

The Use of Self-Correction, Paper-pencil Peer Feedback and Electronic Peer Feedback in the EFL Writing Class: Opportunities and Challenges

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Abstract

The purpose of this research was to compare the students' writing achievement scores and attitudes toward the use of self-correction, paper-pencil peer feedback, and electronic peer feedback. The study was conducted with 90 engineering students having different levels of general English proficiency in a 3x3 factorial design. They were randomly selected and assigned into three groups: 1) self-correction, 2) paper-pencil peer feedback, and 3) electronic peer feedback. At the beginning of the course, the students in the first group were trained in how to do self-correction while the students in groups 2 and 3 were trained in how to provide comments to their classmates effectively via the medium assigned. The data were analyzed by using two-way Analysis of Variance (ANOVA), descriptive statistics, and content analysis. The questionnaire, interview, and students' writing journals were used to gain more in-depth data. The results revealed that the different types of feedback had a significantly different effect on the students' writing achievement. The students in the electronic peer feedback group performed the best. The students in different ability groups all performed differently, while there was no interaction effect between types of feedback and levels of general English proficiency on the students' writing achievement. The students in the three experimental groups had highly positive attitudes in most aspects explored. Qualitative findings also provided some useful information for pedagogical implications for EFL writing classes, especially opportunities and challenges regarding the use of this alternative assessment in a writing class.

1. Introduction

Nowadays, as advances in transportation and technology allow people from different countries and cultures throughout the world to interact with each other, communication across languages has become ever more essential, in particular English, which plays an important role as an international language. In EFL contexts, good English ability is viewed as a key to success in terms of career opportunities, business success, and academic achievement in higher education, and it plays a crucial role both in government and private sectors. Moreover, in 2015, professional mobility will increase with the advent of ASEAN, perhaps especially in the engineering profession. Therefore, it is necessary for Thai students to prepare themselves to use effectively English to write, read, and speak with colleagues, customers, subcontractors, suppliers, and other related people.

Writing seems to be the most demanding skill for EFL learners to master, as it requires both syntactic and semantic knowledge. To be successful in the competitive world, effective writing skill is a predictor of academic success and a basic requirement for participation in civic life and in the global economy (Graham & Perin, 2007). Unfortunately, previous studies have shown that most students are still unable to communicate in English competently although they have studied English for many years (Chinnawongs, 2001; Thongrin, 2002; Wanchid, 2010). The students' significant communicative problems, such as inappropriate language use, incomprehensible passages, and disorganized text, have been found in writing courses. It is clearly seen that if learners have insufficient linguistic knowledge or limited language competence, it will definitely have a negative impact on writing proficiency and the second language writing ability of students (Watcharapunyawong and Usaha, 2013). However, these problems may have been a result of insufficient feedback, the teacher's heavy workload, large-sized classes, mixed proficiency levels of students, variations in motivation, and negative attitudes toward English.

Writing is a process of thinking. The composing process involves a number of activities: setting goals, generating ideas, organizing information, selecting appropriate language, making drafts, reading, reviewing, revising, and editing (Hedge, 2000). It seems impossible for novice or even proficient writers to write a perfect draft without following those steps.

Feedback has a vital role to play in a writing class since it is considered as critical in improving and consolidating

learning (Hyland, 2003). For teachers, it provides crucial information of a student's progress as well as for evaluating their teaching during the course. Providing feedback in the EFL writing class is believed to be a teacher's major responsibility due to the higher-context cultures in which authority is primarily in the teachers' hands and students feel that it is inappropriate to question teachers. In other words, teachers are viewed as the givers of knowledge while students are considered inexperienced and not in a position to share or express ideas (Baker, 2013). However, the controversial issue is whether teacher correction is really useful and helps students learn more effectively than other feedback strategies. Since the paradigm shift of language learning to the learner-centered approach, students have been encouraged to be independent learners that can learn autonomously, show their own voices, and critically express their opinions. As a result, self-correction and peer feedback strategies have been applied in the EFL writing class.

Self-correction is a strategy according to which students read, analyze, correct, and evaluate their own writing by using guided questions or checklists, both form-focused and meaning focused. There are several advantages to self-correction: it helps increase students' independence from the teacher, students remember better from their own mistakes and are aware of their own strengths and weaknesses in writing, and it saves time in large classes (Yang, 2010). Ancker (2000) found that self-correction helps to focus student attention on errors and to reduce reliance on the teacher, thereby encouraging student autonomy. However, students may find it very demotivating about finding the mistakes due to no readers.

Peer feedback is a writing activity in which writers work in groups collaboratively and provide information on each other's writing, either in a written, oral, or computer-mediated mode (Liu & Hansen, 2002). Through feedback, the writer learns where he or she has misled or confused the readers by not supplying sufficient information or with illogical organization, lack of the development of ideas, or inappropriate words choice or tense. This supports Vygotsky's idea of the zone of proximal development, where skills are extended through the guidance and response of others. It is believed that feedback from more advanced peers can provide scaffolding and can reduce problems associated with peer feedback, such as the lack of credibility of peer evaluation and reluctance to use feedback from peers. However, the effectiveness of using peer feedback in the EFL writing class is still a controversial issue due to students' English proficiency and cultural impacts, such as avoiding truthful comments to preserve a harmonious relationship among group members and being reticent in the group discussions.

Interestingly enough, the way to provide feedback has also moved from the traditional paper-pencil or face-to-face mode to the electronic mode with the great influence of computer technology. Many social networking sites such as Facebook, MSN Messenger, and Weblog have become popular and are utilized in the writing class. Although many writing instructors use social networking sites in their classes, their usefulness and constraints in terms of cultural, social, and affective dimensions, especially in the Thai context, have not yet been clearly revealed. In this study, Edmodo (www.edmodo.com), a free networking site program, is applied because it is purposely designed for teaching and learning, with many beneficial functions for students and teachers to submit and check their homework, provide and receive comments on students' assignments, and interact with teachers and classmates, for example.

It is believed that providing electronic peer feedback not only increases the students' learning motivation but also enhances the interaction among the students' classmates and teacher in a virtual context where the target language learning is not limited as in the traditional classroom. It is also expected that the use of electronic peer feedback via Edmodo will possibly reduce language and cultural barriers in the EFL writing class.

As a result, in order to solve the problems mentioned above, three alternative strategies to providing feedback on the students' writing assignments are proposed. It is hypothesized that this worthy activity will possibly help the teachers and students overcome the constraints apparent in the teaching and learning context in the workplace and possibly equip students with the mindset of independent learning in the writing class. It is certainly worthwhile to investigate which type of feedback is the most effective strategy to be used in the EFL writing class.

In this article, the author describes how the research was conducted, followed by the results of the study and a discussion, and concludes with recommendations for further research.

2. Literature Review

2.1 *The differences between paper-pencil peer feedback and electronic peer feedback*

With regards to applying Computer Mediated Communication (CMC) as an alternative means to providing feedback in writing instruction, the differences of paper-pencil peer feedback and electronic peer feedback are summarized in Table 1. CMC refers to the use of computer networks to create opportunities for learners to interact either in synchronous

communications or asynchronous communications (Hassen, 2005). It is noted that the self-correction strategy is not compared in this table as its characteristics are various and depend on the channel chosen and the activity designed by the individual teacher.

Apart from the difference in communication mode, the online environment allows two-way communication between readers and writers without time or place dependence. This feature increases the degree of social interaction and negotiation of meaning, and offers potentially unlimited participation, unlike traditional modes, where group conversation, work submission, and feedback exchange are held during limited class time. This unavoidably creates pressure for immediate response from students.

The level of cultural barriers is considered as another important feature which has a significant impact on the nature of communication and the effectiveness of the peer feedback activity. The online environment can eradicate some of this cultural impact, such as group harmony and face preservation, since there is little pressure of the sort imposed on an individual by another's physical presence (Macleod, 1999). This would encourage students to be more honest in responding and in stating their true thoughts because the peer reviewers could criticize the writers without having to face them.

In the online environment, the peer feedback activity is greatly facilitated by computer functions that allow students to compose, revise, and edit their writing more conveniently. Students do not have to waste time repetitively writing the entire paper for the peer feedback process.

Another feature that differentiates the three types of feedback is the permanence of the message. With electronic peer feedback, the message is immediately visible and thus may encourage a feeling of permanence about the message from the writers (Todd, 2003). Moreover, this can yield potential feelings concerning the "publicness" of the posted message, but this feature cannot be found in self-correction or paper-pencil peer feedback.

In sum, it can be said that the features of the online modes are not completely different from the traditional mode, although paper-pencil peer feedback has its own distinctive functions. As Baron (1998) has stated, electronic dialogues reside somewhere between speech and written communication in formality and style.

Table 1: Common Features and Differences in Self-correction, Paper-pencil Peer Feedback, and Electronic Peer Feedback

Criteria	Paper-pencil peer feedback	Electronic peer feedback
1. Mode of communication	Written/ mostly one-way communication	Written/ two-way communication
2. Pressure to respond	Pressure to respond by next class	No pressure to immediately respond
3. Place and time	Place and time dependence	Place and time independent
4. Components of communication	No nonverbal components	No nonverbal components
5. Personal distance	More or less personal distance depends on the situation	More personal distance
6. Level of cultural barriers	Greater cultural barriers	Fewer cultural barriers
7. Involvement with others	Greater sense of involvement	Greater sense of involvement
8. Frequency of meaning negotiation	Less negotiation of meaning	More negotiation of meaning
9. Delivery effort	Greater delivery effort	Less delivery effort
10. Other facilities	No cut & paste	Cut & paste
11. Message permanence	Fewer feelings of message permanence due to unpublished messages	Greater sense of message permanence due to the visible online messages

Adapted from Tuzi (2004) cited in Wanchid (2010)

3. Research Objectives

1. To compare the effects of self-correction, paper-pencil peer feedback, and electronic peer feedback on the students' writing achievement
2. To compare the effects of the students' levels of general English proficiency (high, moderate and low) on writing achievement
3. To investigate the interaction effect between the types of feedback and levels of general English proficiency on the students' writing achievement
4. To survey the students' attitudes toward the use of self-correction, paper-pencil peer feedback, and electronic peer feedback

4. Research Questions

1. Is there any significant effect among self-correction, paper-pencil peer feedback, and electronic peer feedback on the students' writing achievement?
2. Is there any significant effect of students' levels of general English proficiency (high, moderate, and low) on writing achievement?
3. Is there any interaction effect between types of feedback and levels of general English proficiency on the students' writing achievement?
4. What are the students' attitudes toward the use of self-correction, paper-pencil peer feedback, and electronic peer feedback?

5. Research Hypotheses

1. The mean scores on the writing achievement test of students receiving different types of feedback are significantly different at the 0.05 level.
2. The mean scores on the writing achievement test of students that have different levels of general English proficiency are significantly different at the 0.05 level.
3. There is no interaction effect between types of feedback and levels of general English proficiency on the students' writing achievement at the 0.05 level.

6. Methodology

6.1 Subjects

The population was comprised of 145 Thai second-year undergraduate engineering students enrolled in Writing I as an elective course at KMUTNB in the first semester of academic year 2012; however, the subjects of this study were 90 students. The students' age range was 19-21. All of them had passed Foundation English I and II, and they had different levels of general English proficiency (high, moderate, and low). The stratified random sampling technique was used for subject selection and assignment.

Based on the students' total raw scores of English I and II, they were classified into 3 levels of general English proficiency (high, moderate, and low). Thirty students were randomly selected from the high proficiency group, 30 students from the moderate proficiency group, and 30 students from the low proficiency group. Ten from each proficiency group were randomly assigned to the self-correction, paper-pencil peer feedback, and electronic peer feedback groups. Therefore, each experimental group was composed of 30 students. A mechanical matching design with random assignment (Fraenkel and Wallen, 2000) was utilized to ensure that the 3 groups were statistically comparable.

In the paper-pencil peer feedback and the electronic peer feedback groups, students were divided into 5 subgroups. Moreover, each subgroup was composed of 6 student—2 low-proficiency learners, 2 moderate-proficiency learners, and 2 high-proficiency learners. The students with different levels of English proficiency were arranged in each subgroup because of the benefits of additional comments from a wider audience.

6.2 Instruments and Data Collection

A writing achievement test, a questionnaire, a semi-structured interview, and a journal writing were used in the study. The test aimed at measuring the students' writing ability before and after taking the course. It was composed of 3 main parts: error identification, completion, and paragraph writing. The test was validated by 3 experts, and the Index of Item Objective Congruence (IOC) was 1. Classical Test Item Analysis and Grading (Sukamolson, 1995) was used to analyze the test items. The results of the item analysis showed that, on average, the difficulty index was 0.66, and the discrimination index was 0.54. Moreover, the reliability coefficient was 0.76. The students had to complete all of the test tasks within 3 hours. For the paragraph writing section, the assessment criteria for writing were based on Pavlik and Segal's writing profile (2007). The profile was divided into five majors writing components: content, organization, vocabulary, language use, and mechanics, with each one having three rating levels of *poor*, *average*, and *excellent*. The analytic scoring was applied as the rubric of evaluation because of its outstanding usefulness, high validity, and washback (Hyland, 2003). The test was distributed at the beginning and the end of the course. The data were analyzed

by using two-way Analysis of Variance (ANOVA).

The questionnaire was designed to elicit the students' responses regarding their attitudes toward peer feedback by using five-point Likert scales ranging from strongly disagree (1) to strongly agree (5). The reliability of the questionnaire calculated by the Cronbach Coefficient Alpha, SPSS version 11.5, was 0.79. It was distributed to the students at the end of the course. Descriptive statistics were used for the data analysis. Semi-structured interviews and students' journals were applied to gain more in-depth information. The instruments were validated by 3 experts, and the Index of Item Objective Congruence of the qualitative instruments (IOC) was 1.

6.3 The Experimental Process

In order to ensure that the students could provide effective peer feedback, they were trained at the beginning of the course. The writing achievement test and close-ended questionnaire were used for the quantitative data collection. Two way Analysis of Variance (ANOVA) and descriptive statistics were used to analyze and explain the data. The qualitative data were gathered from the interview. The following table describes the experimental process of the study.

Table 2: The Experimental Process

Phases	Activities	Weeks (1-15)
I	<ul style="list-style-type: none"> The students took the pre-test. 	1
	<ul style="list-style-type: none"> The students were divided into three groups: self-correction, paper-pencil peer feedback, and electronic peer feedback. The use of self-correction and peer feedback activities were introduced to the students, who were in the self-correction group, paper-pencil peer feedback group, and electronic peer feedback group. The objectives, contents, and scoring rubric of the writing tasks were also discussed. The students were trained in how to provide effective peer feedback by using paper-pencil or Edmodo according to the experimental groups they belonged to. 	2-3
II	<ul style="list-style-type: none"> Throughout the course, the students in each group had to write four writing assignments (2-3 weeks for each assignment). The three experimental groups provided feedback on the writing tasks. The students wrote four journal writing assignments. Each journal was written after they finished writing the final draft of each writing assignment. 	4-14
III	<ul style="list-style-type: none"> The three groups took the post-test and questionnaire. Further, 6 students from each group were randomly assigned to the interview session. 	15

6.4 Procedures of self-correction, paper-pencil peer feedback, and electronic peer feedback

At the beginning of the course, the students in the self-correction group were trained in how to correct their work by analyzing their own writing using the guidelines, focusing on content, organization, and grammatical errors. Then the students were divided into small groups for conferencing with the teacher in order to ensure that the students understood how to do the self-correction. The students in the paper-pencil and electronic peer feedback groups were trained in how to provide useful comments on their friends' paper for 6 hours in order to ensure the quality of the peer feedback. Moreover, in order to ensure their ability to distinguish between the helpful and not-so-helpful comments from their peers, group consultations were arranged out of class time at the beginning of the experiment, at least 2 times for each subgroup or 30 minutes per time.

In this study, the students had to write four essays of different rhetorical focuses. For the paper-pencil peer feedback group, the students wrote the essay in the classroom and then submitted it to the teacher at the end of that session. The essays were copied and assigned to the students that were in the same subgroup (six students—2 high proficiency learners, 2 moderate proficiency learners, and 2 low proficiency learners in a subgroup). Each student was assigned to provide feedback on five papers from their group members by using the guidelines constructed by the researcher. They had one week to do the task before returning their friends' papers. After the students received the papers from their peers, they had a weekend to revise their first draft outside the classroom before submitting the second draft to the teacher with the attachment of the peer feedback within the due date. Next, the teacher provided feedback on the students' second drafts using the same form of guidelines. After that they revised and then submitted the final product to the teacher before the due date.

Like the paper-pencil peer feedback group, the students in the self-correction group also followed the same writing process, but they had to make corrections by themselves using the same guidelines. However, they were not divided into

subgroups like the paper-pencil and electronic peer feedback groups.

Like the other two groups, the students in the electronic peer feedback group had to post their work on Edmodo. Each student was assigned to give feedback on five papers from his or her friends that were in the same subgroup (six students—2 high proficiency learners, 2 moderate proficiency learners, and 2 low proficiency learners in a subgroup) by using the guidelines. They had one week to do the task and they had to post their feedback to their friends before the next class. After the students received the feedback from their classmates, they had a weekend to revise their first draft outside the classroom before submitting the second draft. Next, the teacher provided feedback on the students' second drafts using the same form of peer feedback guidelines. After that they had to revise and then submit the final product to the teacher before the due date. All of the tasks were carried out via Edmodo.

7. Results and Discussion

1. According to the first research objective, which was to investigate the effects of types of feedback on the students' writing achievement, the results from the two-way ANOVA in Table 3 showed that the different types of feedback had a significant effect on the students' writing achievement ($F= 8.60, p<.05$). Therefore, the first research hypothesis was accepted. Moreover, the mean scores of the students in the electronic peer feedback group (mean = 73.74) were higher than those of the self-correction group (mean =62.40) and the paper-pencil peer feedback group (mean = 67.13).

This may be due to the convenience of the social networking site, which facilitates the writing process and so may affect the quality of the students' writing. The students can learn from each other's writing assignments and feedback as they can read, model, comment on, and review at their own pace. This channel also motivated the students to write, as their work was published for an authentic audience. Furthermore, the results from the interview revealed that the students were more confident in their friends' comments when several friends made the same points. However, some confusion for the students in deciding what and how to edit and revise their writing occurred due to the multiple-voiced feedback.

Table 3: Tests of Between-Subject Effects

Dependent Variable: Writing Achievement Score

Source	Type III Sum of Squares	df	Mean Square	F
Types of feedback	1956.27	2	978.13	8.60*
Levels of general English proficiency	8837.68	2	4418.84	38.84*
Types of feedback * Levels of general English proficiency	487.39	4	121.85	1.07
Error	9215.78	81	113.78	
Total	433521.43	90		
Corrected Total	20497.10	89		

* $p<.05$

2. According to the second research objective, which was to investigate the effects of the levels of general English proficiency on the students' writing achievement, the results from the two-way ANOVA illustrated that the levels of general English proficiency had a significant effect on the students' writing achievement ($F= 38.84, p<.05$). Therefore, the second research hypothesis was accepted. The mean score of the writing test revealed that the high proficiency group outperformed the moderate proficiency group, and the moderate group outperformed the low proficiency group. The different characteristics of the language learners may be an indication of why the high proficiency group outperformed the moderate proficiency group, and the moderate group outperformed the low proficiency group. The differences between high and low proficiency students have been investigated by many researchers (Jerdan, 1993 cited in Swatevacharkul, 2006; Wanchid, 2007). The findings revealed that high proficiency students consistently outperformed on the test, showed higher task orientation, higher attention level, higher learning ability, higher engagement in social factors, higher cognitive processing skills, and a more self-directed effort than did the low proficiency students. Therefore, there is no doubt why high proficiency learners tend to be more successful in language learning.
3. Based on the results from the two-way ANOVA, it was shown that there was no interaction effect of the types of feedback and levels of general English proficiency on the students' writing achievement ($F= 1.07, p>.05$). Therefore, the third research hypothesis was accepted. There might be a tendency to find that levels of

English proficiency did not yield a significant interaction effect on the types of feedback strategy. It seems that the levels of general English proficiency had significant effects on the students' writing achievement in a natural pattern, as the low proficiency group with each feedback type had the lowest score, while the high proficiency group using a different feedback type performed best. Due to this natural pattern, each line has no chance for intersection. As a result, the conclusion can be drawn that there is no particular feedback type that is preferred by any proficiency group.

4. In order to answer the fourth research objective, investigating the students' attitudes toward the type of feedback they experienced, 10 questionnaire items were analyzed, as presented in Table 4. A five-point Likert scale, ranging from Strongly Disagree (1) to Strongly Agree (5), was used. To make the data more clear, the students' attitudes were interpreted by using the evaluation criteria described below:
 - 0.00-1.50 means that the students had very low positive attitudes toward the type of feedback they experienced.
 - 1.51-2.50 means that the students had low positive attitudes toward the type of feedback they experienced.
 - 2.51-3.50 means that the students had moderately positive attitudes toward the type of feedback they experienced.
 - 3.51-4.50 means that the students had highly positive attitudes toward the type of feedback they experienced.
 - 4.51-5.00 means that the students had very highly positive attitudes toward the type of feedback they experienced.

Table 4: Students' attitudes toward the use of self-correction, paper-pencil peer feedback, and electronic peer feedback

Statement	Self-correction		Paper-pencil peer feedback		Electronic peer feedback	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
1. I think the type of feedback that I experienced is useful when applied in the writing course.	3.70 (H)	0.84	4.03 (H)	0.93	4.23 (H)	0.73
2. I would like to learn writing by using the type of feedback that I experienced	3.57 (H)	0.68	4.03 (H)	0.85	3.97 (H)	1.00
3. The type of feedback that I experienced helps me recognize errors better.	3.57 (H)	0.68	3.83 (H)	0.87	4.13 (H)	0.73
4. Using the type of feedback that I experienced encourages me to acquire English knowledge.	3.87 (H)	0.78	3.97 (H)	1.00	4.00 (H)	1.02
5. I think the type of feedback that I experienced is helpful.	3.80 (H)	1.00	4.03 (H)	0.93	4.10 (H)	0.40
6. I feel comfortable with the type of feedback that I experienced.	3.67 (H)	1.12	4.03 (H)	0.85	4.23 (H)	1.01
7. I am not frightened when using the type of feedback that I experienced in the writing process.	3.83 (H)	0.70	3.90 (H)	0.80	4.07 (H)	1.01
8. My writing improved after using the type of feedback that I experienced.	3.77 (H)	1.14	4.07 (H)	1.01	4.17 (H)	1.09
9. I think the type of feedback that I experienced helps me to become an independent learner.	3.83 (H)	0.70	3.90 (H)	0.88	4.17 (H)	0.75
10. I think after taking this course my attitude towards English writing has changed positively.	3.67 (H)	0.86	3.77 (H)	0.94	3.90 (H)	0.92

*VH= very high, H= high, M= moderate, L= low, and VL = very low

The results illustrated that the students seemed to have highly positive attitudes toward the type of feedback they experienced, as they highly agreed with most of the positive items. However, it is noteworthy to mention that the self-correction group had the lowest mean scores of all the items compared to the other two groups. The results of the students' journal writing assignments and the interview asking the students in-depth information about their attitudes and feelings toward the type of feedback they experienced in the class revealed that the students from the self-correction group thought that the self-correction strategy was very helpful, as it encouraged them to be aware of the elements of good paragraph writing, but it was sometimes difficult for them to make corrections themselves without teacher or peer intervention due to their limited language knowledge.

8. Pedagogical Implications:

The use of alternative assessment in the EFL writing class yields undeniable benefits, as it encourages students to develop a sense of independent learning in various degrees of success. This opportunity also creates students' critical thinking and self-reliance, which would be rare in a traditional teacher-centered writing class. However, failure to use the alternative assessment can possibly occur without clear learning objectives, well-planned lessons, teachers' determination and efforts, effective feedback training, and the learners' full cooperation. Writing teachers in the EFL context should consider the constraints of their teaching and learning contexts, such as levels of English proficiency, cultural context, and Internet accessibility before exploiting these activities in their writing classes. More importantly, teachers should be aware of what, when, and how teacher feedback should be used.

9. Recommendations for Further Research

1. Other crucial factors that might have affected the results of the study, such as gender, age, learning styles, learning strategies, technology apprehension, computer literacy, and group integrity, should be taken into consideration.
2. This research was conducted with engineering students in a writing course; consequently, students in other faculties and in other content courses would be interesting to research.
3. Replication of the study is suggested for a longer period of time to strengthen the results of the study. Moreover, it would be interesting to explore further whether the study will yield the same results if the study is carried out with subjects in other settings, such as private universities or with subjects at other educational levels.

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