

NOTICING AND EFL WRITTEN FEEDBACK STRATEGIES

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ABSTRACT

This study examines the relationship between EFL students' noticing and three written feedback strategies. The convenience sampling method was adopted and four intact classes were randomly assigned into four groups: the model, the error correction, the reformulation, and the control groups. After the completion of picture-cued writing tasks as pretests, three treatment conditions and a noticing log were employed in the respective comparative activities. Focus group interviews were for triangulating the data collected from the log. There was a two-to-four-week interval between the posttest and the delayed posttest to obtain the feedback strategies' short- and long-term effects. An analytical scale was adopted to measure students' writing performance. Johnson Neyman analyses showed a significant difference among the three experimental groups in both posttests as well as that between the reformulation, the error correction, and the control groups in the posttest. Students in the reformulation and the error correction groups reported noticing grammatical problems. Those in the model group declared noticing their inability to develop ideas and describe details. Further analysis showed that learners' noticing contributed to the enhancement of content, grammar, organization, punctuation, and lexis in the model and the error correction groups.

Key words: noticing, models, reformulations, error correction

INTRODUCTION

EFL learners' written output and feedback strategies have been central to EFL writing research. Frequently researched feedback strategies include models, reformulations, and error correction (hereafter EC) (e.g., Bitchener et al., 2005; Ferris, 2004, 2006, 2007, 2010, 2012; Ferris et al., 2013; Ferris & Robert, 2001; Macbeth, 2010; Truscott, 2004, 2007, 2010). Swain and Lapkin (1995) identified output as one of the triggers for noticing since learners would occasionally attend to their written text errors and attempt to self-correct them. However, they also stated that producing oral or written language without receiving any feedback may not lead to language learning in the long term. Qi and Lapkin (2001) indicated that noticing at the level of understanding proved more effective in promoting language learning than noticing per se. Likewise, García Mayo and Labandibar (2017) argued that models enabled higher proficiency learners to notice aspects, such as the content and grammar compared to elementary learners who mostly noticed the lexical aspect, explaining that models could trigger more proficient learners' attention to the gap between their interlanguage (hereafter IL) and the target language (hereafter TL) than reformulations. Nevertheless, research findings on the relationship between noticing and written feedback strategies proved to be inconsistent.

Reformulations have been compared with other feedback strategies such as EC and models with relevant research showing inconclusive findings (e.g., Hanaoka & Izumi, 2012; Santos et al., 2010; Yang & Zhang, 2010). These findings could be attributed to learners' proficiency levels, research designs, target language features, or the measures taken in assessing the efficacies of learners' writing development (Karim & Nassaji, 2019; Li & Vunon, 2019). Most studies in writing investigated noticing and feedback strategies by looking at the number of language features that students had incorporated into their revision or new writing. Although some research utilized grading rubrics in combination with other measures related to linguistic analysis such as complexity, accuracy, and fluency (hereafter CAF) to assess L2 or EFL writing performance (e.g., Hanjani & Li, 2014; McDonough & De Vleeschauwer, 2019), little

research has been done concerning learners' EFL writing performance evaluated through a grading rubric both holistically and analytically when being provided with the three types of feedback strategies, models, reformulations, and EC.

Therefore, the purpose of the current study is twofold: (i) to establish a clearer understanding of what EFL learners notice when being presented with the three feedback strategies, and (ii) to understand quantitatively the extent to which any feedback strategy and dimension related to noticing can contribute to a learner's EFL writing performance by using a rating scale as measurement.

LITERATURE REVIEW

Noticing

Studies have shown the critical role of EFL learners' attention and teacher's written feedback strategies in their writing development (Karim & Nassaji, 2019). Schmidt's (1995, 2001) noticing hypothesis emphasizes the prominent role of noticing in promoting foreign language development. Schmidt (1990) classified relevant terminology into different levels and two levels relevant to this study are awareness at the level of noticing and understanding. For example, learners can notice the correct form provided by the teacher based on errors in their writing. Zhang and Yu (2018) conducted a study on low-proficiency Chinese EFL learners' engagement with direct and indirect written corrective feedback. The results showed that the respective learners only tended to revise their writing based on the correct forms, without any in-depth processing of the written feedback, despite noticing the teacher's error correction. In the comparison of written output and feedback strategies, noticing at the level of understanding is likely to benefit language learning. It can lead to an increased awareness of the gap between what learners write and what they mean to express (Swain, 2000).

The extent to which learners incorporate what they notice into their revision or new writing has usually been the focus of research on noticing and learners' writing development. Hanoaka (2007) asked undergraduate students to identify what they noticed in the drafting,

comparison, and revision stages. He found that learners were most likely to notice lexical features, an outcome supported by other studies (e.g., Cánovas Guirao et al, 2015; Coyle & Roca de Larios, 2014; García Mayo & Labandibar, 2017). Kim (2015) concluded that models led to an increase in young learners' noticing of ideas, while EC contributed to an increase in their noticing of grammatical problems. In terms of student attention from models and reformulations, students were more likely to notice lexical aspects when provided with models (e.g., Cánovas Guirao et al., 2015; Hanaoka, 2007; Lázaro-Ibarrola, 2023; Luquin & García Mayo, 2021; Montealegre Ramón, 2019), whereas they were more likely to notice formal aspects like the verb tense and sentence structure from reformulations (Lapkin et al., 2002; Yang & Zhang, 2010). On the other hand, students also focused on discourse issues, including cohesion and coherence in reformulations (Coyle & Roca de Larios, 2020; Sanavi & Nemati, 2014). However, students' differential attention to language and discourse-related issues may have been influenced by the diversity of participants in model and reformulation research. Models have been used in L2 writing research to understand young learners' noticing while the target learners in reformulation studies are mainly teenagers and university students.

While relevant research has explored the efficacies of feedback strategies with different combinations (e.g., models vs. EC or models vs. reformulations), what EFL students may have noticed when receiving different feedback strategies deserves more exploration. Equally critical is the question as to what extent learners' noticing affected their writing development, particularly with their compositions being assessed by an analytical scale instead of being measured by uptake or T-units after receiving the three types of feedback strategies.

Model, reformulations, error correction

Writing to learn considers writing to be an aid to language learning (Harklau, 2002; Manchón, 2009; Manchón, 2011a; Manchón, 2011b). Examined from a cognitive framework (Manchón, 2011a), it can be crucial for language learning based on theories or hypotheses,

including form focus (Doughty & Williams, 1998), interaction and language learning (Gass & Mackey, 2007), the noticing hypothesis (Schmidt, 1995, 2001), and the output hypothesis (Swain, 1995). A plethora of studies have been devoted to exploring the efficacy of L2 or EFL learners' noticing of models on their writing performances (e.g., Cánovas Guirao et al., 2015; Coyle & Roca de Larios, 2020; García Mayo & Labandibar, 2017).

Hanaoka (2006a) referred to models as sample articles written by a native speaker “independently of learners' output” (p. 2). They can be considered as positive evidence because learners are exposed to the target language and are valued for their “visibility (and accessibility) of target rhetorical conventions” (Abbuhl, 2011, p. 1). Therefore, models are widely used in EFL writing classes to help students learn to write and adapt to the conventions of the TL (Cánovas Guirao, 2011; Hillocks, 1986; Stolarek, 1994). Most writing research (e.g., García Mayo & Labandibar, 2017; Hanaoka, 2006a, 2006b; Montealegre Ramón, 2019) has investigated the extent to which learners incorporate what they notice in models into their revisions and new writing. However, little research has used quantitative measures, such as assessment rubrics, to holistically and analytically assess learners' writing development.

Without considering the overall improvement in writing, Hanaoka (2007) investigated the relationship between learners' proficiency and noticing of models. Cánovas Guirao et al. (2015) investigated young learners' noticing through model comparison, which improved EFL writing performance. García Mayo and Labandibar (2017) found that their teenage learners most often noticed lexical features in models, although almost a third of their “notices” also included content issues. Montealegre Ramón (2019) found that learners noticed the lexical aspect the most frequently regardless of the feedback strategies, suggesting that models provided learners with lexical, linguistic, and ideational alternatives. Thus, models have been shown to serve as a source of input for EFL learners to draw on when developing writing skills such as vocabulary, organization, and ideation. Cohen (1983) defined reformulation as “having a native writer of the target language rewrite the learner's essay, preserving all the learners' ideas, making it sound as nativelike as possible” (p. 4). On the other hand, EC is a

type of written feedback frequently employed in writing classes provided by teachers to correct students' surface-level errors, such as grammar and spelling in compositions (Diab, 2005), and can be either direct or indirect. The type of EC adopted in the present study is the direct EC since the native teacher corrected students' errors by providing them with the correct language form next to the errors.

Reformulations and EC have each been compared with models in an attempt to understand their implications for developing EFL writing. Yang and Zhang (2010) found that students noticed most of the differences between their draft and reformulations. However, the scholars did not provide any indication of how the models had changed the students' revised version. Hanaoka and Izumi (2012) concluded that models were beneficial for Japanese university students' learning of both covert and overt problems. Kim (2015) compared the effects of models and EC on young EFL learners' noticing and writing. However, the researchers left open the question of whether students' writing was improved by the comparison activity, as they did not quantitatively assess learners' revision.

The use of EC has been debated in writing research. Truscott (2007) and associated scholars (e.g., Abedi et al., 2010; Liu, 2008; Polio, Fleck, & Leder, 1998) argued that EC does not benefit L2 writing. However, Polio (2012) contended that written EC can be efficacious under certain circumstances. Santos et al. (2010) found that EC led to secondary school learners' more uptake than reformulations. On the other hand, research on models and reformulations indicated that compared to EC, models, and reformulations are not as effective in promoting L2 writing accuracy (Coyle & Roca de Larios, 2014; Storch & Wigglesworth, 2010).

While studies examining written corrective feedback and EFL writing performance mostly applied measures, including T-units or uptake to calculate learners' written CAF, the three dimensions address the linguistic level of learners' writing without being concerned with other aspects such as content and organization, which remain critical when evaluating EFL writing. As Cao and Mao (2022) argued, EFL writing research should "go beyond the language dimension" (p. 8) and further explore the extent to which models and reformulations enhance EFL learners' writing performance of content

and organization using an analytical scale. Furthermore, the above contradictory findings manifest the need to understand the efficacy of EFL learners' noticing during the receipt of the three feedback strategies on their writing performance, particularly through the evaluation of a grading rubric. Hence, the following research questions are raised in the current study:

1. What kind of writing problems do EFL learners notice in the three respective feedback strategies (model, reformulations, and error correction)?
2. What are students' overall and respective progress in EFL writing after the implementation of the three feedback strategies?
3. Which feedback strategy or strategies prove to be most effective?

METHODOLOGY

Participants

The study involved 80 students aged between 19 and 22 from four intact classes in an English department. The convenience sampling method was adopted because the four writing classes were opened as a requirement for sophomore students in the department. They were composed of 79 English majors and one senior student from the Chinese department. Of the 79 English majors, one is an international student from China, and one is from the Czech Republic. The four classes were taught by four Taiwanese teachers who have each been teaching English for more than ten years. The student's proficiency levels, according to their scores on a departmental writing test in the previous semester, ranged from high beginner to high intermediate. All of the participants had been learning English for at least ten years before participating in the study. Table 1 presents the demographic information of the participants.

Table 1*Students' Demographic Information*

Group	Male	Female	Subtotal
Model	8	11	19
Reformulation	4	18	22
Error correction	5	14	19
Control	6	14	20
Total	23	57	80

Data collection

The four classes were randomly assigned into four groups, the model, the reformulation, the EC, and the control groups. Before participating in the study, the researcher ensured that the student's informed consent was obtained. The picture prompt used for the pretest, posttest, and delayed posttest consisted of six small pictures (see Appendix A). In the pretest, students did not know what they were expected to write until the researcher distributed the picture prompt to them. Thus, students did not have time to prepare for what they would be writing in their drafts. In each test, students had to describe the picture story based on their understanding of the pictures. All of the writing tasks in this study were untimed and students could turn in their compositions whenever they thought that they were ready. The pretest took each group approximately 80 to 100 minutes to complete.

After students completed the first draft as the pretest in the first week, they were offered three respective feedback strategies as the comparison. The comparison activity and the noticing log were designed for all students in the experimental groups; those in the control group were excluded. The three feedback strategies (i.e., the model text, reformulations, and EC) were provided by a native British

English speaker who has been teaching English at the university level in Taiwan for more than a decade to compare with their first draft in the following week. The model text was based on the same picture prompt as that used in the pretest, the post-, and the delayed posttests. During the comparison activity, students were asked to write freely about what they noticed without any specific instructions about which category to fill out in the noticing log. Students could take their time to complete the comparison activity and the posttest while the researcher collected the native teacher's model, reformulations, EC, and the filled-in noticing logs as long as students said they completed the comparison activity to prevent imitation. The picture prompt and students' compositions were collected after they completed each writing task. The procedure of the comparison and the posttest in the experimental groups took approximately 100 minutes to complete. The posttest took the control group approximately 80 to 100 minutes to complete. There was a two- to four-week interval between the posttest and the delayed posttest to avoid practice effects. The delayed posttests also took each group approximately 80 to 100 minutes to complete. Then seven to eight students from each of the three experimental groups were randomly selected as interviewees after they completed the posttest. The total number of interviews stood at 16. The interview questions (see Appendix B) explored in depth the learners' reflections on the comparison activities and the feedback strategies that they received, and the data collected from the noticing logs was triangulated by the interviews. Table 2 illustrates the procedure of data collection.

Table 2

The Data Collection Procedure

Group	Model	Reformulation	Error correction	Control
Pretest	<ul style="list-style-type: none"> ● Picture prompt 			
Treatment condition & posttest	1. The comparison activity & the noticing log 2. Posttest	1. The comparison activity & the noticing log 2. Posttest	1. The comparison activity & the noticing log 2. Posttest	1. N/A 2. Posttest
Interview	Focus group interviews			N/A
Delayed posttest	<ul style="list-style-type: none"> ● Picture prompt without any feedback strategies provided. ● There was a two- to four-week interval between the posttest and the delayed posttest. 			

Note. Students were not allowed to ask either their classmates or the teacher questions or to use dictionaries of any form (i.e., a hard copy or online access) while drafting, comparing, and revising.

Data analysis

The pre-, post, and delayed-post tests were graded by two researchers independently using the rubric proposed by Brown and Bailey (1984), which was developed to assess student’s performance in an ESL program in college. They argued that utilizing T-units to examine ESL writing might not be discriminative enough and proposed the scoring grid as an alternative to assess learners’ writing performance since T-units are associated with the linguistic level of students’ written output only. The grading rubric was categorized as follows: (1) organization, (2) logical development of ideas: content, (3) grammar, (4) mechanics/punctuation, and (5) expression/lexis. Each of the respective categories bore the same weight, with each category counting for 20 points. Following are examples of

reformulations and error correction. The model text is presented in Appendix C.

Reformulations

Student: Christmas is coming. The employer wants to benefit his employees.

Reformulation: It is going to be Christmas. An employer wants to benefit his employees by buying them a gift.

Error correction

Student: The man gets a terrible shock. that makes he can't handle her car to go straight.

EC: The man gets a terrible shock (punctuation correction) that makes him unable to handle his car and go straight.

The researcher of the present study and another researcher independently graded compositions by assigning scores to the five categories separately first and then totaled the sub-scores to obtain the final score. Some adjustment of sub-scores of the five categories was applied after the raters carefully read students' compositions at least two times. Students' final scores as a whole and analytically are the average of the two scores assigned by the raters, and the inter-rater reliability of the two researchers' ratings stood at 85 %. Since there was a significant difference between the groups in the pretest ($F=7.92$, $p=0.01$), ANCOVA analysis was conducted to examine whether the data met the assumptions and a significant interaction was located between the pretest (i.e., covariate) and the groups (i.e., independent variable) ($F=3.38$, $p=0.02$), which violated the homogeneity of regression slopes in ANCOVA. Thus, the Johnson Neyman technique was added to SPSS 27 and conducted to understand the effects of the treatments. Then the paired-sample T-test was employed to examine the potential progress between the posttest and the delayed posttest because the Leven test did not show a significant difference between groups in either posttest ($p=0.59$ vs. $p=1$).

Two words, development, and performance, have been used interchangeably to indicate students' better revision in writing in the

present study. It should be noted that the term “development” used in the current study follows Norris and Ortega’s (2003) definition and measure of acquisition. Sachs and Polio (2007) further explicated their notion by indicating that “the term *acquired* might refer to various sorts of gradual and nonlinear changes in both linguistic and metalinguistic behavior, which include not only the appropriate use of linguistic forms but also, for example, the constructs of emergence, detection, reconstructing, and awareness.” (p. 75). This conception suggests that students’ L2 development comprises noticing in the form of think-aloud or note-taking, and the changes in revision as psycholinguistic processes disregarding what contributes to what.

For analysis, the term ‘noticing’ is used to describe students’ self-reports of what they noticed during comparison via note-taking. Due to its inherent advantages, related research has employed note-taking to obtain learners’ noticing data. Hanoaka (2007) indicated that the respective notes revealed areas in which students focused their attention while comparing their drafts with their respective feedback strategies. These notes then provided researchers with clues concerning the inherent features of students’ language awareness. Although note-taking could not precisely reflect learners’ thinking process, and learners may not be able to verbalize vague concepts through it (Hanoaka & Isumi, 2012), note-taking had fewer issues concerning memory loss (i.e., to what extent learners are unable to retain the feedback strategies) compared to off-line measures such as stimulated-recall interviews.

Swain and Lapkin (1995) originally defined language-related episodes (LREs) as any segments that learners indicated regarding their writing problems, including whether they solved respective problems correctly or incorrectly. Qi and Lapkin (2001) extended the definition of LREs to include any language problems students indicated while comparing their drafts with the reformulations. Students could choose to either give their reasons for accepting or rejecting the respective feedback or not. Following Qi & Lapkin (2001), the LREs in the current study were established as any notes participants wrote in the noticing log, yet students were not requested to explain why they accepted or rejected the treatment conditions. LREs were further classified into four categories: content, lexis,

grammar, and others. This was done to examine the types of writing problems that students found during comparison. The researcher first provided the research assistant with a training session to identify what notes belong to which category before the first coding. Then the researcher did the second coding and discussed the differences between the two rounds of coding with the assistant to reach an agreement on the inter-rater reliability at 94%. The researcher subsequently re-examined the data and the coding, resulting in an intra-rater reliability of 96% by shifting a few notes from one category to another. Examples from the noticing logs illustrate the coding scheme (see Appendix D).

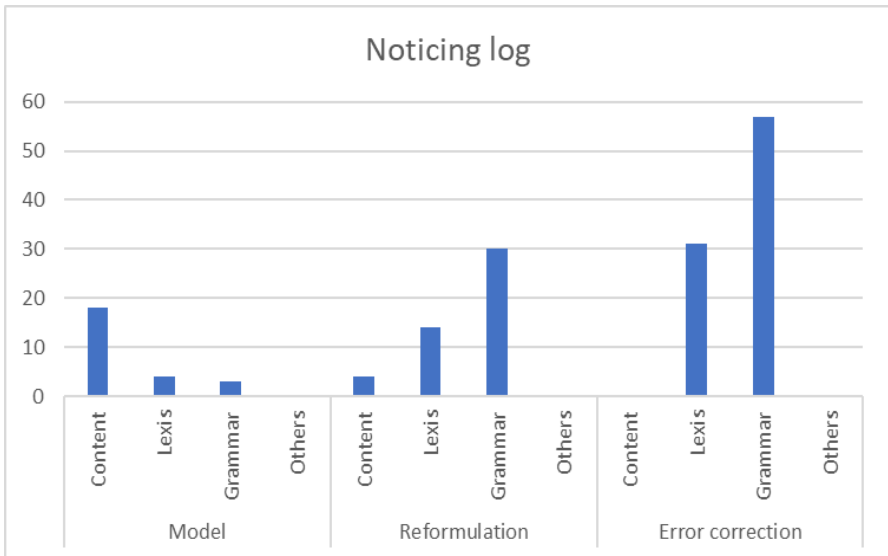
Each focus group interview was audio-recorded with the researcher's field notes to increase the reliability of the data. The data from the interviews were first transcribed and then analyzed using the constant comparison method (Dye, Brian, Rosenberg, & Coleman, 2000). The aim was to identify (i) the issues being reported by students regarding their noticing of EFL writing problems when receiving different feedback strategies, (ii) students' past learning experiences, and (iii) the strengths and weaknesses in students' compositions.

RESULTS

As an answer to the first research question, participants in the error correction group most frequently noticed the teacher's correction of grammatical problems (57). Students in the model group noticed the teacher's ability to describe details and to use more accurate words or phrases to enhance the story's liveliness (18). This implies that students were aware of their shortcomings in describing details as well as of their lack of creativity. They also noticed their problems concerning organizing the composition. Compared to the model group, however, students in the reformulation group noticed grammatical rather than content problems (30 vs. 4, respectively). Figure 1 illustrates the frequency of the LREs identified in the noticing logs.

Figure 1

The Frequency of the LREs Identified in the Noticing Logs



The three excerpts from the focus group interviews illustrate the varied effects of the treatment conditions on participants’ noticing of their writing problems, and we further triangulated the data collected from the log. One participant in the reformulation group indicated that the native teacher’s reformulated version of the draft made her more aware of the verb tense problem. One participant in the model group mentioned her noticing the teacher’s detailed description of the pictures, which turned it into a lively story. Likewise, one participant in the EC group indicated her awareness of the wrong usage of “so” in sentences.

Reformulation group excerpt:

T: What problems have you found when comparing your composition with reformulation?

S: I found my problem in the verb tense.

Model group excerpt:

S: I think the comparison activity is good. My first draft is very different from the second draft...the native teacher's writing was more detailed and he added more images to the story.

Error correction group excerpt:

S: I think this experience is helpful to me because now I know that "so" cannot be used at the beginning of a sentence.

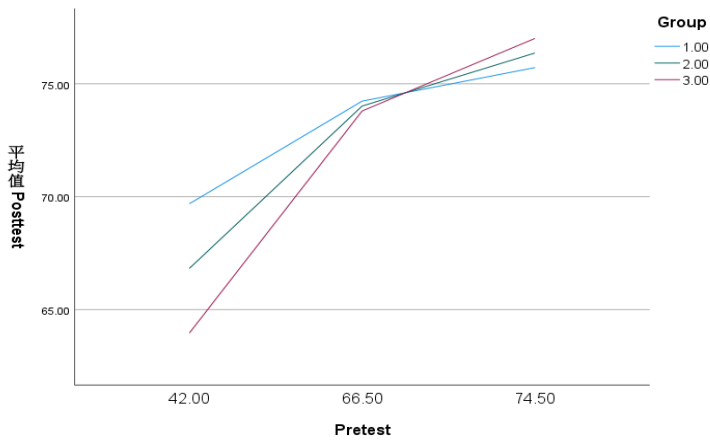
The above findings suggest that students in the model group did learn from the positive evidence, as well as from the organization and idea development provided by the model. Regarding the reformulation and EC groups, participants benefited differently from the two treatment conditions. Reformulations offered students more native input concerning what they had written and what they could have done to enhance their accuracy. EC, on the other hand, enabled students to notice their grammatical problems and taught them how to write in English more accurately.

Regarding the second research question, a paired-sample T-test did not manifest any significant variations between the two posttests ($t = -.44, p = 0.67$). The results of Johnson Neyman analysis suggested a significant difference among the three experimental groups in both posttests (posttest, $p = 0.03$; delayed posttest, $p = 0.02$), yet no difference was found between the model, the EC, and the control groups. Nevertheless, there was a significant difference among the reformulation, the EC, and the control groups ($p = 0.01$) in the posttest. Students in the three experimental groups whose pretest scores were lower than 42.4 benefitted the most from the treatments whereas those who scored higher than 67.25 did not manifest any effects of the treatments. Those who scored lower than 64.31 in the pretest benefited most from the treatments in the delayed posttest while those who scored higher than 65.2 did not show any usefulness of the treatments in the long term. Students in the reformulation and the EC groups whose pretest scored lower than 46.49 benefited more from the treatments than those with the same pretest score in the control

group in the posttest. However, those who scored higher than 46.63 in both groups did not show any effects of the treatments. No significance was found between the three above-mentioned groups in the delayed posttest. Figures 2 and 3 present group comparisons in both posttests using Johnson Neyman analysis.

Figure 2

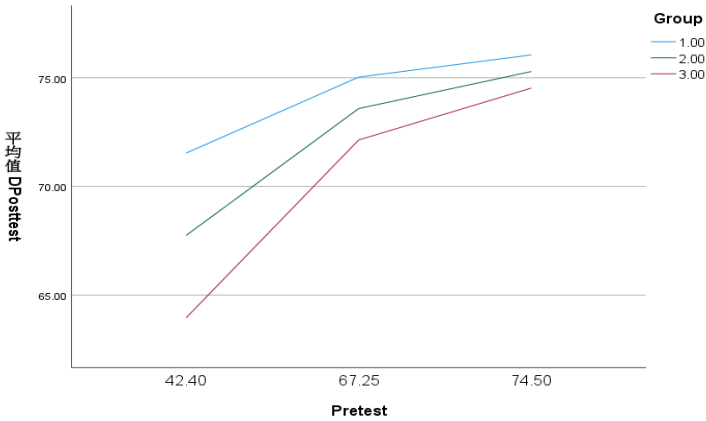
Johnson Neyman Analysis of the Three Experimental Groups in the Posttests



Note. Group1: Model. Group 2: Reformulation. Group 3: EC.

Figure 3

Johnson Neyman Analysis of the Three Experimental Groups in the Delayed Posttests



Note. Group 1: Model. Group 2: Reformulation. Group 3: EC.

Further, pairwise comparisons among the three experimental groups showed a significant difference among groups as well as the interaction between them as follows: the model and the EC in the two posttests ($p=0.05$ vs. $p=0.02$), the model and the reformulation groups in the posttest ($p=0.00$), and the reformulation and the EC groups in the posttest ($p=0.01$). Students whose pretest scores were below 42.8 benefited more from EC than those in the model group due to its higher mean score in the posttest. However, the model group showed a higher mean score in the delayed posttest and those who scored lower than 64.03 in the pretest in the model group benefited more from the treatment than those with the same score in the EC group in the delayed posttest. Those who scored higher than 65.20 in both groups did not show any effects of the treatment. Students whose pretest scores were below 66.2 in the model group benefited more from the treatment than those who scored the same in the reformulation group. Those who scored below 66.62 in the EC group benefited more from the treatment than those with the same pretest score in the reformulation group. Students who scored higher than 68

in both groups did not show any significance. No significance was found between the two groups in the delayed posttests. Then there was a significant difference between the reformulation and the control groups in the posttest. Those who scored higher than 68.88 in the reformulation group benefited more from reformulations than those with the same pretest scores in the control group. No significant variation was found between the EC and the control groups in the posttest, yet an interaction was found between them ($p=0.05$), suggesting that those whose pretest scores were higher than 64.66 benefited more from the treatment than those with the same score in the control group. No significant variations were found among the reformulation, the EC, and the control groups in the delayed posttest. Tables 3 and 4 illustrate the descriptive statistics of the scores holistically and analytically in the pre-, post-, and delayed-posttests.

Table 3

The Descriptive Statistics of the General Scores

Group	N	Test	M	SD	95 confidence interval	
					Upper	Lower
Model	19	Test 1	54.84	18.35	63.1	46.6
		Test 2	73.32	5.84	70.94	79.12
		Test 3	73.24	6.3	72.12	77.34
Reformulation	22	Test 1	65.93	8.55	69.5	62.4
		Test 2	71.1	7.59	67.16	74.56
		Test 3	73.36	5.79	70.27	75
Error correction	19	Test 1	64.18	14.64	70.8	57.6
		Test 2	74.21	6.28	69.82	77.72
		Test 3	71.08	5.96	68.17	73.22
Control	20	Test 1	63.5	9.25	68.2	60.2
		Test 2	64.83	14.07	63.7	71.39
		Test 3	71.2	6.35	68.5	73.41

Note. Test 1=Pretest. Test 2=Posttest. Test 3=Delayed posttest.

Table 4*The Descriptive Statistics of Students' Scores in Analytical Categories*

Category	Test	Model		Reformulation		Error correction		Control	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Organization	Test 1	11.1	3.77	13.3	1.84	13.08	2.93	12.88	2.03
	Test 2	15.32	.41	14.2	.37	14.78	.4	13.43	.39
	Test 3	15.04	.27	14.55	.24	14.11	.26	14.15	.25
Content	Test 1	10.85	3.72	13.25	1.75	12.89	2.9	12.66	1.83
	Test 2	15.01	.4	14.15	.36	14.70	.39	13.34	.37
	Test 3	14.79	.25	14.44	.23	14.09	.24	14.19	.23
Grammar	Test 1	10.66	3.77	13.04	1.7	12.41	2.8	12.36	1.65
	Test 2	14.56	.39	14	.35	14.49	.38	13.14	.37
	Test 3	14.51	.23	14.28	.21	13.92	.22	13.94	.21
Punctuation	Test 1	10.73	3.68	13.08	1.72	12.52	2.83	12.28	1.73
	Test 2	14.78	.39	14.12	.36	14.59	.38	13.37	.37
	Test 3	14.69	.24	14.52	.22	14.06	.23	14.13	.23
Expression/ lexis	Test 1	10.75	3.62	13.03	1.7	12.5	2.93	12.22	1.78
	Test 2	14.89	.39	14.02	.36	14.61	.38	13.47	.37
	Test 3	14.8	.24	14.46	.22	14.22	.24	14.2	.23

Note. Test 1=Pretest. Test 2=Posttest. Test 3=Delayed posttest.

Using the rating scale to examine students' writing performance analytically, significant differences among groups were found in both posttests among the three experimental groups as follows: content ($p=0.01$ vs. $p=0.01$); organization ($p=0.01$ vs. $p=0.01$); grammar ($p=0.03$ vs. $p=0.02$); expression ($p=0.02$ vs. $p=0.02$); punctuation ($p=0.02$ vs. $p=0.02$). Appendix E illustrates students' pretest scores that achieved significance and those that did not in each category. However, individual comparisons among either one or two of the three experimental groups with the control group in each category did not show any significance.

Pairwise comparisons showed significance in the two posttests between the model and the EC groups concerning organization ($p=0.02$ vs. $p=0.01$), content ($p=0.03$ vs. $p=0.01$), expression ($p=0.02$

vs. $p=0.03$), and punctuation ($p=0.03$ vs. $p=0.02$). Then a significant variation of grammar was located between the two groups in the delayed posttest ($p=0.01$). Significant differences between the model and the reformulation groups and between the reformulation and the EC groups in the posttest concerning the five categories were also identified (content $p=0.00$ vs. $p=0.01$, organization $p=0.00$ vs. $p=0.03$, grammar $p=0.00$ vs. $p=0.00$, expression $p=0.00$ vs. $p=0.00$, and punctuation $p=0.00$ vs. $p=0.00$). Therefore, it is suggested that both the model and EC were more efficacious than reformulations in enhancing EFL writing of the five categories. Appendix F shows students' pretest scores that achieved significance and those that did not in each category.

DISCUSSION

The results of the current study on noticing differed from those found in related research. The operationalization of noticing may account for the different findings. For example, Santos et al. (2010) defined noticing as the type and amount of feedback students incorporated into their second version. However, these data were different from those collected in the present study. Students in the current study did not have to indicate their acceptance or dismissal of feedback strategies because their writing was rated on an analytical scale. Moreover, the present study focused on what students perceived when comparing their drafts with the three types of feedback strategies. Cánovas Guirao et al. (2015), García Mayo and Labandibar (2017), and Montealegre Ramón (2019) concluded that young learners were most likely to notice lexical features when offered a model. This was in contrast to what the students in the model group in the present study perceived. In the current study, students perceived more content features, such as details used to enhance the richness of the story, than their corresponding young peers. Hanaoka and Izumi's (2012) data on noticing were collected through a picture prompt consisting of only two small pictures and did not specify what each student noticed when they received the model and the reformulation. However, the picture prompt used in the current study may have

provided students with more clues and interpretations about the storyline compared to that in the former research. It is suggested that each student may have noticed a larger number of differences due to the more detailed presentation of the picture prompt in the present study. Therefore, I suggest that picture prompts consisting of more small pictures provide students at the intermediate level or lower with more details to draw upon, which can focus their attention on the content and organizational aspects when offered with models other than the lexis found in previous studies. It also includes learners' perceptions of their inability to develop ideas and make their compositions flow.

What the students in the model group noticed most frequently corroborates Kim's (2015) analysis, which showed that young learners at higher proficiency levels noticed writing problems that were beyond the realm of linguistics, such as organization or idea generation in models. On the other hand, the EC group in the present study noticed grammatical problems most frequently, which has probably led to their better revisions when compared to the reformulation group, suggesting that EC promoted students' conscious awareness of their incorrect language forms and structures.

When looking at the results from the five categories, models and EC have been shown to be more effective in promoting EFL learners' writing performance than reformulations in the short term, while models have been shown to be more beneficial to EFL writing in grammar compared to EC in the long term, particularly to those whose grammar sub-scores in the pretest were lower than 12.05. These findings can be attributed to the measures used in the present study to assess learners' writing performance. The findings about reformulations in the current study are partially consistent with Sachs and Polio's (2007) findings: reformulations were not as effective as EC, and this is shown in the present study models as well. However, the results of both studies need to be interpreted cautiously, as the data in both studies were collected from only three drafts of writing, and the measures employed to assess learners' writing performances also differed. In the present study, students' accuracy was measured quantitatively through the categories of grammar and lexis in the scale whereas, in Sachs and Polio (2007), the written accuracy was coded

based on a 40-category classification system. On the other hand, they found that reformulations plus think-aloud led to a more accurate revision, yet the difference was not significant between the EC and the reformulation groups. The language awareness data in Sachs and Polio's study was collected through verbal protocols while in the current study, the related data was collected through note-taking and focus group interviews. Furthermore, the duration of the treatment conditions and the participants in the two studies varied.

Coyle et al. (2018) found that model-instructed learners developed more successful EFL writing trajectories than those in the control group, which also corroborates the improved performance of the model group in the present study. The findings of the current study seem to support the proposition that models are beneficial to EFL writing in various aspects. Models can be a resource for learners to refer to, for analysis, and comparison with their compositions as they attempt to solve writing problems. In the current study, models were more beneficial to EFL learners' writing performance concerning the five dimensions than reformulations and EC. It is likely that when students were comparing their first draft to the model, they were able to identify the idea development and the organization in the text without being distracted by the native teacher's reformulation or EC of their writing. Further studies are needed to explore the potential predictive factors such as language proficiency and working memory that led to learners' various levels of noticing when being provided with models.

Both the current and Santos et al.'s (2010) studies proved EC to be more effective than reformulations despite the different measures. The current results were based on the mean scores utilizing an analytical scale rather than the T-units applied in Santos et al. (2010), which addressed accuracy only. Nevertheless, this finding has to be interpreted with discretion; it highlights the necessity of re-examining the effects of the three feedback strategies on EFL writing longitudinally (Karim & Nassaji, 2019).

Storch and Wigglesworth (2010) used uptake as the measure and suggested that learners receiving editing symbols had to process the feedback strategy more deeply due to the decoding process and concluded that reformulations were less effective than editing

feedback in eliciting LREs relating to the provided feedback. Students in the present study, however, received the native teacher's reformulations without decoding any editing symbols, and the effects remained insignificant despite the different measures and comparative feedback strategies. Yang and Zhang (2010) concluded that learners' comparison, in combination with the reformulated version and the model text, significantly promoted learners' awareness and "appropriation" of language features. This finding partially contrasted with results from the present study. Although participants noticed the teacher's reformulations, their overall performance in the second draft did not improve compared to the other two experimental groups despite the significance found between the reformulation group and the control group. It is suggested that students were likely only to agree with what the native teacher rewrote and corrected without exploring the reasons behind the respective feedback strategy.

The EC and the model groups' outperformance of reformulations is opposite to Truscott's (2010) claim that EC is ineffective and harmful to writing development. However, as indicated, development in the current study referred to not only learners' better use of the linguistic forms but the construct of detection and awareness, differing from Truscott's (2010) notion of acquisition. Furthermore, the finding echoes Hanoaka's (2007), Coyle and Roca de Larios (2014), and Polio's (2012) argument which manifests the positive role of models and EC in fostering EFL learners' noticing, diversifying learners' concerns, and enhancing the revision of various aspects.

The current study utilized a rating scale and mean scores as a whole and in categories to evaluate learners' writing development. Coyle and Roca de Larios (2014), on the other hand, calculated the percentage of noticed features in the model text incorporated in the revision. The findings of the present study manifest that EFL adult learners are more aware of the rhetoric structure and idea development than their younger counterparts, which may have also contributed to their better performance in the five dimensions. It is probable that, during comparison, participants whose pretest scores were below the cut-off point in the model group processed the model text with more cognitive engagement than those who scored higher in the same and the EC groups in the delayed posttest as well as those whose pretest

scores were the same in the reformulation group in the posttest.

TEACHING IMPLICATIONS

According to the findings of the present study, three pedagogical implications are provided for language teachers when implementing written feedback strategies in the classroom.

First, for learners at the beginning or higher levels, teachers can provide students with sufficient exposure to models. As indicated, models do not only provide language input but also idea development and rhetoric conventions in EFL writing. Through constant access to the written TL, students would be able to appropriate the language in various aspects, including structures, language use, idea generation, and organization. Furthermore, language teachers can analyze complex and well-written sentences in the model text to on the one hand foster students' language awareness concerning how English native speakers develop and organize ideas and on the other enhance their grammatical and lexical ability. Students can be further prompted to imitate writing sentences with structures similar to the sample sentences.

Second, while providing EC to correct students' grammatical, lexical, and punctuation errors, language teachers can require students to summarize errors most frequently identified by teachers in their compositions in the error log. Then teachers can focus on those errors and provide focus on form instruction such as input flooding or consciousness-raising activities to foster their noticing of the gap between their IL and the TL and further help students narrow the gap.

Third, it remains important for teachers to offer reformulations in writing classes. It likely takes a long time for students to be cognitively engaged in the teacher's reformulations when the feedback strategy is regularly provided by the teacher. Therefore, teachers can request students to identify what changes one has found between the reformulated version and one's draft. Then the teacher can require students to write a new draft to enable them to apply and try out what they learned from reformulations in the new writing piece.

CONCLUSION AND LIMITATIONS

The current study showed a distinctive picture regarding what students noticed when being presented with the three feedback strategies. Students in the model group noticed their lack of ability to describe the respective pictures' details. Those in the EC and the reformulation groups noticed grammatical problems most frequently. Their noticing of different writing issues contributed to significant writing development, particularly in the model and the EC groups in the two posttests, while the reformulation group outperformed the control group in the posttest.

Nevertheless, several limitations remain. First, any generalization of this study's findings should be carried out with caution due to the different measures in assessing writing development. Second, since this study was conducted at a private university, the results may vary when the participants are students from a national university. Third, variables such as students' language proficiency were not considered when forming the experimental groups because of the convenience sampling method in the current study. For future research, longitudinal studies involving individual differences like language proficiency, and the three respective interventions can shed light on the relationship between noticing and EFL writing.

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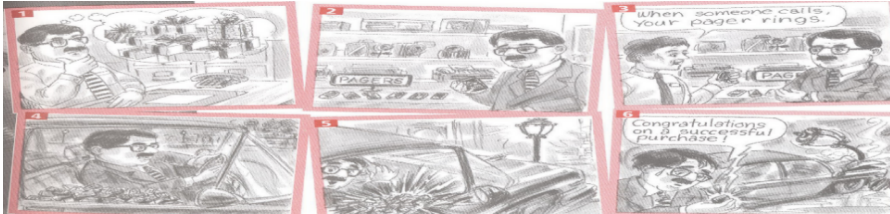
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APPENDIX

Appendix A

The picture prompt used for the pre-, the post-, and the delayed post-test



Source: Huizenga, J. (2000). Can you believe it? Stories and Idioms from Real Life. Book 1. New York: Oxford University Press.

Appendix B

Interview questions:

1. When did you start learning English writing?
2. What problems have you found when comparing your composition with the native teacher's model/error correction/reformulation?
3. What do you think about this experience? How may it have helped with your English writing?

Appendix C

The model

A business manager is sitting at his desk in this office contemplating what kinds of gifts can be purchased for this company personnel. It should be something practical that can help them with doing for the company. It could be some kind of useful electronic product.

After arriving at an electronic goods shop, he looks at the pagers on display and decides these could be very useful. Company personnel could be reached by using them to receive messages from the company when they are not at the desk and cannot be reached over the phone.

He then calls over a salesclerk and asks him how this new product works. The salesclerk explains that someone can dial the pager number from a phone.

The manager then purchases a large number of them, and places them loosely in a heap on the front passenger seat of his car, and drives away from the shop.

While he's driving, he's suddenly startled by the sound of the pagers beginning to ring all at once, and looks at the heap of them on the passenger seat, and does not look at the road ahead while he's driving, and the car is veering off the road and running straight toward a lamp post

After the car crashes into the lamp post, he gets out of the car, and takes one of the pagers from the heap of them. While standing away from his wrecked car, he looks distraught and reads the display on the pager, which says "Congratulations on a successful purchase!"

Appendix D

The coding of LREs in the noticing log

Excerpt	Coding and analysis
<ul style="list-style-type: none"> ● The foreign teacher wrote more details and described things elaborately. For example, he named the main character to prevent misunderstandings. He wrote the story vividly, which made readers feel like they were experiencing it. Definitely, the grammar and sentences were smoother than what I wrote. ● Compared to my draft, I wrote more like an outline. I mentioned the basic part in pictures but did not describe too many details. Also, there were some grammatical errors and the sentences were not smooth enough. ● The grammar and sentences were smoother than what I wrote. Also, there were some grammatical errors and the sentences were not smooth enough. ● There are no tedious words. If the depiction can be completed with one word, do not describe it with a sentence. ● I did not notice there should be pauses between sentences, so the whole paragraph looked tedious. 	<ul style="list-style-type: none"> ● Content: <i>The foreign teacher wrote more details and described things elaborately. Compared with my draft, I wrote more like an outline. I mentioned the basic part in pictures but did not describe too many details.</i> ● Grammar: <i>1. The grammar and sentences were smoother than what I wrote. Also, there were some grammar errors and the sentences were not smooth enough. 2. Definitely, the grammar and sentences were smoother than what I wrote.</i> ● Lexis: <i>There are no tedious words.</i> ● Other: <i>I did not notice there should be pauses between sentences, so the whole paragraph looked tedious.</i>

Appendix E

Summary of the pretest scores regarding the comparisons between the three experimental groups that showed significance.

Group	Test	Pretest score (Sig.)	Pretest score (Non-sig.)
MRE-Content	1	9.8	10.36
	2	12.67	13.15
MRE-Organization	1	11.17	11.4
	2	13.58	13.67
MRE-Grammar	1	6.12	6.67
	2	12	12.26
MRE-Expression	1	9.13	9.7
	2	12	12.26
MRE-Punctuation	1	8.66	9.07
	2	12.02	12.42

Note. 1. MRE stands for model, reformulation, and EC.

2. Pretest Sig. means that students whose pretest scores were lower than the number achieved significance while those who scored higher than the number in the pretest non-sig. column did not.

3. Test 1 stands for the posttest and Test 2 stands for the delayed posttest.

Appendix F

Summary of the pretest scores regarding the comparisons between the model and the EC, the model and the reformulation, and the reformulation and the EC groups that showed significance

Group	Test	Pretest score (Sig.)	Pretest score (Non-sig.)
ME-Content	1	8.23	8.68
	2	99.8	10.36
ME-Organization	1	10.86	11.4
	2	13.45	13.67
ME-Grammar	2	12.05	12.26
ME-Expression	1	9.13	9.7
	2	11.61	11,97
ME-Punctuation	1	7.67	7.96
	2	11.95	12.43
MR-Content	1	12.16	12.68
MR -Organization	1	12.63	13.17
MR -Grammar	1	11.41	11.96
MR-Expression	1	12.89	13.16
MR-Punctuation	1	12.54	12.57
RE-Content	1	13.3	13.7
RE -Organization	1	13.33	13.71
RE -Grammar	1	12.94	13.37
RE -Expression	1	13.06	13.1
RE -Punctuation	1	11.87	12.43

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