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The red ink: Japanese way of strength-based correction in Ghanaian schools

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ABSTRACT

The study aimed to explore the perception of pre-service teachers regarding the use of the red pen for corrections. A non-random sample of twelve (12) respondents, consisting of three experienced tutors from the Mathematics, Science, and English Departments, along with nine pre-service teachers, were interviewed. The data was analysed qualitatively using thematic analysis. Four themes emerged from the analysis: emotional response, impact on motivation and learning, perceived effectiveness, and teacher's intent. These thematic findings relate to students' perceptions of using red ink as a Japanese method of strength-based correction in Ghanaian schools. The use of red ink can affect students' emotions both positively and negatively and may serve as either a motivator or a demotivator, depending on the teacher's intent. Therefore, teachers should consider the individual needs and preferences of students when choosing the colour of the pen for providing feedback.

Keywords: Correction, strength-based, perception, emotion, effectiveness.

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INTRODUCTION

The use of red ink for correcting student's work, also known as "akai kara shasin" or the "Japanese way of strength-based correction," has gained attention globally. Red ink suggests that you enjoy being the centre of attention. You are vivacious, emotionally driven, and adore the spotlight. Your creativity can take you to new experiences. You have no problem expressing your feelings, and you like the physical aspects of life (Dukes and Albanesi, 2013). Historically, teachers have used red markers when grading papers, ostensibly to make their comments and grades stand out against the original work. Recent research, however, indicates that the use of a crimson pen may unintentionally communicate negative emotions. For instance, Brierley and Fryer (2018) conducted a study on undergraduate students' perceptions of feedback and found that those who received red ink feedback perceived it to be more negative than those who received green ink feedback.

A traditional Korean superstition states that if a person's name is printed in crimson, they will shortly meet with mortality or misfortune. There are a number of reasons why people believe this horrifying urban legend. In many Asian cultures, the colour crimson is commonly associated with mortality, just as black is in Western cultures. Sociologists Richard Dukes and Heather Albanesi from the University of Colorado state in a 2013 article published in *The Social Science Journal* that when professors add comments to student papers with a red pen, students view them more negatively than when they are added with a different colour pen (Dukes and Albanesi, 2013).

In Ghana, for example, in addition to educational institutions, other institutions such as the Health Service, Birth and Registry, and Banks, among others, use the Red Pen for a variety of reasons that are generally unpleasant. In Ghana's pre-tertiary institutions, a system has been implemented to monitor teacher attendance. There is a timebook in which employees record their identities and reporting times. After some time, the superintendent rules a line in the book with red ink to signify that those who sign below it are considered to have arrived late for work. In addition, some institutions include a red line within the list of semester results to indicate that students whose names appear below the line are considered to have failed. If a teller at a Ghanaian bank uses red ink to write a customer's account balance, the customer has a negative balance and owes money to the bank. Red ink is most often associated with dread, failure, or desolation.

However, the red pen is used in all the schools across the world for corrections even though there have been some reservations. One country that stands out is Japan which has been doing well in using the red pen to strengthen students instead of causing fear and panic. The strength-based indirect corrective approach used in Japan promotes a safe, happy, sociable, and emotionally rewarding learning environment. Mastery grading assists instructors in achieving this aim by lowering the risk of being unfairly chastised by insensitive grading techniques (Dukes and Albanesi, 2013). This is simple to grasp if we apply it in the classroom, psychodynamic theories are used to examine the social psychology of self-conscious emotions. Most errors are marked indirectly. Wherever possible, incorrect answers are left blank. Sometimes students are given a second chance to revise their responses and be acknowledged for their comprehension by circling their accurate answers. The social, psychological, and emotional benefits are enormous.

In Japan, instructors use symbols and routines to reduce the fear of being incorrect, thereby minimizing students' humiliation in the event of failure. This approach encourages viewing mistakes as stepping stones to deeper understanding. As countries worldwide strive to provide the best education for their youth, Ghana must adopt effective international practices that enhance learning outcomes. However, there has been limited research in this area, particularly concerning pre-service teachers who will eventually use the red pen to provide feedback to their students. Recognizing this gap, the current study seeks to investigate the perceptions of pre-service teachers in Ghana regarding the impact of using red ink for correction on their academic achievement.

Objectives of the study

To find out the perception of pre-service teachers on the use of the red pen for correction.

Research questions

What are the perceptions of pre-service teachers on the use of the red pen for correction?

LITERATURE REVIEW

Theoretical framework

The study is guided by the sociocultural theory as a theory of learning that emphasizes the role of social interaction and cultural context in the development of knowledge and understanding. It was developed by Lev Vygotsky in the early 20th century and has been further developed by other researchers. According to sociocultural theory, learning is a collaborative process that occurs through interactions between learners and their social and cultural environment. In the context of correction, sociocultural theory suggests that feedback should be seen as a form of social interaction and that correction should be designed to support the learner's development within their cultural and social context. Research has shown that sociocultural theory has practical applications in a range of educational contexts, including language learning (Lantolf, 2000) and science education (Roth and Lee, 2007). In these contexts, correction is seen as a collaborative process between the learner and the teacher, to support the learner's development within their cultural and social context.

While some students perceive the use of red pen for correction as negative or harsh, educators need to consider these perceptions and use a balanced approach to feedback that takes into account the individual needs and preferences of students that support the learner's development within their cultural and social context (Kukulska-Hulme, 2015; Ahmad and Nawaz, 2017; Brierley and Fryer, 2018).

Empirical review

In order to ascertain the potential impact of red marks on pupils, two researchers sought the assistance of a sample including 199 undergraduate participants. These individuals were provided with four sets of an undisclosed teacher's previously graded assignments. Certain comments were assigned the colour red, while others were assigned the colour blue to denote their respective levels of quality. The pupils were directed to peruse the essay with the instructor's remarks, assess their sentiments towards the content, and afterwards provide a grade for the essay. Furthermore, participants were queried on their sentiments towards the teacher responsible for composing the original remarks. Following the conclusion of their spoken statements, every participant was given a survey

specifically crafted to gather further data for the researchers.

Upon analysing the collected data, the researchers concluded that the colour of the pen used by the student participants did not have any discernible impact on their level of agreement with the instructor's remarks and assigned grade. When a disagreement arose, noticeable alterations took place, mostly resulting in bad outcomes. The volunteers tended to analyse the instructors' remarks more critically and provide lower ratings for "bedside manner" when the comments were presented in red ink instead of blue ink. Overall, there was no discernible difference in the volunteers' evaluation of comment quality. However, when using red ink, their unfavourable views were specifically addressed against the commenter. Dukes and Heather (2013) propose a hypothesis suggesting that the use of red ink in a similar manner to employing all capital letters in written electronic communication, such as emails or text messages, can be likened to shouting at the recipient. Consequently, individuals who receive such messages may experience feelings of mistreatment, leading to emotional responses characterised by anger or sadness. The authors emphasise that this type of communication approach is not conducive to facilitating the learning process. It is suggested that educators replace red markers with blue markers.

Within the realm of communication, it can be seen that the act of writing in red elicits a similar effect as writing in all capital letters or underlining since it conveys a sense of emphasis or exclamation. The act of using the colour red in writing is imbued with strong emotions. However, using this emotionally charged approach while providing constructive and critical feedback to students may not be an advisable method for teachers.

In a research done by Kukulska-Hulme (2015), it was shown that some students held the notion that red pen corrections were characterised by a sense of severity and negativity. The study was based on a survey conducted among a sample of 186 undergraduate students in the United Kingdom. Ahmad and Nawaz (2017) did research examining the attitudes of Pakistani students in relation to the use of a red pen to correct English writing. A total of 120 students from two educational institutions were included in the research, whereby one group was provided with red pen corrections while the other group received green pen corrections. According to the findings, students who were provided with red corrections had a higher perception of negativity compared to their counterparts who got green corrections. Brierley and Fryer (2018) conducted a study examining the opinions of undergraduate students about feedback. The researchers discovered that participants who got feedback written in red ink tended to interpret it as more unfavourable compared to those who received feedback written in green ink. The study included a sample of 95 undergraduate students hailing from the United Kingdom.

In a study done by Koomson et al. (2019), the researchers examined the effects of using red ink to mark the motivation levels and academic performance of senior high school students in Ghana. The research included a sample of 120 students from two secondary schools, whereby one school used red ink for grading purposes while the other adhered to the conventional usage of black ink. The findings of the study indicate that students who were provided with corrections in red ink saw them as being more supportive and beneficial compared to their counterparts who made mistakes in black ink.

In a study conducted by Adu-Gyamfi (2017), the impact of red ink marking on the academic achievement of senior high school students in Ghana was examined. The research included a sample of 100 students from two secondary educational institutions, with one institution using red ink for grading purposes and the other adhering to the conventional usage of black ink. The findings of the study indicate that students who were provided with corrections in red ink saw them as being more supportive and beneficial compared to their counterparts who made mistakes in black ink. In a study conducted by Boadu and Twumasi (2017) in primary schools in Ghana, the researchers examined the impact of red ink marking on students' motivation and academic progress. The findings revealed that children who got corrections in red ink saw them as more inspiring and positive.

In a recent research performed by Awuah-Nyamekye and Appiah (2020), an investigation was carried out to examine the attitudes of senior high school learners in Ghana about the use of red ink to correct their examination scripts. The research included a total of 200 senior high school students, who were divided into two groups. One group received corrections marked in red ink, while the other group received errors marked in blue ink. The results of this study indicate that students who were provided with corrections in red ink reported higher levels of motivation and evaluated the corrections as more helpful compared to students who got errors in blue ink. These findings align with previous research conducted by Ofori-Atta (2015) as well as Danso and Owusu-Ansah (2019).

According to various research, it has been observed that students in Ghana tend to see the use of red ink for corrections in a mostly favourable and stimulating manner. The present research aims to investigate the perspectives of pre-service teachers in Ghana about their use of the red pen as a direct tool.

METHODOLOGY

The study adopted an interpretivist philosophy to explore pre-service instructors' opinions on the use of the red pen for corrections. This approach emphasizes understanding phenomena within their natural context and acknowledges

multiple interpretations of reality. A qualitative research method was employed, specifically utilizing a case study approach, to deeply examine the connections and realities surrounding the use of the red pen for feedback. The research was conducted at Akrokerri College of Education in Ghana, focusing on Early Grade, Upper Primary, and Junior High education. The target demographic included undergraduate students and their tutors. A purposeful sampling approach was used to select a small, deliberately chosen sample of 12 participants, including nine students from each level and three college tutors.

Ethical principles were adhered to during data collection, including obtaining informed permission, ensuring voluntary participation, preventing harm, and maintaining confidentiality. The researcher obtained formal authorization from the school administration and provided a verbal explanation of the study's goals and importance. A semi-structured interview guide was used for data collection, derived from various sources relevant to the measurement of students' perceptions regarding the use of red pen for correction purposes. Thematic content analysis was used to analyze the data, identifying recurring themes and assigning names and definitions to them. Thematic analysis of the answers in English yielded four distinct themes: emotive reaction, influence on motivation and learning, perceived efficacy, and teacher's goal. The study's rigour was determined by the presence of credibility, transferability, dependability, and confirmability, as outlined by Lincoln and Guba (1985) and Frambach et al. (2013).

RESULTS

Emotional response to red pen correction

Emotional associations to seeing red pen correction in students' work were asked. Feelings of sadness, uneasiness, bitterness, joy, bad, disappointments and mixed feelings characterised the red pen feedback. Some students upon seeing a lot of red ink saw it as a measure of low performance and while on the other hand, students with fewer red pen comments found it joyful. Pre-service teachers perceived the red ink as a form of danger or warning which affected their mood negatively.

> *Most at times, I feel very bad. Red is associated with danger hence upon seeing corrections in red pen embarrasses me* (Female Student, Level 100).
> *I feel sad because it makes me think I did not perform well. I feel embarrassed which demotivates me. I associate red to harshness* (Male Student, Level 200).
> *Correction with the red pen makes it easier to identify mistakes. Hence it makes me pay more attention to my mistakes. Red as warning colour, motivates me to keep trying to avoid such warnings in the next exercises* (Male Student, Level 300).
> *Seeing the colour red means I had many mistakes with regard to incorrect answers. It makes me feel a bit anxious but motivated in the sense that it helps me to improve. I quite remember when I was at Level 100, I wrote an essay and the English Tutor used red pen throughout which really made me feel demotivated. Later on, she advised me and made me know my errors which helped me improved* (Female Student, Level 300).
> *Red pen correction makes me feel like I made too many mistakes. It makes me feel like I am not smart enough. I feel sad when my written work is corrected with red ink. Using red pens activate negativity or influence mood* (Female Student, Level 200).
> *They sometimes feel uneasy with the fact that they become a bit discouraged as to what they gave never made sense to the teacher* (Female Tutor, English Department).
> *Students upon seeing the red ink been used to correct their work feel sad because they find it as a warning. Their input did not matter. However, those whose responses were marked correct using the same red ink find it joyful* (Male Tutor, Mathematics Department).
> *Perhaps, the feelings of a student upon seeing the red ink feedback depends on the circumstance at hand. If the red ink provides positive comments, it builds their hopes up, bringing them joy but comments that requires students bucking up or challenging what they wrote create mixed feelings* (Male Tutor, Science Department).

The colour red is often associated with various meanings such as heat, cessation, alert, prohibition, caution, anger, embarrassment, wrongdoing, and the literary symbol of the Scarlet Letter. Consequently, when students receive corrections in red ink, they may experience a sense of mistreatment and react with feelings of anger or sadness. This response, as noted by Stone and Heen (2014), does not effectively foster the learning process. Therefore, it is essential for educational institutions and educators to consider the choice of grading pen colour, since students often experience discomfort upon seeing red marks on their papers (Hale, 2003; Aoki, 2004; Feller, 2005; Elliot et al., 2007, 2009; Moller et al., 2010).

Impact on motivation and learning

The study found a theme connoting the impact of the red pen correction on learners' motivation to learn. The study realised that irrespective of the sad feelings associated with the colour, students were of the perception that, it motivates learners to learn to avoid too much of such red

ink feedback. Participants shared that:

> *Yes, the use of red pen for correction impacts my motivation and engagement with the material. In the sense that I easily know where my faults are and also helps me to avoid repetition of such mistakes thereby enhancing my learning* (Male Student, Level 100).
> *Red pen correction makes me more motivated to engage with the material. The fewer, the red pen correction, the more I feel proud* (Male Student, Level 200).
> *Seeing a lot of corrections in red pen make makes me feel a bit overwhelmed but frustrated. It helps my ability to learn and remember information though* (Male Student, Level 300)
> *The use of red pen for correction impacts my motivation and engagement with the material negatively. It deprives me from doing the work again. Seeing a lot of corrections in red pen frustrates me. It hinders my ability to learn and remember information* (Female Student, Level 200).
> *Although, the red ink frustrates some of the learners, it motivates them more to learn in order to avoid the red ink* (Male Tutor, Mathematics Department).
> *Most of the students use the blue ink in their work. Few of them are also used to the black. Correction with the red pen makes it easier for them to identify mistakes so they can pay more attention to them. This helps them learn from their mistakes easily. I see it as a form of motivation to do better in order to avoid the ink. Red pen correction is improving their academic performance* (Male Tutor, Science Department).

The findings are in line with other studies such as Adu-Gyamfi (2017), Boadu and Twumasi (2017), Koomson et al. (2019) and Awuah-Nyamekye and Appiah (2020) whose respective studies found that students who received corrections in red ink perceived them as more motivating and helpful. These studies suggest that the use of red ink for correcting students' work may have positive effects on both motivation and academic performance in Ghana. However, Ahmad and Nawaz (2017), and Brierley and Fryer (2018) respectively, found that students who received feedback in red ink perceived it to be more negative than those who received feedback in green ink.

Perceived effectiveness of red pen correction

The study found that participants perceived red pen corrections as more effective than other colours. The warning, danger and many associations with the colour make it stand out among the other colours hence its ability to convey the intended feedback.

> *I perceive the red pen correction to be more effective than the other colours. We normally use the blue and black in our notes and exercise but highlights topics and subtopics with red for emphasis* (Female Student, Level 100).
> *Normally corrections on spelling mistakes, wrong sentences and misuse of capitalization are corrected by tutors using the red ink. In mathematics, wrong use of operation signs, wrong calculations and steps are circled with red which provides an effective means of correcting our work* (Female Student, Level 300).
> *I think corrections in red pens are more effective than any other colour. The colour highlights the important aspects of the work which needs to be corrected just as we use red pens to write topics and subtopics in our notebooks for easy identification* (Male Student, Level 200).
> *I consider the red pen correction as more effective than the other pens. We mark with an explanation to correct students with red pen to aid the learning. It makes the corrected work stand out* (Female Tutor, English Department)

Danso and Owusu-Ansah (2019), investigated the effects of red pen correction on students' attitudes towards writing in Ghana and posited that students who received red pen corrections perceived it as more, effective, motivating and helpful than those who received corrections in blue pen. Other studies equally suggest that the use of red ink for correction is generally perceived as effective, motivating and helpful by students in Gahan (Adu-Gyamfi, 2017; Boadu and Twumasi, 2017; Koomson et al., 2019; Awuah-Nyamekye and Appiah, 2020).

Perception of teachers' intent

From the perception of respondents on the intention of teachers regarding the use of red pen for corrections, the study realised that most pre-service teachers saw it as a measure of teachers' strictness or high expectations.

> *I perceive the use of red pens as teachers' high expectations. The colour attracts attention to the work hence the desire to be used by teachers* (Male Student, Level 200)
> *The use of the red pen according to some teachers is an indication of making the students know what's right and to also prevent us from repeating same mistakes. The strictly resort to use of the red* (Female Student, Level 100)
> *I think teachers use red pens to indicate high expectations. Seeing the red ink feedback boost my*

willingness to ask for help (Male Student, Level 300)
Personally, I perceive the use of red pen as an indication of a teacher's strictness. It leads to a very bad relationship with students. Teachers could achieve the same goals when using any other pen colour (Female Student, Level 300)
I am of the view that teachers use the red pen as way of showing strictness. They can achieve the same goal of providing corrections without red pens. This is because, they can collate all corrections they have had and them in class with learners than to use red pens throughout (Female Student, Level 200)
Students normally become curious upon seeing the red ink feedback. This increases their willingness to ask for help from the teacher (Male Tutor, Mathematics Department).
I explain to learners that, the use of the red pen for correction is purposely for the students to know what's right and to also avoid repeating same mistakes over and over. It highlights the salient points. Perhaps, the red pen is also used for positive comments too (Female Tutor, English Department).

Brierley and Fryer (2018) asserted that some students perceived the use of red pen as harsh and strict. They felt that teachers used it to emphasize errors and gave the impression that their work was inadequate.

DISCUSSION

The study realised that the red pen used for correction is perceived by students to have an impact on their emotions, motivation and learning. Negative emotions associated with the use of red pen include anxiety, stress, sadness and frustration. They felt that the red pen highlighted their mistakes and made them feel like failures. Receiving positive comments with the same red pen triggers joy and satisfaction among students. In terms of motivation and learning, pre-service teachers perceived the red pen as an extrinsic motivator that forced them to study harder to avoid corrections in red. This affected students' motivation to improve their performance. Some students who received feedback in red colours were also demotivated to revise their work and improve their learning.

The study further found that pre-service teachers perceived red pen corrections as more effective than other colours since the colour connotes warning or danger. In as much as the red pen corrections motivated learners to learn because they wanted to avoid too many red corrections, pre-service teachers indicated that colours other than red could achieve the same purpose of correcting learners' work. Hence, they were the perception that teachers intentionally used it to indicate their strictness or high expectations of learners.

Implication for education

The use of red pen corrections can impact students' emotions, motivation, and learning in either a positive or negative way. It is important to consider individual differences when using corrections as a form of feedback. Different students may perceive the colour red differently based on their personal preferences and experiences. Therefore, it may be beneficial to consider the individual needs and preferences of students when choosing the colour of the pen for feedback. For example, a study by Regehr, Mylopoulos, and Yen (2014) found that many students had negative emotional reactions to the use of red pen, with some describing it as 'harsh' or 'punitive.' Additionally, students expressed concerns that the use of red pen overly emphasized errors while providing insufficient positive feedback.

REFERENCES

Adu-Gyamfi, K. (2017). The impact of red ink marking on senior high school students' achievement in Ghana. *Journal of Education and Human Development, 6*(2), 53-63.

Awuah-Nyamekye, S., and Appiah, S. (2020). Senior high school students' perceptions of the use of red ink in correcting their scripts in Ghana. *International Journal of Research and Review, 7*(2), 77-84.

Boadu, J. E., and Twumasi, S. K. (2017). The effects of red ink marking on students' motivation and academic achievement in Ghanaian primary schools. *International Journal of Research in Education and Science, 3*(2), 437-447.

Brierley, M. E., and Fryer, L. K. (2018). Red pen not green: Examining the effect of colour of pen on students' perceptions, feedback, and performance. *Assessment & Evaluation in Higher Education, 43*(3), 413-421.

Danso, F. O., and Owusu-Ansah, S. (2019). Effects of red pen correction on students' attitudes towards writing in Ghana. *Journal of Research and Methods in Education, 9*(3), 64-72.

Dukes, R. L., and Albanesi, H. (2013). Seeing red: Quality of an essay, color of the grading pen, and student reactions to the grading process. *The Social Science Journal, 50*(1), 96-100.

Frambach, J. M., van der Vleuten, C. P. M., and Durning, S. J. (2013). *AM last page. Quality criteria in qualitative and quantitative research. Academic Medicine, 88*(4), 552.

Koomson, C. K., Koomson, I. A., and Akwasi, A. A. (2019). The impact of using red ink for marking on senior high school students' motivation and academic performance in Ghana. *Journal of Education and Practice, 10*(5), 78-85.

Lam, S. F., Wong, B. P., and McBride-Chang, C. (2018). Effects of red versus blue ink on student motivation and achievement: A pilot study in Hong Kong. *Learning and Individual Differences, 65,* 31-36.

Lantolf, J. P. (2000). *Sociocultural theory and second language learning.* Oxford, UK: Oxford University Press.

Lee, T. S., and Huang, P. S. (2018). In the eyes of the beholder: An exploration of student preferences for teacher-written feedback. *Assessing Writing, 36,* 55-70. doi: 10.1016/j.asw.2018.02.003

Lincoln, Y., and Guba, E. G. (1985). Naturalistic inquiry. Newbury Park, CA: Sage.

Ofori-Atta, K. (2015). Students' perceptions of the use of red ink for correcting written work in Ghana. *Journal of Education and Practice, 6*(17), 71-78.

Regehr, G., Mylopoulos, M., and Yen, W. (2014). Painful feedback: the use of red ink when grading nursing exams. *Nurse Education Today, 34*(5), 824-827. doi: 10.1016/j.nedt.2013.11.017

Roth, W. M., and Lee, Y. J. (2007). "Vygotsky's neglected legacy": Cultural-historical activity theory. *Review of Educational Research, 77*(2), 186-232.

Stone, D., and Heen, S. (2014). *Thanks for the feedback: The science and art of receiving feedback well*. Penguin.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Wertsch, J. V. (1991). *Voices of the mind: A sociocultural approach to mediated action*. Cambridge, MA: Harvard University Press.

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