

NOTICING AND GRAMMATICAL ACCURACY IN ESL LEARNERS' WRITING

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Abstracts

This paper presents an overview of an exploratory study on the role of noticing in improving written accuracy. The noticing hypothesis, as conceptualised by Schmidt (1990, 2001), focuses on the need to enhance learners' awareness of target language items in order to convert input into intake and subsequently internalise input as part of interlanguage. This study also takes into account the comprehensible output hypothesis (Swain, 1985, 1998) that proposes that output can promote noticing as it encourages learners to become aware of the gap between their interlanguage and the target language usage. These concepts have been translated into three types of feedback techniques for written output and the techniques are Enhancement, Reformulation, and Sequential. All three techniques function as a means to enhance learners' awareness of past time forms and are therefore form-focused in nature but avoid explicit explanations of those target forms. Results indicate that noticing is influenced by the types of learner responses to the techniques. The structural components of a target form may influence the success of its acquisition. Statistical results suggest that all three instructional techniques were equally successful in enhancing noticing and in increasing learners' written accuracy.

Keywords: noticing hypothesis, input, intake, interlanguage, comprehensible output hypothesis, enhancement, reformulation, sequential

INTRODUCTION

Upon commencing tertiary education, the average Malaysian students would have had at least eleven years of instructed English language learning. Nevertheless, in institutions where English is the medium of instruction, the majority of the students will have to spend more time in learning the language in ESL classes. Ensuring that the students are

equipped with good writing skills is particularly important to ascertain their survival in facing academic challenges. A perpetual problem that concerns ESL writing is grammatical inaccuracy in students' written work. It is an alarming problem that requires continuous effort in finding its solutions. One of the ways to solve the problem could be in ensuring that noticing takes place during instruction. This paper seeks to present an investigation on the means to improve written accuracy. It tries to examine the processes and the effects of enhancing noticing and to ultimately find the evidence that instruction can encourage noticing to take place.

CONCEPTUAL BACKGROUND

A primary concept that the study is concerned with is "noticing". The noticing hypothesis, as conceptualised by Schmidt (1990, 2001), focuses on the need to enhance learners' awareness of target language items. This is done in order to convert input into intake and subsequently internalise input as part of interlanguage. Batstone (1996, p. 273) defines noticing as "the intake of grammar as a result of learners paying attention to the input where 'intake' refers to input which becomes part of the learning process".

Ellis (1994a) mentions a number of factors that may induce a learner to notice something in the input. Among them are task demands and frequency of linguistic features. In the first, the instructional task should make the learner heed specific features as the features are important for task completion. Noticing may also take place when the target linguistic features occur repeatedly in the classroom input. Salience of features may make it more likely for students to notice target linguistic items.

Since this study is concerned with accuracy in written work, it integrates in its design the comprehensible output hypothesis (Swain, 1985, 1998). The hypothesis proposes that output can promote noticing as it encourages learners to become aware of the gap between their interlanguage and target language usage. Pica (1994) proposes the term "modified output" in discussing output that promotes noticing as the focus is on how the learners modify output to ensure more accurate linguistic forms. In this study, the students produced comprehensible or modified output as the treatments tried to promote noticing and increase the students' accurate use of grammar items in written output.

Writing is the investigative base of this study but grammar instruction is its focal point. A form-focused approach to grammar instruction is favoured whereby form-focused instruction refers to any pedagogical effort which is used to draw the learners' attention to language form either implicitly or explicitly (Spada, 1997, in Doughty, 2001). Ellis (2001) defines the term as any planned or incidental instructional activity

intended to induce language learners' attention to linguistic form. This type of instruction includes focus-on-forms and focus-on-form as defined by Long (1991) and Long and Robinson (1998). This study is concerned with the planned form-focused instruction as this can be observed and assist the investigation on noticing.

In order to improve accuracy in written work, feedback techniques remain as a central element in writing pedagogy and various techniques have been developed in the field. An example is "reformulation", a feedback technique involving the whole restructuring or recasting of learners' output (Allwright et al., 1988; Cohen, 1989, 1990; Thornbury, 1997, 1999). Reformulation can be utilized to draw students' attention to target forms implicitly. It encourages noticing and can easily be part of a class that adopts process writing. As it deals with written output, it naturally gives the chance for learners to produce "pushed" or modified output. Batstone (1994) points out that noticing activities should encourage a more introspective engagement with language. They should call for a quiet observation of the language where the students are unhampered by the simultaneous need to manipulate it. Reformulation seems to possess the requirements of a noticing activity as mentioned by Batstone (1994) and has the factors that may induce noticing (Ellis, 1994a).

Enhancement refers to another feedback technique that promotes noticing. Unlike the Reformulation technique where errors are corrected for the learners, the Enhancement technique requires learners to correct errors in their written output after the errors are made salient through the application of highlighting techniques. There have been studies that focused on enhancement as a means to promote noticing. Alanen (1995) and Jourdenais et al., (1995) provide evidence to suggest that highlighting forms in the input increases the likelihood of their being noticed and subsequently used. The current study differs from both Alanen and Jourdenais et al., as unlike their studies that focused on input, this paper presents a study that centres on output-based input–input that was generated from the learners' written work.

Both techniques can be manipulated to subtly direct students' attention to grammar forms. They can encourage noticing and they may be used to improve accuracy in written work. Thus, noticing training here concerns the form-focused techniques used to encourage noticing and improve the accuracy of selected past time forms in comprehensible or modified written output.

METHODOLOGY

A mixed approach design featuring both qualitative and quantitative measures was carried out to unravel the cognitive and pedagogical matters surrounding the concept of noticing in ESL. The study involved three groups of students. They were 81 post-secondary students at intermediate level. The students were undergoing matriculation level courses before proceeding to their degree courses. The target grammar items selected for this study were the present perfect, present perfect progressive, past progressive and simple past. The students' ability to use the forms was evaluated based on the essays they wrote on themselves and their choice of public figures.

The noticing training techniques involved in the study were the Enhancement, Reformulation, and Sequential techniques. All three form-focused techniques function as a means to enhance learners' awareness of past time forms while avoiding explicit explanations of those target forms. Enhancement refers to a feedback technique where learners' written output is manipulated into input. Errors in the students' essays were made salient by changing the font type and bolding them. The students in the first treatment group tried to correct their errors based on the given enhanced versions. Reformulation technique involves the whole restructuring or recasting of learners' output by an instructor. Students in the Reformulation group compared reformulated work with the first drafts of their essays. The third feedback technique applied in the study was Sequential, a combination of the Enhancement and the Reformulation techniques.

Four research questions, their corresponding methods of data collection, as well as types of data analyses are summarised in the following table.

Table 1: Research questions, data collection and data analysis methods

Research question	Data collection procedure	Data Analysis
1. How do learner responses to the instructional techniques influence their use the past time forms?	Concurrent verbal report procedure involving 18 respondents. Essay writing 1	Descriptive analysis of protocols and essays
2. What are the specific linguistic features related to the past time forms that learners notice after the exposure to the instructional techniques?	Essay writing 2	Descriptive analysis of students' written output.

3. Do the three instructional techniques improve ESL learners' accuracy in using the past time forms in their writing?	Quasi-experiment – pretest and posttest data from essay and grammaticality judgment test scores.	Paired samples t-tests
4. Which of the three instructional techniques is more effective in improving ESL learners' accuracy in using the past time forms in their writing?	Quasi-experiment – pretest and posttest data from essay and grammaticality judgment test scores.	ANCOVA

DATA ANALYSIS AND DISCUSSION

Learner Responses to Instructional Techniques and Subsequent Use of Past Time Forms

Respondents from the Enhancement and Reformulation groups provided the verbal report data. It was found that the types of instructional techniques determined the kind of responses given by the students. Two types of responses were identified. The first, the non-metalingual responses, were implicit responses including those where correction to errors were provided without any mention of the rules or grammar terms. The Enhancement group tended to provide non-metalingual responses. What was required of the student – figuring out the errors and correcting them – seemed to have resulted in the students focusing on providing the corrections to their errors. The second type was the metalingual responses. These were characterised by explicit grammar rules and terms given by the students. Students who underwent the Reformulation technique largely provided metalingual responses.

The second draft of the participants' essays showed a high frequency of corrected errors. Of the two techniques, however, the Reformulation group had a higher frequency of corrected errors. Metalingual responses which resulted from the students' reaction to the Reformulation technique were probably produced because of the characteristics of the technique itself. In applying the Reformulation technique, the instructor reformulated or corrected all target form errors and highlighted them. While comparing the first drafts of their essays with the error-free versions, the students did not have the burden of having to correct themselves. They only needed to think of the reasons for the changes that were made to their first drafts. It did appear that the provision of the corrected model of the target forms removed the need to think of how to correct errors and encouraged them to think of

the explicit reasons for the necessary changes. The application of the explicit knowledge of the target items might have led to higher correction frequency.

Specific Past Time Form Features that Learners Noticed after the Exposure to the Instructional Techniques

Out of the four target grammar forms in this study, present perfect, present perfect progressive, simple past, and past progressive, the analysis of the students' written corpus showed that the students in all groups managed to correct the majority of the simple past form errors. This is an indication that noticing took place for that particular item. The more successful noticing of the simple past as compared to other forms could be due to the structure of the form itself. The simple past is a simpler structure requiring the suppliance of a single verb form. The form is also one that has been exposed considerably often to the students throughout their school years. The techniques helped the students to notice a form that they have had a lot of exposure before. Ellis (1994a) points out that the frequency of a linguistic item in input may help noticing to take place. The previous exposure to the simple past form may also have prepared the students to acquire the form as explained in the selective attention hypothesis. Ellis (1994b) mentions the hypothesis which proposes that instruction does not enable learners to fully acquire what is taught when it is taught, but prepares the way for its acquisition in the future.

Results for other items are not as encouraging. There was the initial difficulty in analysing the perfective and progressive aspects as those forms were not as abundantly used as the simple past form. However, partial noticing of the structures whenever they were in use was evident. An example of partial noticing was when only the auxiliary *has* was noticed and not the participle *-en* for a present perfect form. This occurrence of partial noticing was quite consistent in the students' second draft of the essays. Celce-Murcia and Larsen-Freeman (1999) mention that the perfect aspects are difficult to learn unlike the past simple form as the structures are built using two parts: the auxiliary and the participle. Huddleston and Pullum (2002) point out that the major syntactic difference between the present perfect and the simple past is the fact that the latter is a compound tense. A compound tense expresses two temporal relations: a combination of a perfect and a primary tense. The argument should also apply to the compound nature of the present perfect progressive and the past progressive as each has dual syntactic levels. The syntactic duality proved to be challenging to the learners.

Effects of the Three Instructional Techniques in Improving ESL Learners' Written Accuracy

The results of the paired samples *t*-tests from both the essay and the grammar test indicate that the three instructional techniques improved accuracy. Initial comparison shows a higher posttest mean scores for all groups compared to the pretest. This difference is statistically significant as shown by the essay score results of the paired samples *t*-tests presented in Tables 2, 3 and 4.

Table 2: Results of paired samples *t*-tests for the Enhancement group

Treatment		Mean	Std. Deviation	t	df	p	y ²
Enhancement technique	Pre	4.32	.74	11.13	28	.000	0.8
	Post	6.47	.93				

Table 2 shows the result for the group exposed to Enhancement technique. The mean score for the posttest ($x = 6.47$, $SD = .93$) is greater than the pretest ($x = 4.32$, $SD = .74$), with a significant difference between the scores ($t(28) = 11.13$).

Another instructional treatment is the Reformulation technique and Table 3 presents the result for this group.

Table 3: Results of paired samples *t*-tests for the Reformulation group

Treatment		Mean	Std. Deviation	t	df	p	y ²
Reformulation technique	Pre	4.47	1.20	9.93	25	.000	0.8
	Post	6.24	1.20				

A similar observation was made for the Reformulation group whereby the mean score for the posttest ($x = 6.24$, $SD = 1.20$) is greater than the pretest ($x = 4.47$, $SD = 1.20$). The result of the paired samples *t*-test, $t(25) = 9.93$, is significant.

The third group was exposed to the Sequential treatment. Table 4 below shows the paired samples *t*-test result for the group.

Table 4: Results of paired samples *t*-tests for Sequential group

Treatment		Mean	Std. Deviation	t	df	p	y ²
Sequential technique	Pre	4.23	.85	13.76	25	.000	0.9
	Post	6.62	1.01				

Table 4 shows that the mean score for the posttest ($x = 6.62$, $SD = 1.01$) is also greater than the pretest ($x = 4.23$, $SD = 0.85$). The paired samples *t*-test result, $t(25) = 13.76$, is also significant.

The results for the essay test show a significant increase in the posttest scores in comparison to the pretest for all three instructional treatments. This is an indication that the three feedback techniques, Enhancement, Reformulation, and Sequential, helped noticing to occur and increased the accuracy of past time form usage in the learners' written work. Further investigation on the strength of the relationship between posttest scores and treatments were carried out by computing the effect size. Tables 2, 3, and 4 show that the η^2 for each Enhancement, Reformulation and Sequential groups are large at 0.8, 0.8, and 0.9 respectively. The effect size further strengthens the results of the paired samples *t*-test as they indicate a strong relationship between the treatments and the posttest scores.

The grammaticality judgment test was used to further analyse the effect of instructional treatments on the students' acquisition of the past time forms. Three separate paired samples *t*-tests on the pretest and posttest scores of the grammaticality judgment test for each treatment were conducted. Results are consistent with those of the essay test scores with slightly lower effect sizes indicating moderate relationship between the treatments and the posttest scores. It is an indication of considerable effectiveness of the instructional treatments. It should be noted that the Reformulation group has the largest effect size (0.7). The lower effect size for the grammar test compared to the essay test could have been resulted by the difference between the two types of tests. The essays specifically gauged the learners' improvement in correcting their errors in the first draft of their essays. On the other hand, the grammar test was item specific. Some items such as the perfective and the progressive forms were not as amply used as the simple past resulting in the techniques not being widely applied on the grammar items.

Effects of Treatments on Individual Past Time Forms

The test scores were scrutinised further according to the four different past time tense-aspect forms. The paired samples *t*-test results for the grammaticality judgment test on individual past time form indicate that the treatments worked differently for the specific target items. Table 5, 6, and 7 show the results for the paired samples *t*-test for each treatment.

Table 5: Results of the Enhancement group's paired samples *t*-tests on grammaticality judgment test scores

		Enhancement (n 29)				
		Mean	SD	t	P	(η^2)
Present Perfect	Pre	8.10	2.26	2.39	.024	(0.2)
	Post	9.38	1.92			
Present Perfect Progressive	Pre	7.55	1.62	4.70	.000	(0.4)
	Post	9.21	1.97			
Simple Past	Pre	10.93	2.25	4.08	.000	(0.4)
	Post	12.86	1.83			
Past Progressive	Pre	3.07	1.00	1.47	.153	-
	Post	3.38	.86			

Table 5 shows that the group's *t*-test results indicate a significant difference between the pretest and the posttest scores for three past time forms. They are present perfect ($t(28) = 2.39$), present perfect progressive ($t(28) = 4.70$), and simple past, ($t(28) = 4.08$). However, the result for past progressive ($t(28) = 1.47$), is not significant. Table 6 presents the results for the Reformulation group.

Table 6: Results of the Reformulation group's paired samples *t*-tests on grammaticality judgment test scores

		Reformulation (n 26)				
		Mean	SD	t	p	(η^2)
Present Perfect	Pre	9.19	1.86	3.58	.001	(0.3)
	Post	10.77	1.86			
Present Perfect Progressive	Pre	8.12	2.20	2.41	.024	(0.2)
	Post	9.04	2.01			
Simple Past	Pre	10.19	2.33	4.60	.000	(0.5)
	Post	12.50	1.92			
Past Progressive	Pre	2.62	1.27	2.61	.015	(0.2)

Post 3.23 .99

Unlike the previous group, the Reformulation group shows a significant difference between the posttest and the pretest scores for all past time forms. These are present perfect ($t(25) = 3.58$), present perfect progressive ($t(25) = 2.41$), simple past ($t(25) = 4.50$), as well as past progressive ($t(25) = 2.78$) forms.

The next table presents the paired samples t -test result for Sequential.

Table 7: Results of the Sequential group's paired samples t -tests on grammaticality judgment test scores

Sequential (n 26)						
		Mean	SD	t	P	(η^2)
Present Perfect	Pre	8.81	1.90	1.12	.273	-
	Post	9.38	2.16			
Present Perfect Progressive	Pre	8.00	2.19	1.11	.276	-
	Post	8.58	1.96			
Simple Past	Pre	9.96	2.58	4.02	.000	(0.4)
	Post	12.23	1.58			
Past Progressive	Pre	2.54	1.14	2.61	.015	(0.2)
	Post	3.15	.78			

The results for the Sequential group, however, show significant difference only for simple past ($t(25) = 4.02$) and past progressive ($t(25) = 2.61$). The results for present perfect and present perfect progressive are not significant.

Observations can be made based on the results of the statistical tests used to examine the effect of instruction within each treatment group. The grammaticality judgment test results generally suggest that the treatments improved the students' use of the past time forms due to the overall increase in the pretest-posttest scores. More importantly, results indicate that the treatments worked differently for the specific target items. The group that received the treatment in the form of the Reformulation technique improved in all target items. Results for the simple past forms suggest that the different treatments were all effective in improving the students' usage of the item. Other groups and items are not as consistent.

The results fail to show significant improvement in their mean scores for certain forms as many of the test items were not available for the treatments. For example, the present perfect progressive was scarcely used in most pretest essays. Thus, the students' improvement on that item in the grammaticality judgement test could not be expected. Results also differ from group to group due to the same reason.

Comparative Effects of the Three Instructional Techniques in Improving ESL Learners' Written Accuracy

All treatments significantly improved students' scores signifying the effectiveness of individual treatments. The comparative effectiveness of the three feedback techniques was examined by conducting the analysis of covariance (ANCOVA) on the essay scores. Table 8 shows the ANCOVA results of the essay posttest scores of the three treatment groups. The pretest scores acted as the covariate.

Table 8: ANCOVA results of essay posttest scores

Source	SS	df	Mean Square	F	Sig.
Covariate	25.574	1	25.574	32.925	.000
Group	3.567	2	1.783	2.296	.108
Residual Error	59.808	77	.777		

The ANCOVA result, $F(2,77) = 2.30$, $p > 0.05$, shows that there is no significant difference in the adjusted mean scores of the posttest among the three treatment groups. The ANCOVA was also conducted on the grammaticality judgment test scores and the result confirms that of the essay scores.

It can be cautiously deduced from statistical results that the treatments were equally effective in encouraging noticing to take place and improving learners' accuracy in using the target items. All instructional techniques managed to be instrumental in improving the written accuracy of past time form use without one treatment being more affective than the rest. However, the overall evidence from the study suggests that one of the three techniques, Reformulation, seemed to have encouraged noticing to take place differently. The Reformulation technique encouraged more metalingual responses and the technique was successful in producing

corrections. As it was applied to model recasts of the past time forms it was not constrained by the simultaneous need for the students to manipulate or use the language. It has the features of what Ellis (1994a) mentioned of a good noticing activity. Its task demands encouraged the learners to pay special attention to the features of the target items. It allowed the target items to be modelled frequently and saliently. Batstone's (1994) idea of a good technique in encouraging noticing was also materialised in the Reformulation technique.

CONCLUSION

This study that is primarily concerned with noticing training and written accuracy results in a few observations. Firstly, noticing is influenced by the types of learner responses to the techniques. Since the metalingual responses produced by the Reformulation technique seemed to ensure more noticing, Reformulation and other similar recasts techniques should be incorporated in ESL writing classes that cannot avoid dealing with the problem of inaccurate grammar use.

Secondly, the structural components of a target form may influence the success of its acquisition and some structures such as the present perfect has been said to appear later in a second language learner's acquisitional order of the English language (Housen, 2002). It seems to be important for ESL instructors to try to incorporate planned noticing training as effectively as possible in their teaching. At the same time, one's understanding of the nature of structures and the lengthy period that may be needed to acquire them will act as a reminder that improving the accuracy of ESL learners' written work has to be an on-going process.

Although noticing is not seen as a guarantee to acquisition, it appears to be facilitative in encouraging learners' interlanguage development. It can aid acquisition by drawing learners' attention to forms in the input that otherwise they may not notice and fail to intake (Ellis, 2001). The study is hoped to provide an initial glimpse to the cognitive processes that were involved during noticing. It has also shown the effects of noticing training where a good technique such as Reformulation has the potential to encourage written accuracy among students at tertiary level.

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