Student Awareness of Errors and Error Correction

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Abstract

Previous research has provided evidence supporting the efficacy of written corrective feedback in L2 acquisition of the target language. However, there is still debate on whether implicit or explicit written corrective feedback is more effective, and in what circumstances. It is the intent of this paper to investigate this topic further, by exploring the relationship between which errors students are able to identify on an explicit error correction quiz, and which errors they make in their own writing. Four types of common errors were assessed: tense usage, subject-verb agreement, singular-plural noun usage, and indefinite article usage. In this study, it was found that students performed much lower on the error correction quiz than they did in their own writing, and their own writing had considerably fewer errors than expected, based on the number of errors corrected appropriately on the quiz. Additionally, some of the quiz results were much lower than expected. In the discussion of these findings, this paper suggests further study on this topic. Several recommended approaches to assist further study and possible explanations for the results are provided, and it is also suggested that incorporating additional explicit (rather than implicit) written corrective feedback may assist students in improving their second language writing.

1. Introduction

There is considerable debate within the fields of Second Language Acquisition (SLA) and Language Pedagogy regarding corrective feedback and the treatment of L2 learners' errors. While this debate is useful in determining the methods and efficacy of written corrective feedback, there is little research on how aware students are of the errors they make in writing. This study aims to explore this concept by investigating students' abilities to identify errors in the writing of others, then comparing these results to the presence of errors in their own writing. Four types of common errors in L2 writing were explored to facilitate this study: tense usage, subject-verb agreement, singular-plural nouns, and indefinite article usage.

2. Review of Literature

2.1 Written Corrective Feedback

According to Ellis (2009), corrective feedback is a form of negative feedback that is done in response to a learner's error in language. In particular, written corrective feedback refers to the correction of grammatical errors in a learners' writing. The efficacy of written corrective feedback has been debated (e.g. Truscott, 1996, 1999, 2007; Ferris, 1999); however, more recent studies have shown evidence that written corrective feedback can assist learning and improve the learners' writing (e.g. Sheen, 2007; Ellis et al., 2008; Ferris, 2012; Fan & Ma, 2018; Kim & Emeliyanova, 2019). While there is much literature to back the efficacy of corrective feedback, it is also important to remember that studies on corrective feedback (and written corrective feedback) incorporate many different populations, treatments, and/or research designs, so it can be difficult to establish specific conclusions on written corrective feedback as a whole (Hyland & Hyland, 2006).

There are various approaches to providing written corrective feedback, which can broadly fall under two categories: direct (explicit) and indirect (implicit). Direct or explicit written corrective feedback refers to feedback which provides the correct form of the error, and indirect or implicit written corrective feedback refers to feedback which does not provide the correct form. Ferris and Roberts (2001) found that indirect corrective feedback is more likely to assist in long-term learning. Indirect written corrective feedback is also frequently preferred over direct methods because it allows the learner to engage in the error correction and learning processes. Additionally, it encourages learners to reflect on their own language abilities (Bitchener & Knoch, 2010a). However, it is also necessary to incorporate direct written corrective feedback, since learners may not always know the correct form. Ellis et al. (2005) and Bitchener & Knoch (2010b) also conducted studies on corrective feedback and found that explicit corrective feedback was more effective, but both types of corrective feedback did aid in acquisition. While both direct and indirect corrective feedback have their merits, in a practical sense, it is unlikely that language teachers will understand each learners' individual interlanguages enough in order to make calculated decisions about which type of corrective feedback should be used (Ellis et al., 2008).

2.2 Teacher Approaches to Providing Feedback

Ferris (1997) found that students do, generally, pay attention to written feedback from teachers, and make appropriate steps to revise their writing in subsequent drafts. Additionally, Ferris (1995) also suggested that students pay more attention to teacher feedback given on preliminary drafts than on final drafts of papers. While both of these studies provide strong evidence supporting the importance of teacher feedback in writing, there are various approaches

teachers use when providing written corrective feedback, and it has been found that teachers frequently rely on intuitive responses when giving feedback, which can result in inconsistent error correction practices. These inconsistent practices can be very problematic; however, it is also important to remember that these inconsistencies can arise from a variety of reasons, including the teacher's attempt to accommodate students' individual differences within the classroom (Ellis, 2009).

2.3 Purpose of the Study, Research Questions, and Hypotheses

Individual learner's awareness of errors in language learning is a surprisingly neglected topic. Few studies have aimed to investigate learners' awareness of errors, or determine the link between what language learners know, and what errors they produce. This study aims to explore this gap in knowledge, and investigate how aware students are of the errors they make in their own writing. This study involves examining four types of common errors in English: tense usage, subject-verb agreement, singular-plural nouns, and indefinite article usage.

The research questions investigated in this paper are as follows:

(1) Are students able to identify common errors on an explicit error-correction quiz?

(2) What is the relationship between which errors students are able to identify on an explicit error correction quiz, and which errors they make in their own writing?

It is hypothesized that participants will perform well (e.g. >85% correct) on the error correction quiz, and will also perform better on the error correction quiz than they will in their own writing. High scores are expected on the error correction quiz because participants will be prompted to find errors, thus, priming them that errors are present. Additionally, the participants involved will

all be advanced learners of English, and the errors on the quiz will all be discrete, using plain language.

3. Methods

3.1 Participants

This study involved 10 university students with advanced English language abilities, all taking the second course of a required two-course series of English Composition for non-native speakers. All participants were degree-seeking students, and were taking other courses at the university at the time of this study. Participants were all native-Arabic speakers.

3.2 Data Collection

There were two parts of data collection for this study. The first part involved students writing short, in-class writings during the first ten minutes of 17 class periods. These writing samples were very short, ranging from around one to three sentences, and were written in response to various prompts (e.g. *What is your favorite TV show and why? If you could have any superpower, what would it be and why?*). Additionally, the samples were typed on the students' computers. To conduct the data analysis, the writing samples were copied into one file for collective assessment. About 6,000 words were collected. A specific explanation of the methods used to determine errors in the writing samples is given in section 3.3.

The second part of the data collection involved a fifteen-minute error correction quiz, done during one of the regularly scheduled class times. The error correction quiz was completed after all in-class journals had been collected. On the quiz, students were asked to read sentences in English, circle any errors, answer *yes* or *no* to a question asking if there were any errors, and

correct the errors. This combination of error correcting steps was done to ensure understanding of what the student was correcting. Fifteen questions were originally on the quiz; however, only thirteen questions will be included in the results, as it was determined that two questions (three and fourteen) were ambiguous, and could be corrected in multiple ways. The aforementioned four types of errors (tense usage, subject-verb agreement, singular-plural nouns, and indefinite article usage) were included on the quiz. There were also three questions which did not contain any errors. See Appendix A for the error correction quiz.

After collecting both types of data, the quiz results were compared to the writing results. All data was assessed collectively, and comparisons between individual quiz results and individual writing samples were not made as part of this study.

3.3 Computational Analysis

A mixture of computational and manual methods was used to analyze and determine errors in the writing samples. Prior to any data analysis, the data was run through a generic spellchecker to minimize inaccuracies due to misspellings. For all error types, instances of ambiguity were not counted incorrect if they were grammatically appropriate. For example, the sentence *I will have a grammar mistake*, did not qualify as erroneous indefinite article usage. Although this sentence construction is uncommon, it is not clear from the sample if this construction was intentional, or if the writer intended to write *grammar mistakes* (plural), in which case, the indefinite article usage would be incorrect. This would not be marked as incorrect since counting this indefinite article usage as incorrect would incorporate making semantic assumptions that are not within the scope of this paper. The methods used for each of

the four error types (tense usage, subject-verb agreement, singular-plural nouns, and indefinite article usage) is explained below. Computational analyses were done using spaCy.

Tense errors were searched using a combination of computational and manual methods. Using spaCy, sentences were marked correct if all verbs were the same tense (i.e. present or past), and incorrect if the tenses were inconsistent in the same sentence. The incorrect sentences were then manually checked for inaccuracies, and any correct sentences which were erroneously marked as incorrect were re-marked as correct. This method of searching for all verbs containing the same tense did overgeneralize many sentences with grammar mistakes or appropriate tense switches as incorrect, which is why the manual step was incorporated.

Subject-verb agreement errors were also searched for using a combination of computational and manual methods. Using spaCy, the nominal and clausal subjects were identified, and their root verbs were checked for agreement. Modals were excluded from this search. The incorrect sentences were also manually checked, and any inaccuracies were corrected. This manual correction was necessary since the writing sample contained many grammatical errors, which were difficult for spaCy to tag correctly. Because of the structure of the code, anything which did not discretely meet the criteria for being correct was considered incorrect, which led to overgeneralization, and the need for the manual review.

Errors in usage of singular and plural nouns were checked manually, but spaCy was used to identify phrases which contained a noun that was a direct object or clausal complement. Nouns which were direct objects or clausal complements were chosen due to their ease of identification in spaCy. After identifying nouns as direct objects or clausal complements, each noun's corresponding dependency phrase was printed to a file, and these phrases were checked manually for correct singularity or plurality. This step was completed manually, because it was

difficult to identify correct singularity or plurality accurately in spaCy.

Indefinite article errors were searched for manually. This involved searching for any instances of *a* and *an*, and determining if the usage was correct. Additionally, the writing sample was read through once to determine if any indefinite articles were missing. The *a* in *a lot* was excluded from this portion of the data, because it is a very common collocation. Computational methods were not used for this portion, since it is difficult to accurately parse for count and non-count nouns in spaCy. Errors were counted for each indefinite article used incorrectly (e.g. the incorrect *a* in *You are going to learn a new things.)* or omitted (e.g. the missing *a* in *I played soccer when I was child*.).

4. Results

4.1 Error Correction Quiz

Table 1 provides a summary of the error correction quiz results. Any questions which were not answered were excluded from the final calculations. As can be seen, the participants did not perform as expected, and none of the error types met the aforementioned hypothesis of >85% accuracy, although the tense-usage errors did nearly meet this estimate (82.96% correct). In fact, the participants performed much lower than expected, with one of the error types (singular-plural noun usage) showing as low as 46.67% correct.

Table 1: Error Correction Quiz Results

Type of Error	# Total Participants	# Total Responses	# No Responses	% Correct	% Incorrect*	% Corrected Inaccurately**
Tense Usage	**30**	**29**	**1**	**82.96%**	**6.67%**	**10.37%**
Question #1	10	10	0	100.00%	0.00%	0.00%
Question #5	10	10	0	60.00%	20.00%	20.00%
Question #12	10	9	1	88.89%	0.00%	11.11%
Subject-Verb Agreement	**20**	**18**	**2**	**53.75%**	**27.50%**	**18.75%**
Question #8	10	10	0	70.00%	30.00%	0.00%
Question #13	10	8	2	37.50%	25.00%	37.50%
Singular-Plural Noun Usage	**20**	**19**	**1**	**46.67%**	**21.11%**	**32.22%**
Question #4	10	10	0	60.00%	20.00%	20.00%
Question #9	10	9	1	33.33%	22.22%	44.44%
Indefinite Article Usage	**30**	**30**	**0**	**60.00%**	**33.33%**	**6.67%**
Question #2	10	10	0	70.00%	20.00%	10.00%
Question #7	10	10	0	50.00%	50.00%	0.00%
Question #11	10	10	0	60.00%	30.00%	10.00%
No Errors	**30**	**29**	**1**	**92.96%**	**7.04%**	**0.00%**
Question #6	10	10	0	90.00%	10.00%	0.00%
Question #10	10	10	0	100.00%	0.00%	0.00%
Question #15	10	9	1	88.89%	11.11%	0.00%

** Responses labeled as "Incorrect" represent any responses which answered the question "Are there any errors in this sentence?" incorrectly.*
*** Responses labeled as "Corrected Inaccurately" represent any responses which answered the question "Are there any errors in this sentence?" correctly, but did not correct the error correctly.*

Within the *Corrected Inaccurately* section, there was a variety of responses. Notable ones will be mentioned here. In the subject-verb agreement section, two participants inaccurately corrected *My friend bake cookies* to *My friend bake a cookies*, rather than *My friend bakes cookies.* While this also indicated erroneous indefinite article usage, this error, and others of this manner, were only counted erroneous for the category in which the question was embedded (subject-verb agreement errors). The indefinite article question, *Tomorrow, I will eat a rice*,

proved to be more difficult than expected, and 50% of students erroneously indicated this sentence was error-free. This was a surprising result, since *rice* is a very common non-count noun, and, regardless of participants' awareness of the explicit grammar rule, it was assumed they may have been able to answer this correctly based on their implicit understanding of English. Lastly, many of the responses under the *Corrected Inaccurately* category erroneously made an indefinite article correction; for example, *The bookstore sells book* was changed to *sells a book* or *sells a books*, or *I ate a hamburger yesterday* was changed to *ate hamburger*. In the former example, *sells a book* was marked as an inaccurate correction since it does not make sense logically, without additional information added (e.g. *The bookstore sells a book on chemistry*, or similar).

These results were quite surprising, given that all participants are currently enrolled in other coursework at the university-level (United States). Additionally, the language used in the examples was not complex, and the quiz was purposefully created using relatively basic vocabulary (e.g. rice, dog, computer, etc.). Interestingly, the participants performed well when asked to identify any errors in sentences without errors. The implications of these results will be expanded on further in section five.

4.2 Writing Samples

Table 2 provides a summary of the findings from the writing samples. As can be seen, students performed relatively well in their own writing. The area with the highest percentage of error was indefinite article usage, and the area with the lowest percentage of error was singular-plural noun usage. The singular-plural noun usage was counted in phrases, rather than individual instances; in other words, the number of occurrences represents the number of phrases containing

a direct object or clausal complement, and any phrases with one or more errors was counted as incorrect.

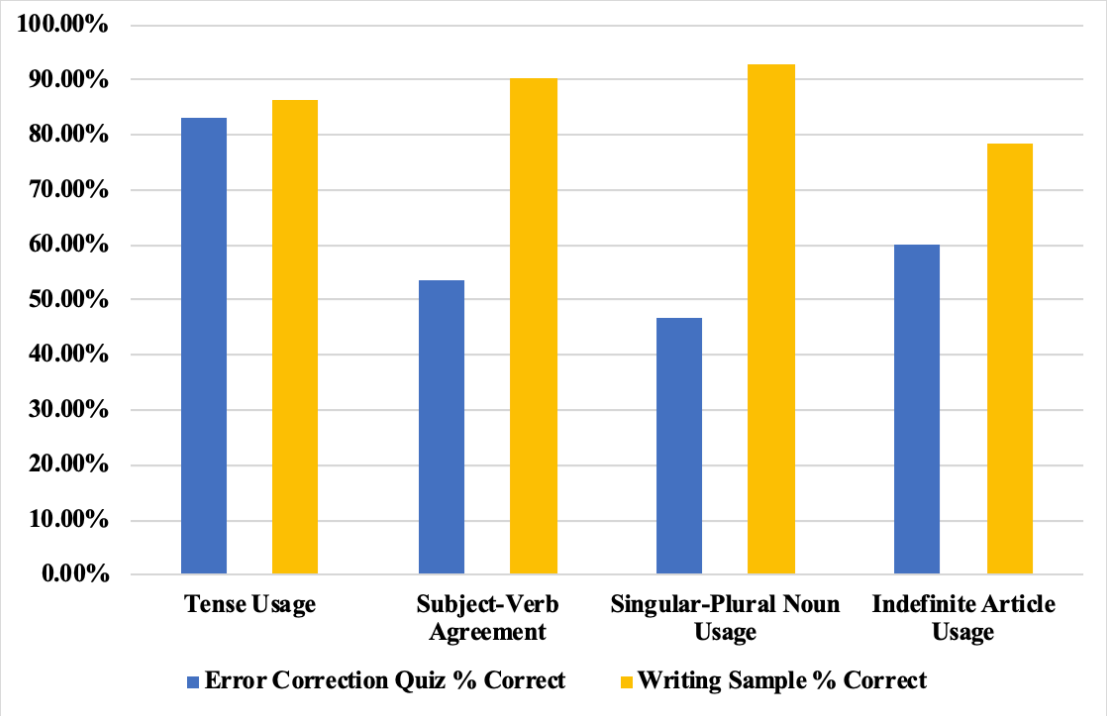
Table 2: Errors in Writing Sample Results

Type of Error	# Occurrences	% Correct	% Incorrect
Tense Usage	364	86.26%	13.74%
Subject-Verb Agreement	615	90.24%	9.76%
Singular-Plural Noun Usage (Phrases)	350	92.86%	7.14%
Indefinite Article Usage	189	78.31%	21.69%

4.3 A Comparison Between the Quiz and the Writing Sample

Figure 1 provides a comparison in errors between the quiz results and writing sample.

Figure 1: A Comparison between the Error Correction Quiz and Writing Sample



As can be seen, participants performed better in their writing sample than on the error correction quiz in all four categories. *Tense Usage* was the only category which had similar results between the quiz and writing sample, and singular-plural noun usage had the largest disparity (46%) between the quiz and writing sample. This directly contrasts the hypothesis that participants would perform better on the error correction quiz than in their own writing.

5. Discussion

In this study, it was found that participants performed worse on an explicit error correction quiz than they did in their own writing, which was very surprising, and differed from the hypothesis significantly. This study indicates that additional research is needed on this topic. L2 learners, even at the advanced level, may still not understand how to correct some common errors in English.

This study has implications to how teachers approach written corrective feedback. The results of the error correction survey indicate that students at the advanced level may not have adequate explicit knowledge of the tested areas, excluding tense usage, which could indicate the potential helpfulness of continued grammar lessons and practice, even into the advanced-level curricula. If students at the advanced level still have difficulty with their explicit knowledge, more explicit written corrective feedback may be necessary.

One large consideration to be made is that participants wrote all writing samples electronically on their own devices, which likely have basic grammar-checking capabilities. This was considered in the design of this study; however, it was decided that requesting hand-written samples would be intrusive in the students' learning environment, and the ten-minute time constraint for individual in-class journals already discouraged extensive editing. Additionally,

since university students at this level typically complete written assignments using word processing software, it was preferred that students in this study also complete their writings using similar methods.

Another consideration to be made is the fact that the writing samples had many errors, in general, and not all errors were ones encompassed within this study. This high number of errors present did create difficulty in assessing the writing sample both computationally and manually. For this reason, it is possible that the aforementioned error identification process would undergeneralize errors, since only ones which were explicit errors were considered incorrect.

However, while the use of grammar-checking software and relative difficulty of identification could explain the higher scores on the writing sample, it does not explain the relatively low scores on the error correction quiz. A few considerations on this will be listed here. First, although the quiz was not graded, assessing student anxiety levels was not a consideration in this study, and it is possible that students performed worse due to anxiety. Second, the un-graded nature of this quiz may have affected students' approach, and it is possible that some students may have underperformed due to applying minimal effort. Lastly, the sample sizes of 10 students and only 13 quiz questions were relatively small, and this could also affect the validity of these results.

In future studies, it is recommended that a larger sample size be used, both in the number of participants and the number of quiz questions. Additionally, a more sophisticated error identification system should also be used, and the writing samples should be hand-written, rather than typed.

6. Conclusion

This study aimed to explore the relationship between which errors students are able to identify on an explicit error correction quiz, and which errors they make in their own writing. In this study, it was found that students performed much lower on an explicit error correction quiz than they did in their own writing, and their own writing had considerably fewer errors than expected, based on the number of errors corrected appropriately on the quiz. Additionally, some of the quiz results were much lower than expected, with one of the four error types (singular-plural noun usage) being corrected accurately as low as 46% of the time. The findings of this study indicate that grammatically correct writing of advanced learners may not necessarily be representative of their explicit knowledge of the language. Additionally, the findings also have implications on how teachers should consider approaching written corrective feedback, and it is suggested that explicit (rather than implicit) written corrective feedback be incorporated, even with students at the advanced level.

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Appendix A

Disclaimer: This survey is not graded and is only for research purposes. Do not write your name on the survey. If you have any questions, please raise your hand and the facilitator will come over to you.

Instructions:
Read each sentence below and draw a circle around any errors you find, then answer "yes" or "no" to the question: "Are there any errors in this sentence?". If you circle "yes" and believe there is an error in the sentence, write a short explanation after the question.

1. When I was a child, I go to school.

    Are there any errors in this sentence? (Yes or No)

    If yes, what is/are the error(s)?

    _____

2. There is computer on the table.

    Are there any errors in this sentence? (Yes or No)

    If yes, what is/are the error(s)?

    _____

3. My brother are eating dinner.

    Are there any errors in this sentence? (Yes or No)

    If yes, what is/are the error(s)?

    _____

4. The bookstore sells book.

    Are there any errors in this sentence? (Yes or No)

    If yes, what is/are the error(s)?

    _____

5. I play football when I was in high school.

    Are there any errors in this sentence? (Yes or No)

If yes, what is/are the error(s)?

_____

6. I ate a hamburger yesterday.

Are there any errors in this sentence? (Yes or No)

If yes, what is/are the error(s)?

_____

7. Tomorrow, I will eat a rice.

Are there any errors in this sentence? (Yes or No)

If yes, what is/are the error(s)?

_____

8. Going to school make me happy.

Are there any errors in this sentence? (Yes or No)

If yes, what is/are the error(s)?

_____

9. The team has 20 soccer player.

Are there any errors in this sentence? (Yes or No)

If yes, what is/are the error(s)?

_____

10. The dog is very happy.

Are there any errors in this sentence? (Yes or No)

If yes, what is/are the error(s)?

_____

11. Do you have new car?

Are there any errors in this sentence? (Yes or No)

If yes, what is/are the error(s)?

_____

12. My house sold tomorrow.

Are there any errors in this sentence? (Yes or No)

If yes, what is/are the error(s)?

_____

13. My friend bake cookies.

Are there any errors in this sentence? (Yes or No)

If yes, what is/are the error(s)?

_____

14. I am wearing new dress today.

Are there any errors in this sentence? (Yes or No)

If yes, what is/are the error(s)?

_____

15. Two years ago, I bought an old car.

Are there any errors in this sentence? (Yes or No)

If yes, what is/are the error(s)?

_____