

The Effectiveness of Error Correction on the Learning of Morphological and Syntactic Features

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THE EFFECTIVENESS OF ERROR CORRECTION ON THE LEARNING OF MORPHOLOGICAL AND SYNTACTIC FEATURES



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History

Much of the impetus for initial work in error correction studies stemmed from the fact that some researchers became interested in the acquisitional order of morphemes (Brown, 1973; Dulay and Burt 1973; 1974; Bailey, Madden and Krashen, 1974) because they had been motivated by studies in error analysis and universal grammar views. It began with the study of acquisition of morphemes and developed to include research on learners' development, most notable of which are multi-dimensional studies and the teachability hypothesis (Pieneman, 1984; 1987; 1989; 1998).

Statement of the Problem

In spite immense amount of research in the area of error treatment, there are still many unresolved issues in this regard; for example, the knowledge of language teachers concerning what features or structures to correct and what to overlook is still extremely limited. In other words, we do not have enough evidence as to which types of structures in the target language are more amenable to learning than others. Therefore, there is a need for further analysis of issues such as the impact of corrective feedback on learning the type of structures selected by teacher. More specifically, it may be interesting to know whether learners learn better when they are corrected on their morphological errors or on their syntactic errors. Morphological errors versus syntactic errors. Morphological correction refers to the treatment given to the grammatical morphemes (inflections and function word), erroneously uttered by the learners. Syntactic correction refers to the treatment given to the contextual dislocation of words in the sentence- i.e. word order.

- **Research Question**
- **This study attempts to answer the following research question**

Is there a difference in the effects of error correction on the learning of morphological and syntactic features?

Lit. Review

- a number of experimental and classroom studies that have indirectly compared the effect of feedback on different features without distinguishing between morphological and syntactical features. A number of these studies investigated syntax: Dekeyser, 1995 (categorical rules); Doughty and Varela, 1998 (passives and participles); Rosa and O'Neil, 1999 (conditional sentences); Robinson, 1996, 1997 (pseudo cleft of locations and subject inversion, dative alternation); Van Patten and Oikenon, 1996 (Spanish object pronoun); and Shook, 1994 (present perfect and relative clauses in Spanish), and some others investigated morphemes: Carroll & Swain, 1992, 1993 (suffixes 'ment' and 'age', dative alternation); Leow, 1998 (morphological irregularities); Alanen, 1995 (locative suffixes).
- The study that is closest to the present research is Gass et al. (2003), a comparative investigation of the effect of instruction on some morphosyntactic, syntactic, and lexical features of Italian. Unlike the present study in which the syntactic and morphological features were studied by post hoc analysis of the tailor-made items, in Gass et al. (2003), the learners were placed into one of the two conditions (+ focused attention and – focused attention) for each of the three linguistic areas (syntax, morphosyntax and lexicon). The findings of their study showed that the instruction directed at syntactic forms was more effective than that directed at morphosyntactic forms.

METHOD

Design

The general design of the study involved meaning-based activities, and identification of randomly selected errors during the learners' reconstruction tasks in researcher-learner interactions. It involved randomly selecting of 56 learners for the Treatment Group.

▪ Participants

A total of 56 intermediate adult learners from some language schools took part in this study. To determine the general proficiency band in the study, a commercially developed practice test of grammar was used.

▪ Materials

For the purpose of eliciting errors, two passages were chosen. The difficulty levels of these passages were calculated by using the SMOG Readability Formula (Developed by: Harold C. McGraw

▪ Testing

Individualized tailor-made tests were constructed based on the errors made by the learners' reconstruction tasks. Therefore, every learner had two tailor-made tests, each consisting of a number of test items.

Error Correction Episode	Test Item
L: Mostly between 1885 and 1907, one Russian jeweller <u>has made</u> several Easter eggs....	Between 1885 and 1917, a Russian jeweler... a number of Easter eggs for the Tsars and their families.
R: Please use a past tense form here. You should say: 'Between 1885 and 1917, he <u>made</u> a number of Easter eggs for ...'	(a)has made
L: For the Tsars and their families...	(b)makes
	(c) made
	(d)making

ANALYSIS

- **Tailor-made Tests**

Overall, there were **112** tailor-made tests, for both tasks A and B, administered to the learners. They included **764** test items measuring the same number of error correction episodes.

- **Identification of Error Correction Episodes**

An error correction episode is triggered by an error made by the learner and corrected by the researcher. It ends when the interaction returns to the topic of discussion. There were also two other criteria considered in identification of the episodes: Error correction episodes included only researcher- corrected errors (not self corrections) and each one included only one error

- **Detailed Transcription of Error Correction Episodes**

The recorded sessions were copied onto a computer program to enable the researcher to listen repeatedly to the recordings. Detailed transcriptions of the error correction episodes took place at this time.

- **Reliability**

To determine reliability in the identification of error correction episodes, a sample of 23% of the recorded tasks was evaluated by a second rater. This method of reliability judgement was the same as the one used by Loewen (2002). The resulting agreement rate was 88.3%.

- **Reliability and Validity of the Tailor-made Tests**

Following Loewen (2002), Brown's (1996) checklist of potential sources of error variance or measurement error was used. The checklist points to different potential sources of errors such as environment, administration procedures, examinees, scoring procedures, and test items. Ways of reducing error variance due to these factors were considered.

- **Characteristics of Error Correction Episodes**

To investigate the research question, certain morphological and syntactic features were selected from the frequency table of errors. They were selected on the basis of, whether errors were sufficiently frequent in order to be analysed and whether the errors were classifiable as either morphological or syntactical..

Morphological Features	Syntactic Structures
1. Definite Article (the)	1. Relative Pronouns
2. Indefinite Article (a, an)	2. Use of Active/ Passive
3. Regular Past Tense(ed)	3. Wrong Word Order
4. Irregular Past Tense	
5. Plural 'S'	
6. Third Person Singular 'S'	

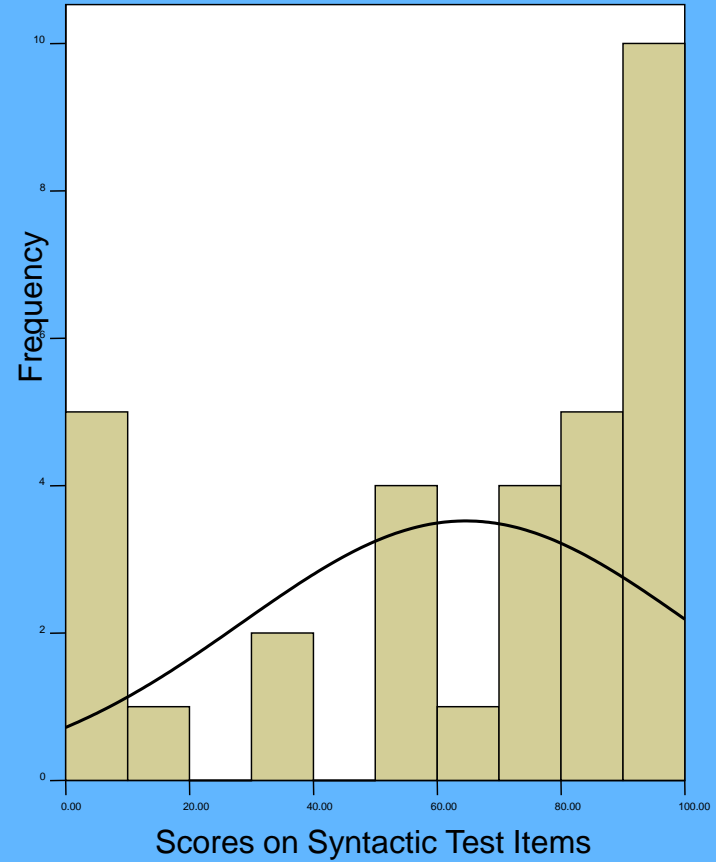
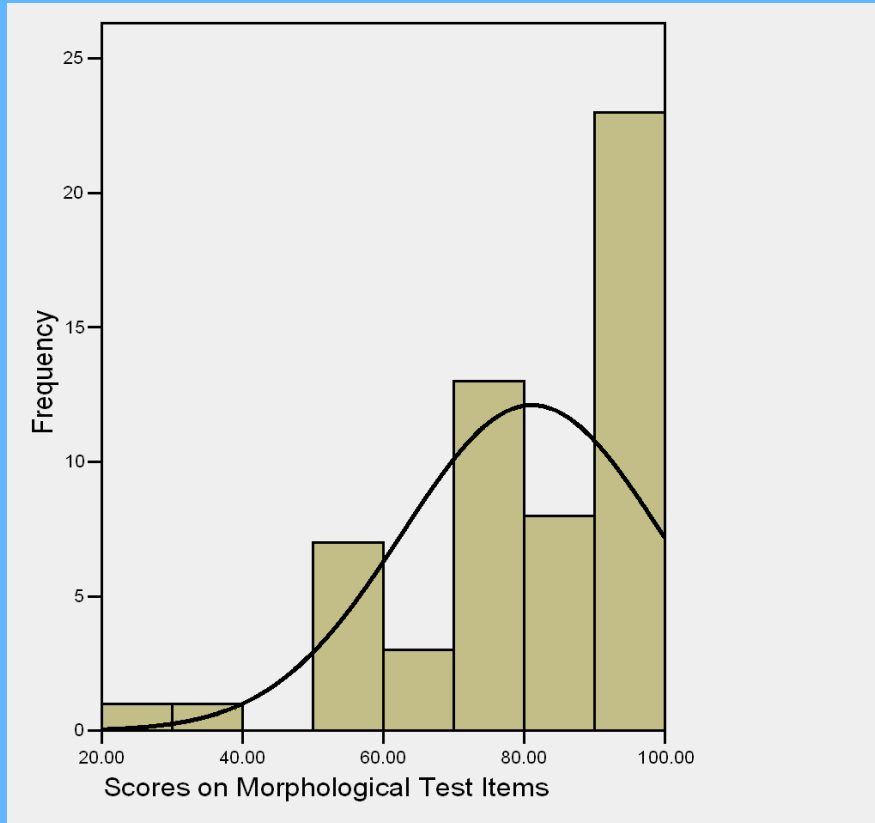
Scoring Procedures

The final scores on morphological and syntactic test items given to each learner would be a fraction of the correctly answered morphological and syntactic test items over the total number of the morphological or syntactic test items.

Statistical Analysis

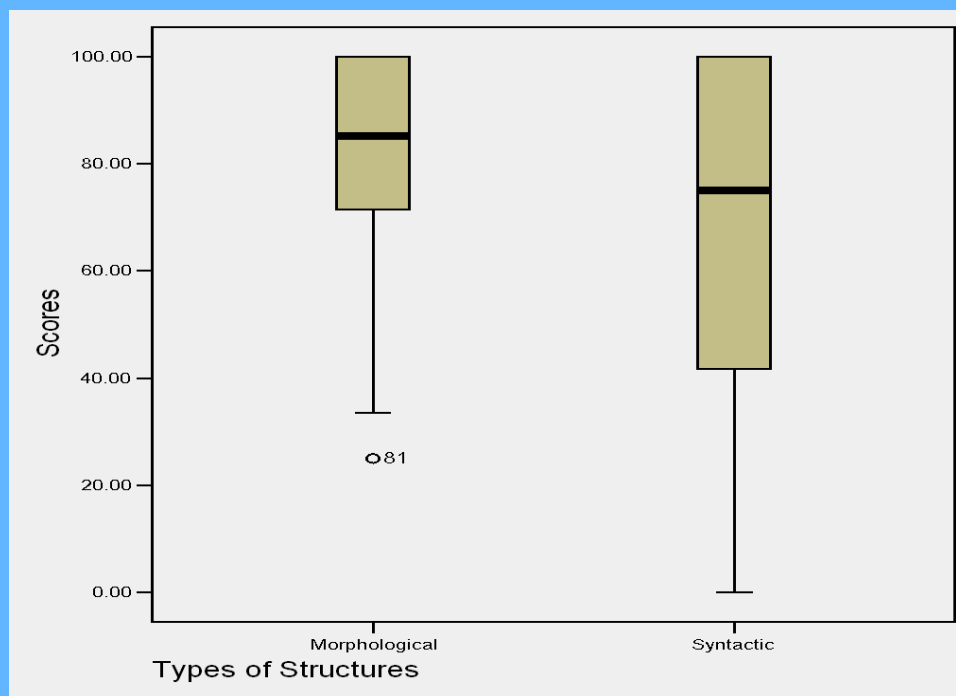
- There were two variables: The dependent variable was the learners' scores on the morphological and syntactical corrections, and the independent variable was the focus of correction. Each learner's tailor-made tests were checked to see if they included any of the test items pertaining to the linguistic focus (morphological and syntactic features) mentioned in Table
- For all groups descriptive statistics were calculated. These included mean, median, low and high range, and standard deviations. The particular choice parametric and non-parametric analytical techniques was made based on checking of the normality assumption. Finally, a non-parametric, two related sample test; namely, the Wilcoxon Signed Rank Test, was carried out to compare the learners' scores on morphological and syntactic items in their tailor-made tests.

Results



Group Statistics for Scores on Morphological and Syntactic Items

Scores	N (Number of the learners)	Mean	Std. Deviation	Median	Range
Morphological Scores	56 (100%)	81.14	18.45	85	75
Syntactic Scores	56 (100%)	64.64	36.22	75	100



- **Testing the Difference in Means of the Syntactic and Morphological Test Items**
- The output, as displayed in the Table, indicates that there is a significant statistical difference between the scores for the morphological and syntactic test items ($z = -2.118$, $p\text{-value} = 0.034$). This clearly shows that the learners scored higher on the morphological items than on the syntactic items.

	Morphological Syntactic
Z	-2.118(a)
Asymp. Sig. (2-tailed)	.034

DISCUSSION

- **Attention** causes noticing and through noticing, learners can isolate relevant parts of the input to create and test hypotheses. Noticing arises because of (1) learner's existing interlanguage which creates a 'readiness' to notice, and (2) salience of a form in the input. Accordingly, if there is a difference in the outcome of correction for morphological and syntactic features, and if attention is the major factor in learning, then it is logical that the learners' attention (and consequently learners' noticing) is different for the two types of features.

- **Learning Difficulty**
- **Understanding**

[Understanding relates to explicit knowledge which refers to knowledge that is available to the learner as a conscious representation. Learners may be able to understand and memorise the rules pertaining to the grammatical structures of a language, but this does not necessarily mean that they have acquired them.]

- **Acquisition**

[Acquisition relates to implicit knowledge. Therefore, there are two questions that need to be answered: First, which structures, morphological or syntactic, are easier to understand, and second, which structures are easier to acquire?]

■ Item versus System Learning

[In item learning, the learning entails learning individual exemplars, essentially what occurs when learners learn lexical items. In system learning, learners generalize their knowledge beyond the words they are given as examples to form rules. As has been hypothesized by some researchers (Hulstjin and De Graaff, 1994; Ellis, 1997b; Fotos and Ellis, 1991), exemplar based item learning is less likely to occur in syntax because syntactic features have to be processed beyond the item level, whereas learners are likely to store individual, inflected word forms. A number of the morphemes in the study were more likely to have been more amenable to item learning than to system learning. Features such as articles and singular-s probably involve system learning but some features such as irregular past and plural-s entail item learning (Ellis, 1997b). In the syntactic list, however, all the structures entail system learning.]

■ SUMMARY and CONCLUSION

[The effect of correction on morphological features was more than it was on syntactic features. A number of reasons for this were suggested: (1) morphological features are, for different reasons, easier than syntactic features to understand, (2) learners are cognitively more ready to acquire morphological features than syntactical features, and (3) morphological features are learned as items: whereas, syntactic features are not.]

■ Theoretical Implications

- 1-learners' cognitive readiness to acquire features(Schmidt and Frota's (1986) Noticing Hypothesis)
- 2- corrective feedback may be more effective in promoting item than system learning.

■ Pedagogical Implication

[The implications of the present study is that teachers need to be aware that corrective feedback is more likely to be effective with some linguistic features than with others. As the result of corrective feedback, learners may be able to revise their hypotheses about some of their errors but not others and the teacher should not necessarily expect error correction to be uniformly successful. They must be prepared to recognize that it is sometimes effective and sometimes not effective. It will also be useful if they are aware of the factors that are likely to influence whether the corrective feedback works or does not. One such factor is the linguistic difficulty of the feature. If the feature is beyond the learners' current developmental stage, the corrective feedback is unlikely to work. Therefore, teachers should have some sensitivity as to what kind of errors their correction is likely to have an impact on and which kind it will not.]

Thank You!