgan's Sampling Table. There are 83 Year 3 students in the school. Therefore, 80 students were selected as the samples.

As this is survey research, the instrument used is a questionnaire. This questionnaire about the perception of cursive writing is adapted from Karadag (2014). This questionnaire was used to gauge the perception of pupils towards cursive writing. The questionnaire contains two dimensions, namely application and motivation. Therefore, the idea of the questionnaire is to gauge students' perception of the use of cursive writing to improve spelling accuracy based on its application and motivation. The questionnaire has 9 items, whereby Item 1 until Item 4 focuses on the dimension of application while Item 5 until Item 9 focuses on the motivation dimension. The questionnaire uses a 5 point Likert scale which is 1 for Strongly Disagree, 2 for Disagree, 3 for Neutral, 4 for Agree and 5 for Strongly Agree.

Below is the flow chart on the data collection procedure:

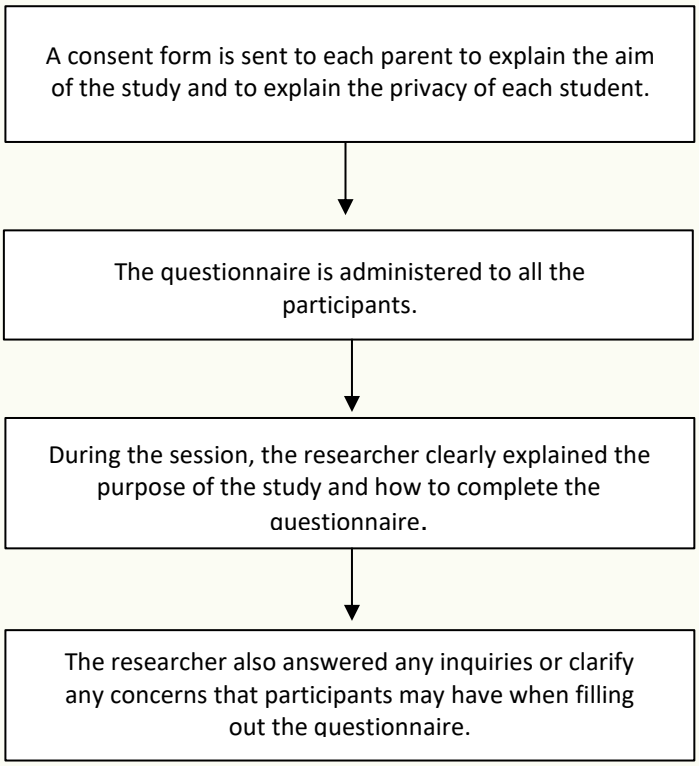

Figure 1: Data collection procedure

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Data analysis was conducted using Statistical Package for the Social Sciences (SPSS) Version 26. The data analysis was broken down into two category which is the descriptive analysis and the inferential analysis. The data was first checked using the normality test before being further used for other analysis. For the descriptive analysis, the mean and standard deviation is presented with charts. For the inferential analysis, the chi-square test is conducted to find an association between gender with the application and motivation to use cursive writing. An independent t-test (Mann Whitney U test) is also conducted to view the significant differences between males and females when focusing on application and motivation to use cursive writing for spelling accuracy.

3. Findings and Discussion

3.1. Normality Test

The normality test is first carried out to test if the data is normally distributed or not. The results are as below:

Table 1: Normality test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Q1	.337	80	.000	.563	80	.000
Q2	.336	80	.000	.584	80	.000
Q3	.292	80	.000	.602	80	.000
Q4	.291	80	.000	.623	80	.000
Q5	.376	80	.000	.546	80	.000
Q6	.334	80	.000	.609	80	.000
Q7	.312	80	.000	.643	80	.000
Q8	.349	80	.000	.595	80	.000
Q9	.356	80	.000	.587	80	.000

The Shapiro-Wilk test results indicate that the p-values (Sig.) for all questions (Q1 to Q9) are less than 0.05. This suggests that the null hypothesis of normality is rejected for all the questions. Therefore, the data for each question do not follow a normal distribution. Given that the data do not meet the assumption of normality, non-parametric statistical methods is appropriate for further analysis of this data.

3.2. Descriptive Statistics

Descriptive statistics is first carried out using SPSS to analyse the frequency of the answers.

There are 80 participants in this study. Below is the graph bar to represent the composition of participants based on gender.

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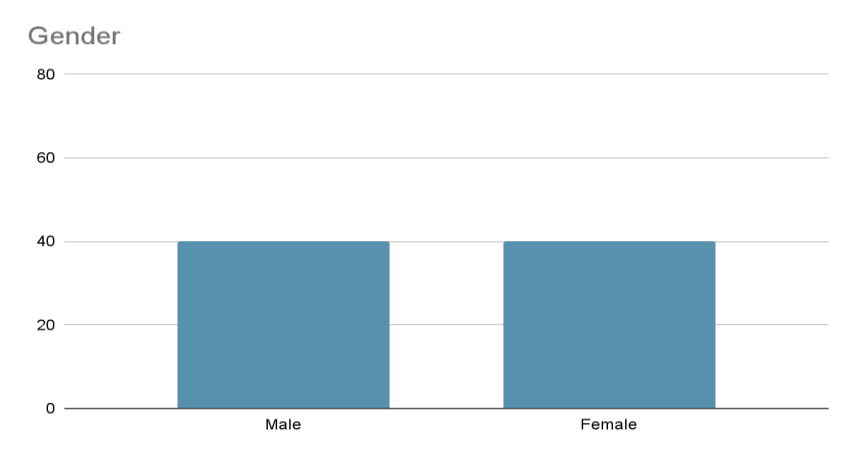

Figure 2: Participant's gender

There are 40 male and 40 female students who took part in this study. Therefore, there is an equal representation of males and females in terms of gender.

Next, let's look at the respondents' responses based on items in terms of frequency of choice selected.

For Item 1 which is "I prefer to use cursive writing while I write to improve my spelling", the Likert Scale with the value of 1 has the lowest frequency, with only 5 respondents (6.3%) choosing this option. Likert Scale with the value of 4 is more common, with 25 respondents (31.3%) selecting this option. Likert Scale with a value of 5 is the most frequent response, chosen by 50 respondents, making up 62.5% of the total responses.

For Item 2 which is "I believe that using cursive handwriting is useful to reduce my spelling errors", a Likert Scale with the value of 1 has a frequency of 3 respondents, accounting for 3.8% of the total responses. Likert Scale with the value of 2 has the lowest frequency, with only 1 respondent (1.3%) selecting this option. Likert Scale with a value of 4 is chosen by 27 respondents, making up 33.8% of the total responses. Likert Scale with a value of 5 has the highest frequency, with 49 respondents (61.3%) selecting this option. A total of 80 respondents provided valid answers to Item 2.

For Item 3 which is "I believe that cursive writing is exciting", Likert Scale with the value of 1 has a frequency of 4 respondents, making up the 5% of the total responses. Likert Scale with a value of 4 constitutes 34 of the respondents or 42.5% of the respondents. Meanwhile the remaining 42 participants or 52.5% of the selected the Likert scale of 5.

For Item 4 which is "I feel cursive handwriting is useful in my future professional life", a Likert scale with a value of 1 has 4 respondents, or 5%. Meanwhile, the Likert scale with a value of 3 has 1 respondent, which makes 1.3%. Likert scale with a value of 4 has 43 respondents, making up 42.5%. The Likert scale of 5 is selected by 41 respondents, constituting 51.2% of the respondents.

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For Item 5 which is “I am motivated in practicing in cursive handwriting to spell accurately”, 3 respondents selected Likert scale with value of 1, constituting 3.8%. Meanwhile, 1 respondent, selected a Likert scale with a value of 3, representing 1.3%. On the other hand, 22 participants selected the Likert scale with the value of 4, constituting 27.5% and 54 respondents selected the Likert scale of 5, representing 67.5%.

For Item 6 which is “I feel myself comfortable while using cursive handwriting”, 2 respondents (2.5%) selected the Likert scale with the value of 1 and 2 respectively. Meanwhile, 28 respondents selected the Likert scale with a value of 4 (35%). On the other hand, 48 respondents selected the Likert scale with a value of 5, representing 60%. For Item 7 which is “Cursive handwriting practices are great fun for me to practice my spelling”, 2 respondents (2.5%) respectively selected the Likert scale with the value of 1 and 2. Meanwhile, 1 respondent (1.3%) selected the Likert scale with a value of 3. 30 respondents (37.5%) selected the Likert scale with a value of 4, and 45 respondents (56.3%) selected the Likert scale with a value of 5.

For Item 8 which is “Cursive handwriting makes me more self-confident while writing”, 2 respondents (2.5%) selected the Likert scale with the score of 1 and 2 respectively. A total of 26 students (32.5%) of respondents selected the Likert scale of 4 while the remaining 50 respondents (62.5%) selected the Likert scale with the scale of 5.

For Item 9 which is “I believe cursive handwriting improves my aesthetic taste”, 2 respondents (2.5%) selected the Likert scale with the value of 1 and 2 respectively. 25 respondents (31.3%) selected the Likert scale with the value of 4 while 51 respondents (63.7%) selected the Likert scale with the value of 5.

Below is the median and the interquartile range for the data based on the application dimension which constitutes Item 1 to Item 4 and the motivation dimension which constitutes Item 5 to Item 9.

Table 2: Median and Interquartile Range

Application	Mean		4.4313	.10014
	95% Confidence Interval for Mean	Lower Bound	4.2319	
		Upper Bound	4.6306	
	5% Trimmed Mean		4.5903	
	Median		4.5000	
	Variance		.802	
	Std. Deviation		.89564	

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	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		1.00	
	Skewness		-2.824	.269
	Kurtosis		8.750	.532
Motivation	Mean		4.5875	.09856
	95% Confidence Interval for Mean	Lower Bound	4.3913	
		Upper Bound	4.7837	
	5% Trimmed Mean		4.7500	
	Median		5.0000	
	Variance		.777	
	Std. Deviation		.88151	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		1.00	
	Skewness		-2.946	.269
	Kurtosis		9.222	.532

The median values (4.5 for application and 5.0 for motivation) suggest that, on average, students rated their motivation slightly higher than their application. This central value indicates the typical response in the dataset, which is less influenced by extreme values compared to the mean. The IQR for both variables being 1.00 indicates a relatively narrow spread of the middle 50% of the data. This suggests that there is moderate consistency in the responses among students regarding both application and motivation. The scores are not widely dispersed, which implies that most students' ratings cluster closely around the median. The skewness and kurtosis values can further inform the interpretation. The negative skewness values for both application (-2.824)

and motivation (-2.946) suggest that the data distributions are left-skewed, meaning there are relatively few lower scores and higher scores. High kurtosis values (8.750 for application and 9.222 for motivation) indicate a distribution with heavier tails and a sharper peak than a normal distribution.

3.3. Is there an association between gender with application and motivation to use cursive writing for spelling accuracy?

The Chi-Square Test is carried out to determine the association between gender with the application of cursive writing for spelling accuracy. The results are as below:

Table 3: Chi-Square test for application

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.939[a]	3	.585
Likelihood Ratio	1.962	3	.580
Linear-by-Linear Association	.035	1	.851
N of Valid Cases	80		

The Pearson Chi-Square value of 1.939 with 3 degrees of freedom has a p-value of 0.585. Since the p-value is greater than the significance level of 0.05, we fail to reject the null hypothesis. This indicates that there is no statistically significant association between gender and the application of cursive writing. The Chi-Square test results show that there is no significant association between gender and the application of cursive writing among the participants. Both the Pearson Chi-Square test and the likelihood ratio test have p-values greater than the commonly used significance level of 0.05, leading to the conclusion that gender does not influence the application of cursive writing in this sample of 80 students.

Another Chi-Square Test is conducted to determine the association between gender with the motivation to apply cursive writing for spelling accuracy. Below are the results:

Table 4: Chi-Square test for motivation

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.625[a]	3	.654
Likelihood Ratio	2.018	3	.569
Linear-by-Linear Association	.145	1	.704
N of Valid Cases	80		

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The Pearson Chi-Square value of 1.625 with 3 degrees of freedom has a p-value of 0.654. Since the p-value is greater than the significance level of 0.05, we fail to reject the null hypothesis. This indicates that there is no statistically significant association between gender and the motivation to use cursive writing. The Chi-Square test results show that there is no significant association between gender and the motivation to use cursive writing among the participants. Both the Pearson Chi-Square test and the likelihood ratio test have p-values greater than the commonly used significance level of 0.05, leading to the conclusion that gender does not influence the motivation to use cursive writing in this sample of 80 students. The linear-by-linear association test also supports this conclusion, indicating no significant linear relationship between gender and motivation to use cursive writing.

3.4. Is there an association between gender with application and motivation to use cursive writing for spelling accuracy?

In the earlier part, the normality test carried out concluded that the null hypothesis of normality is rejected for all the questions. Therefore, the data for each question do not follow a normal distribution. A non-parametric test is conducted to determine if there are significant differences between males and females when focusing on application and motivation to use cursive writing for spelling accuracy. Thus, the Mann-Whitney non-parametric test is carried out. Below are the results:

Table 5: Mann Whitney U test

Ranks

	GENDER	N	Mean Rank	Sum of Ranks
Application	1	40	39.36	1574.50
	2	40	41.64	1665.50
	Total	80		
Motivation	1	40	39.53	1581.00
	2	40	41.48	1659.00
	Total	80		

For the first part, which is the application, the male has 40 participants with a mean rank of 39.36 and a sum of ranks of 1574.50. Meanwhile, the female also has 40 participants with a mean rank of 41.64 and a sum of ranks of 1665.50. The Mann-Whitney U test results indicate that the mean rank for females (41.64) is slightly higher than that for males (39.36). This suggests that female participants generally have higher application scores compared to male participants.

Similarly, the table shows the Mann-Whitney U test results for the motivation scores between the two gender groups. The male has 40 participants with a mean rank of 39.53 and a sum of ranks of 1581.00. The female also has 40 participants with a mean rank of 41.48 and a sum of ranks of 1659.00. For motivation scores, female participants have a mean rank of 41.48, which is higher than male participant's mean rank of 39.53. This indicates that female participants tend to have higher motivation scores compared to those male participants.

Table 5: Mann Whitney U analysis

Test Statistics[a]

	Application	Motivation
Mann-Whitney U	754.500	761.000
Wilcoxon W	1574.500	1581.000
Z	-.471	-.481
Asymp. Sig. (2-tailed)	.638	.630

From the table above, we can see that the p-value for application is 0.638 which is more than the significance level (0.05), we could conclude that there is not significant difference in application scores between the two groups. The p-value for motivation is 0.630 which is more than the significant level (0.05). Therefore, we can conclude that there is also no significant difference in motivation between the two groups.

3.5 Discussion

According to a study done by Taneri & Akduman (2018), students prefer printed writing because it is legible and smooth. At the same time, they prefer non-contiguous letters for fast writing. However, the questionnaire results beg to differ. For item 2, it can be seen that the majority of students believe that cursive writing is capable of producing any useful result. Therefore, they do believe that the application of cursive can help to improve spelling accuracy. This is in contrast with the statement by Bova (2015) stating that in this modern era, cursive writing is deemed not significant in the learning context, and digital printed letters are more relevant. In the Malaysian school contexts, real importance is placed on the teaching and learning of cursive writing through penmanship through the syllabus. We cannot deny that there are mixed reactions towards the pupils' preference to use cursive writing. There are groups of students who think cursive is not exciting. This is further supported by Ates (2018) stating that students indicate that they get bored and have difficulties when learning to write. However, this study shows that there are groups of students who do enjoy cursive writing. Many external factors may play a role such as a teacher's teaching technique and the motivation to learn cursive or even being prone towards arts. More studies must be conducted on this.

The majority of the respondents do see the relevance of cursive in real-life situations, especially when it comes to improving their spelling. This is also asserted by Dinehart (2014) by stating that cursive handwriting has a significant connection to life achievement of a student in the future. Besides, it assists in the improvement of compositional fluency and increases the speed of note-taking. Despite being young, many feel comfortable with cursive despite it being foreign or something new. This can be explained in a study done by Burke (2013), stating that cursive writing has an essential role in supporting the development of young learners' cognitive, affective, and psycho-motor skills, in which language pedagogues are significant figures to initiate and instill the ' I can do it, mindset', whilst enjoying in the application of cursive in the educational surroundings. This highlights the importance of cursive writing towards spelling performance of an individual. This is also because the words that are linked together help students to form the words as a whole, allowing them to master long and difficult words that are pronounced the way it is written.

Based on the questionnaire, as a whole, the students perceive a promising or positive attitude towards cursive handwriting to help and assist them in improving their spelling. There are several possible factors influencing this outcome. One of the criteria is the relationship of graphomotor to students' writing skills. Students demonstrate positive affective towards cursive as they feel it is easy and they can write in the correct format. The main reason could be perceived as an adequate amount of exposure at the initial stage of their life in learning handwriting (both manuscript and cursive). Thus, the gross motor skill aspect and the less revelation of cursive, ignite a pessimistic connotation amongst the students' mentalities. Morin, Lavoie, & Montésinos (2012) stated that the part of composing doesn't get a lot of consideration in class, and in that capacity, academic components had an effect especially as to specific components of showing penmanship (recurrence, immediate and unequivocal nature) with the challenges looked by students on changed stages after the underlying one.

Furthermore, improved emphasis on teaching cursive in specifically primary schools may be the reason students are having increased motivated to learn and think about its criterion, which might be useful for their future and create opportunities for self-improvement in different areas of their lives. According to Alves et. al. (2015), there is an impact of handwriting on academic achievement, self-confidence, and personal improvement. Thereby it is stressed that handwriting should be given equal importance while teachers prepare their students for academic achievement.

As an abbreviation, cursive has been given significance in the context of the Malaysian education system. The related literature works of a vast number of researchers discovered that cursive handwriting has more advantages in several disciplinary localities of a learners' learning growth. Simultaneously cursive script is relevant and allows students to be competent individuals, in correlation to writing advancement.

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4. Conclusion

In conclusion, there has been positive feedback on the idea of cursive writing applications for improving spelling performance. The insertion of cursive writing in the national syllabus is indeed helpful for students to apply it in the classroom for the context of this study. They see its relevance in improving spelling accuracy and also view learning and mastering cursive writing as not to be a burden. Thus, with such positivity, they felt the application of cursive writing in the classroom aided their spelling performance. However, it must be emphasized that the results of this study are only relevant for this context as there are many external factors such as self-motivation, passion, and teaching techniques that play a role in ensuring cursive help can aid in spelling accuracy in a learner.

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