THE RELATIONSHIP BETWEEN DIFFERENT METHODS OF TEACHER CORRECTION FEEDBACK MECHANISMS AND STUDENTS' WRITING FLUENCY IN BOTSWANA

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ABSTRACT: *This paper uses a predominantly quantitative approach to establish the relationship between error correction feedback mechanisms and students' ESL writing Fluency (narrative and descriptive) amongst high school students in Botswana. A longitudinal, quasi-experimental design is used, with a control group that received no correction feedback while the experimental groups received direct, coded and uncoded feedback. The study is defined by a hypothesis that there is a relationship between feedback mechanism used and the development of fluency in students' writing. Students were drawn from two Form 4 classes from one private co-educational secondary school. The Form 4 class was chosen because it was a pre-candidate class and the students were expected to sit for their BGCSE examination the following year in Form 5. There were 28 males and 40 females and their ages ranged between 16 years and 21 years. From the findings, no significant increases in fluency were found between the pretests and posttests. Correction success achieved by the three treatment groups when rewriting texts reflected the explicitness of the feedback, with the direct group highest, followed by the coded and uncoded groups.*

KEYWORDS: Relationship, Teacher Error Correction Feedback Mechanisms, Students' Writing, Fluency, Direct feedback, Coded feedback, Un-coded feedback.

INTRODUCTION

Writing is one of the basic skills in the learning of either a first or a second language. It involves mastering the elements of grammar of a language, vocabulary, mechanics, content, organisation and style. In order to develop writing skills, it is essential for learners to receive feedback. Richards, Platt, and Platt (1992, P. 137) define feedback as:

> Any information which provides reports on the result of behaviour, for example verbal or facial signals which listeners give to speakers…. In the teaching context, these may be comments or information learners receive on the success of a learning task either from the teacher or from other learners.

Error correction feedback in this study should be distinguished from other types of teacher response that can be made to student writing, such as feedback on content or interpersonal feedback. It refers to the correction that students receive on the errors made in their essay writing, hence 'teacher error correction feedback'. In this paper, 'teacher feedback' is often used to cover the longer label 'teacher correction feedback' while 'teacher correction feedback mechanisms' refer to the type of correction that the students receive on their writing.

Teacher correction feedback can take various forms. It can be direct or indirect feedback. In direct correction feedback, a teacher indicates the presence or the location of errors in the text

and also provides clues or tips on how the students can correct their errors. It includes: (a) underlining a word and providing a written tip, for example *she go* $^{past\ tense}$ *home yesterday*; (b) bracketing a misplaced word or phrase and indicating its proper place in a sentence, for example "*keep quiet [their mother]*" $^{their\ mother}$ *told them*; (c) crossing out a superfluous word, for example *John went to ~~to~~ the party late;* and (d) providing a correct form or structure of an incorrect word or phrase, for example. *They cutted* ^{cut} *the fence yesterday*. In the above examples, (a) is slightly different from the other three in that it is less direct as it requires the students to do some thinking while the others require the students to just transcribe the changes that have been made. In indirect correction, the learners are not given any clue about how they should correct the errors that they have made, however the teacher indicates the presence of an error. The teacher can give indirect correction by: (a) underlining the incorrect forms; (b) circling an inappropriate word; (c) inserting an arrow to indicate a missing word; and (d) placing a question mark alongside a confusing phrase or structure (Hendrickson 1980, p. 218). However the question arises as to how explicit indirect correction should be. Indirect correction can be coded or uncoded. When it is coded, the learners are given codes for the type of errors made, for example *v* to show that a verb error has occurred. The codes are explained to the students so that they can correct the errors. Uncoded indirect feedback happens when the teacher just circles or underlines the error and the student is left to figure out the type of error that has occurred. There are however no general standards that exist with regard to whether, when, which or how student errors should be corrected and who should correct (Hendrickson, 1978).

Feedback is an essential part of language acquisition and correction seems to have been accepted as one form of feedback (Horner 1988). There has been a debate on whether or not to give grammar correction and the empirical evidence that exists is divided on this issue. Some research studies (such as Chandler 2003; Greenslade and Felix-Brasdefer 2006; Lalande 1982; and Lee 1997) suggest that teacher correction feedback is helpful to students. However, others (such as Bitchener, Young, and Cameron 2005; Fazio 2001; Kepner 1991; Robb, Ross and Shortreed 1986; Semke 1984; and Sheppard 1992) suggest that it is not helpful to students. If some studies show that error correction is helpful while others show that it is not and students want their errors corrected, what should the teacher do? Teachers are put in a situation where they are not sure whether to correct or not to correct students' errors and if they are to correct, what errors should be corrected and how these errors should be corrected. Hendrickson (1978) raised this issue over 30 years ago and to date no answer has been arrived at despite the numerous studies that have been done.

The issue of fluency in student writing has also been of major concern for some researchers and has been measured in various ways in student writing. Richards et al. (1992, p. 141) define fluency as 'the ability to produce written and or spoken language with ease'. Frantzen (1995) measured fluency by taking into account: (a) the length of the essay; (b) the expressive ability revealed; and (c) the complexity of sentence structure. For many researchers fluency is measured in terms of the number of words written, but Chandler (2003) measured fluency differently. Since in her data the length of the composition was stipulated for the students, fluency was measured in terms of the length of time taken to write it. Students were asked to indicate the amount of time they took to write an assignment. Writing was done as homework assignments. The students were simply asked to write approximately five pages about their own life but they were not required to write in a particular order and this was done as a homework assignment. The time each student reported spending on the first and fifth

assignment was then calculated per 100 words and change over the semester was one of the outcome measures.

Thus, ability to write more words within a specified time shows improvement in fluency. Fluency is tested in many examinations. In Botswana, in all the primary and secondary school national examinations, students are required to write a given number of words within a limited time. For example, in the Form 5 (Grade 12) English examination, students are required to write an essay of between 350 and 500 words in one hour. At the international level, in examinations such as TOEFL, IELTS and SAT, students are also tested in fluency as they are given tests that are done within a limited time and the minimum number of words is specified. Students lose marks if their scripts are under the minimum word limit (www.ielts.com). Teachers of English are therefore expected to produce students who can write fluently. Apart from academic achievement, learners of a second language after completing secondary school should be able to communicate fluently both in oral and written communication.

A study by Robb, Ross, and Shortreed's (1986) was carried out amongst 134 Japanese college students for a period of one academic year. The study focused on more genres of writing among them; expository, narrative and descriptive essays. The subjects wrote a total of five compositions each and were divided into four treatment groups: (a) direct correction; (b) indirect coded feedback; (c) indirect highlighted feedback (no codes); and (d) indirect marginal feedback. Content feedback was not given. The group that received direct correction had their papers marked completely by the instructor. The correction covered lexical, syntactic and stylistic errors. The students had to rewrite their work and all that they had to do was copy out their composition incorporating the instructor's corrections. The second group received coded feedback whereby the type of error made by the student was indicated on the paper. The students received a guide on the codes on their papers in order for them to understand the instructors' marking. The indirect highlighted feedback group had their errors highlighted with a yellow test-marking pen. This differed from the coded feedback in that it indicated the places that needed editing but did not indicate the reason why it was marked. For the fourth group, which received indirect marginal feedback, the total number of errors per line was written in the margins of the student's paper. The subjects were all expected to rewrite their work based on the type of feedback that was given by the instructor. The data was analysed on a set of measures designed to assess accuracy, fluency and complexity.

The study found that there was no significant difference across the four treatment groups on any of the three measures investigated. For fluency, there was no improvement. The results suggest that methods of correction that are less time consuming may suffice since as per the finding of this study, there was no significant difference in students' writing, despite the fact that some very time consuming feedback mechanisms were used. This study however had one shortcoming: it lacked a true control group that received no feedback at all, which would have made it easier to draw comparisons.

MATERIALS AND METHODS

The study was performed in Botswana within Gaborone City. One private co-educational secondary school was selected for the study. The school was chosen based on the feasibility and the willingness of the school administration to allow the study to be carried out. It had students with a lower academic profile than their counterparts who had been admitted to senior

government schools. The study involved 68 students and one teacher of English. The students were drawn from two Form 4 classes. The Form 4 class was chosen because it was a pre-candidate class and the students were expected to sit for their BGCSE examination the following year (2007) at the end of Form 5. The Sample size comprised 28 males and 40 females of ages ranging between 16 years and 21 years. All the students spoke Setswana as their first language and were learning English as their second language.

A quasi-experiment, a student questionnaire and a structured teacher interview were used in the data collection. The study made use of an experimental class and a control class. The experimental class had subjects assigned to three different groups which were: direct feedback group, coded feedback group and uncoded feedback group. The direct feedback group (n=11) had their essays marked by having their errors given the correct forms. The correct forms of the errors were written above the error that had occurred. The coded feedback group (n=11) had their errors coded. The errors were underlined and a code was written above the error. The codes were explained to the students at the end of their essays so that they could understand them. The codes only gave students an idea of the kind of errors that they had made and nothing else. Some of the codes were adapted from Ferris (2002, p. 155). The uncoded feedback group (n=12) received feedback whereby the errors were underlined without an indication of what type of errors they were. The students were to try and work out the errors for themselves and correct them. The control group had 34 students and this group did not receive any form of feedback except for a summative statement. This was for ethical reasons such that the students had a feel that their essays were looked into. Students maintained their groups throughout the term to allow consistent comparisons to take place. The students were asked to write each essay (first draft) in about 300 words within a time limit of 80 minutes. All the essays were done in class.

At the beginning of the study, a total of 68 students were involved. However not all the respondents completed writing all the eight essays. To allow consistency, only those who completed writing all the eight sessions had their results processed for this study. By the end of the study, only 50% of the control class students had succeeded in writing all the eight essays, 82% from the coded group, 91% from the uncoded group and 82% from the direct group. Data was collected from a total of 57 subjects who successfully participated in the study, and a total of 214 essays were analysed. The analysed essays were only from the pretest and the posttest. The experimental group resulted had 30 subjects for both the narrative genre and the descriptive essay for the pretests and the same number of scripts for the posttests respectively. The control group yielded 27 subjects for the narrative essay and 20 subjects for the descriptive essay in the pretests and a similar number of scripts in the posttests respectively. The number of subjects varies between the narrative and the descriptive essays because for each category scripts were analysed only for those who completed writing all the eight essays.

The experimental class had to rewrite their essays after receiving their previous drafts, complete with feedback. The students in the experimental class were assigned to the three groups mentioned and they maintained their feedback groups throughout the term. The control group did not receive any kind of feedback except for a summative statement so that they could feel that their essays were indeed marked. The summative comments were about matters such as the length of the essays, organisation of the work, content and any other area that the researcher felt that the students had to work on. The control group was not asked to rewrite their work either. In this study, only the researcher gave the feedback in all the essays, so as

to allow consistency in marking as well as more valid comparisons between the pretest and posttest results.

For fluency both the experimental and the control group were asked to write about 300 words for each essay. The number of words written by each of the students for each of the eight essays were counted and recorded. For analysis only the pretest and posttest number of words were compared. The students were expected to write each essay in about 300 words. To check if the students' writing increased in the number of words written, the number of words written in each first draft essay was counted and recorded. For statistical analysis, only the pretest and posttest were compared in terms of the mean number of words written. An increase in the mean number of words in the posttest was seen as an improvement in fluency while a decline in the mean number of words was seen as lack of improvement in fluency. To test for significance, t-tests were run, using the SPSS program, version 10. The t-test is a statistical procedure for testing the difference between two means. The t-test allowed easy comparisons to be made in terms of the effect of each feedback mechanism as well as no feedback on fluency.

RESULTS AND DISCUSSION

Fluency has been described as 'the rapid production of language' (Wolfe-Quintero, Inagaki, and Kim 1998 cited in Chandler 2003, p. 273) and has been measured in different ways. Chandler (2003) measured fluency by how much students wrote. In the present study fluency is examined in terms of the change in the number of words written from pretest to posttest. The number of words was counted both in the pretest and posttest essay and any changes were an indication of either improvement in fluency if the number of words increased or none if the number of words declined.

The analysis for fluency for all the experimental groups and the control group was carried out. The mean number of words in each feedback group is shown in Tables 1 (narrative essays) and Table 2 (descriptive essays), followed by the mean number of words written by the students. The standard deviations were also calculated. To find out if students wrote longer or shorter texts in the posttest, the pretest means were subtracted from the posttest means. To find out if there was any significant improvement in the number of words written in each feedback group a t-test was carried out whereby the pretest and posttest results were compared. The following headings have been used and their meanings include: SD stands for standard deviation, T stands for the t-value, df stands for degrees of freedom while Sig (2-tailed) stands for the p-value or level of significance (given a 2-tailed test). The results were tested in terms of the 0.05 level of significance. A negative sign in the analysis for fluency in the pretest-posttest change column shows that the students wrote fewer words in the posttest. The findings are arranged according to each feedback group. Fluency results for the narrative essay are shown on Table 1 below.

Table 1: Narrative essay (fluency)

Group	Pretest			Posttest			pretest-posttest change	t-test outcome		
	Totals	Mean	SD	Totals	Mean	SD		T	df	Sig (2tailed)
Direct (n=10)	3340	324.00	68.86	3073	307.30	66.69	-16.7	.781	9	.455
Coded (n=10)	3622	362.20	73.59	3563	356.30	91.22	-5.90	.321	9	.755
Uncoded (n=10)	3692	369.20	118.87	3745	365.50	99.44	-3.70	.122	9	.905
Control (n=27)	8559	317.00	78.59	8849	327.74	114.55	10.74	.555	26	.584

Analysis for students' fluency was done in the narrative essay and it was revealed that in the pretest essay, the highest mean number of words was written by the un-coded feedback group (369.20) while the control group wrote the lowest mean number of words (317). In the posttest the un-coded feedback group still wrote the highest mean number of words (365.50), while the direct feedback group wrote the lowest (307.30). All the experimental groups wrote a lower mean number of words in the posttest with the direct feedback group having the largest decline in mean number of words (-16.7). However, the t-test results revealed that none of these differences were significant. The control group showed that the mean number of words written in the posttest increased by 10.74 words, but this result was also not significant, and so, neither those who received feedback nor those who did not showed any real change in fluency.

The number of words for the pretest and the posttest descriptive essays for the experimental groups and the control group were analysed. The results are shown in Table 2 below.

Table 4.2: Descriptive essay (fluency)

Group	Pretest			Posttest			pretest-posttest change	t-test outcome		
	Totals	Mean	SD	Totals	Mean	SD		T	df	Sig (2tailed)
Direct (n=9)	2843	315.89	69.76	2579	286.56	62.54	-29.33	1.8	8	.103
Coded (n=11))	3506	318.73	58.50	3389	308.10	72.34	-10.63	.667	10	.520
Un-coded (n=10)	3412	341.20	73.99	3118	311.80	89.86	-29.40	1.8	9	.110
Control (n=20)	5823	291.15	74.65	5141	256.85	86.56	-34.30	1.747	19	.097

For the descriptive essay in the pretest the un-coded feedback group wrote the highest mean number of words (341.20) while the control group had the lowest (291.15). In the posttest essay the un-coded feedback group had the highest mean number of words (311.80) while the control feedback group still had the lowest (256.85). For all the experimental groups and the control group, the mean number of words written by the students decreased in the posttest. The highest decline was in the control group, which had a mean decline of -34.30 words, and although this decline was not significant, it could be argued to show a weak tendency towards significance (being less than $p=.010$ at $p= .097$). When the results for the experimental groups were

compared they were not found to be significantly different either thus none of the groups showed any improvement in fluency.

The results of this analysis do not therefore support the hypothesis that teacher error correction of any sort leads to improvement in students' fluency.

Results from the three experimental groups revealed that the students did not write longer texts in the posttests. Rather, in both the narrative and descriptive essay they actually wrote shorter texts in the posttests, though the differences were not statistically significant. The control group showed a decline in the mean number of words in the narrative essay, while in the descriptive essay the same group wrote a higher number of words although this was not significant. Thus the students in this study did not show any improvement in fluency with or without feedback. The result of this study concur with the findings of Frantzen (1995) and Robb et al. (1986), where subjects in the two studies did not improve in fluency, but contradicts that of Chandler (2003), Fathman and Whalley (1990), where there was a significant improvement in fluency.

IMPLICATION

The implication of the study is that with or without feedback, fluency in writing does not improve. More studies should be undertaken to find out what exactly leads students to improve in their writing fluency, as this study did not discover any relationship between giving teacher correction feedback and fluency.

CONCLUSION

Rewriting after receiving teacher correction feedback does not lead to students' improvement in fluency. For all the feedback mechanisms except the un-coded and the control group in the narrative essay, students actually wrote fewer words in the posttests compared to the pretests. There were no statistically significant changes at all, with the only tendency toward significance shown by the decrease in the posttest word numbers for the descriptive essays of the control group.

RECOMMENDATION

More studies should be undertaken to find out factors that could lead students to improve in their writing fluency, as this study did not discover any relationship between giving teacher correction feedback and fluency.

This study was carried out for a period of three months, more studies could be done for a longer period of time such as one year to establish if there can be significant change in fluency over a longer period of time.

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