Corrective Feedback that an Automatic Writing Evaluation System Can and Cannot Provide

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Kim, Tae-Eun. (2011). Corrective feedback that an automatic writing evaluation system can and cannot provide. English Teaching, 66(1), 111-140.

The purpose of the study is to report and share a reflection on using the ETS Criterion online writing evaluation system in a university setting and evaluate if this system can be a suitable teaching/learning tool for English language learners (ELLs) in an English as a Foreign Language (EFL) context to facilitate their writing ability. Participants were given a writing prompt to write about in class and entered their writing into the Criterion system to receive feedback. Both quantitative and interpretive analyses were conducted for 129 student writing samples and Trait Feedback Analysis reports. The study revealed that the sentence-level feedback appears to be in urgent need for EFL writers, but Criterion did not provide this kind of feedback. Errors in such aspects as basic sentence structures, subject-verb relationship, awkward meaning construction, and formulaic expressions could not be treated by Criterion at all. In addition, the comparison of teacher feedback and Criterion feedback were discussed in details. This study alerts users to contemplate before use what the purpose of using Criterion is, whether for diagnosis of writing proficiency or as a teaching/learning tool for developing students’ writing ability. Plus, educators should be aware of on which language aspects and features EFL writers necessitate feedback to facilitate their writing development, different from first language (L1) writers.

I. INTRODUCTION

English writing teachers may have a common burden on providing frequent feedback on multiple writings throughout a semester. Even worse, if you have a large number of students to teach writing, it can be badly stressful to read writings of all students and provide detailed feedback for each. Taking a careful look even at a piece of writing can require a long time depending on the number of errors included and the degree of clarity that the writing entails in expressing the writer’s intended message.

In a sense that it can relieve writing teachers of such an enormous and stressful workload, Criterion, which is an award-winning Web-based, online writing evaluation
system developed by Educational Testing Services (ETS), can be a revolutionary solution. Regardless of the number of writings submitted, Criterion can offer students feedback on five traits (e.g., grammar, usage, mechanics, organization/development, and style) within six seconds at the same time, which is fascinating. Criterion has started to get popularity in the English as a Foreign Language (EFL) context such as in Korea and Japan. In Korea for instance, some universities have been using this system either for diagnosis/placement tests or as a teaching/learning tool of facilitating students’ writing ability.

Along with increasing attention, Criterion appears to contain attractive advantages on the surface. However, in order to evaluate if it can be an effective support indeed for English language learners (ELLs) to develop their writing proficiency, it would be imperative to look into its insides, what is really going on. This study has a purpose of reporting a reflection on using the Criterion online writing evaluation system in a university setting from an ELL perspective, exploring the nature of the Criterion service, comparing the Criterion feedback with the teacher feedback, and evaluating the usefulness of online writing evaluation system for EFL writers. In other words, this study is aimed at investigating if the Criterion system would be effective in helping develop students’ writing ability, not in diagnosing their writing proficiency, and if it could provide adequate feedback demanded by EFL writers. In this study explored are the following research questions:

1. What is the percentage of the Criterion feedback provided for each error category?
2. What is the nature of the Criterion feedback and a reflection on it?
3. What are the types and the rate of wrong feedback among the Criterion feedback provided?
4. On which areas of language features does not Criterion provide feedback?

II. LITERATURE REVIEW

1. What is Criterion?

Criterion is a Web-based, online writing evaluation system developed by ETS (ETS, 2006, 2007, 2008) in order to help students improve their writing skills while going through the writing processes of writing, receiving feedback, and revising. Students access the Criterion website and submit essays on topics assigned by their instructor, and then Criterion provides them with automated essay holistic scoring and instant writing trait feedback analysis. For the online tour of Criterion, you can refer to the following web site: http://www.ets.org/criterion/ell/demo.

Criterion won awards, including an Education Software Review Award from ComputEd Gazette and an Award of Excellence from Technology & Learning magazine; Criterion
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was also a finalist in the Best Instructional Solution for English Language Acquisition. According to ETS (2006), “in 2006, the program has had more than 2 million essay submissions...Outside the United States, the system is used in many countries including Canada, England, India, Qatar, Vietnam, Taiwan, Singapore, and Japan” (p. 1).

By using an automated scoring engine and Natural Language Processing (NLP) technology, Criterion has an ability to compare a student’s writing with thousands of other essays scored previously and stored in the database and provides holistic scores either 1-4 or 1-6 points in a very speedy manner—in an approximately six seconds. In addition to a holistic score, Criterion also offers Trait Feedback Analysis in which users receive feedback for 40 error categories under five traits of grammar, usage, mechanics, organization/development, and style (refer to Appendix for a sample of the Trait Feedback Analysis report).

Criterion provides two types of feedback messages, either descriptive or prescriptive feedback. Descriptive feedback does not tell directly how to correct, but rather it guides the student to correct it by himself/herself (e.g., You have used either an imprecise word or an incorrect word). Criterion provides descriptive feedback most of the time. On the other hand, prescriptive feedback gives a detailed and direct solution to an erroneous part (e.g., You have used ‘there’ in this sentence. You may need to use ‘their’ instead).

ETS's Criterion service has its power in that it offers very speedy feedback that the instructor could not, eases the instructor’s enormous load for reading and providing feedback for many essays, and accordingly gives students more chances to practice writing. In addition, ETS states that Criterion has 97% of “typical exact plus adjacent agreement between e-rater and the score assigned by a human rater” (ETS, 2006, p. 5). However, the Criterion service admits some limitations because it fails to judge accurately what word the student intended to use, stating that “Criterion is intended to be an aid, not a replacement, for classroom instruction” (ETS, 2006, p. 1). It also delivers a word of caution: “the technology that enables the Criterion service to do holistic scoring is not immune from making errors....the scores provided by the Criterion system should be used as one piece of evidence about a student’s writing” (ETS, 2008, p. 7).

2. Written Corrective Feedback Types

Ellis (2009) presents a typology of different types of written corrective feedback available to teachers and researchers. The following Table 1 illustrates options for correcting linguistic errors along with description of each type of corrective feedback.


TABLE 1

| Types of Written Corrective Feedback |
|-------------------------------------------------------------|------------------|
| Type of corrective feedback | Description |
| 1. Direct corrective feedback | The teacher provides the student with the correct form. |
| 2. Indirect corrective feedback | The teacher indicates that an error exists but does not provide the correction. |
| a. Indicating + locating the error | This takes the form of underlining in the student’s text. |
| b. Indication only | This takes the form of an indication in the margin that an error or errors have taken place in a line of text. |
| 3. Metalinguistic corrective feedback | The teacher provides some kind of metalinguistic clue as to the nature of the error. |
| a. Use of error code | Teacher writes codes in the margin (e.g., art=article). |
| b. Brief grammatical descriptions | Teacher numbers errors in text and writes a grammatical description for each numbered error at the bottom of the text. |
| 4. The focus of feedback | This concerns whether the teacher attempts to correct all (or most) of the students’ errors or selects one or two specific types of errors to correct. |
| 5. Electronic feedback | The teacher indicates an error and provides a hyperlink to a concordance file that provides examples of correct usage. |
| 6. Reformulation | This consists of a native speaker’s reworking of the students’ entire text to make the language seem as native-like as possible while keeping the content of the original intact. |
III. METHOD

1. Description of the Course

During the years from 2007 to 2009, the instructor had taught a second-year mandatory English course at a university in Seoul, Korea. This course ran 75 minutes, twice a week, and the major emphasis of this course was put on practicing English writing both at a sentence level and a paragraph level. Students had chances to engage in multiple types of writing tasks such as in-class writing, reaction writing, and essay writing throughout the course taking.

2. Participants

Most of the students taking the course were sophomore and came from a range of all different majors because it was a required second-year English course. In the second semester of 2009, 157 students took this course, and they were in the College of Natural Sciences, College of Engineering, and College of Informational Technology. The 157 registered students composed of 119 sophomores, 33 juniors, and 5 seniors; 117 males and 40 females.

3. Writing Tasks

Out of the total 157 registered students, 151 students had a chance to use the Criterion service to accomplish an essay writing task that the instructor assigned, among which 129 essay writings were appropriate for the data analysis. Writing prompts were provided for students to write about in class in a timed manner—during 75 minutes of a class time. Dictionary was not allowed to use for two reasons: not to disturb their writing flow and to prevent them from copying and making awkward expressions from the dictionary. The instructor collected students’ writing essay sheets to make copies and distributed copied writing to students in the next class. Original and copied writing sheets were used to confirm if they put their original texts without any change. Then they were asked to enter their writing as it was into the Criterion website, push the submit button, receive automatic writing feedback from Criterion, and hand in the Trait Feedback Analysis report to the instructor.

The instructor selected the writing topics from the Criterion writing topic library, which she thought it would be best relevant for students to think and write about. The two writing prompts were differently provided according to the day of classes because students who heard about the writing topic by any chance might prepare for the essay in advance to get a
good grade. The writing prompts assigned were as follows:

Writing prompt 1: Career goals
All students are faced with the decision of what to do after graduation. Think about the career goals you have beyond graduation. Write an essay about what your career goals are, what you will do to reach your career goals, and how you will achieve your goals, being as specific as possible in describing the obstacles and challenges you might face on the road to success.

Writing prompt 2: Reasons for attending university
People attend a university for many different reasons (for example, new experiences, career preparation and increased knowledge). Why do you think people attend a university? Use specific reasons and examples to support your answer.

4. Definition of the Terms

- Criterion feedback (CF) is the feedback Criterion provided to students’ writing. The feedback was analyzed based on the modified list of the feedback traits and error categories (refer to Table 2).
- Wrong feedback (WF) is the erroneous feedback that Criterion supplied. The incorrect feedback among CF was coded as WF and analyzed to present its nature.
- Teacher feedback (TF) is the feedback teacher provided to students’ writing. The researcher and one writing teacher examined CF, and added feedback to CF when some parts of writing needed feedback but Criterion did not mention anything about them. In other words, TF can be considered as Criterion’s missed feedback. TF was also analyzed based on the same list of feedback traits and error categories that was utilized to analyze CF.

5. Data Analysis

Each student writing sample was given the grades from A, B, C, D, and F depending on their level of writing ability. Those who received ‘A’ grade produced higher quality of English writing than the other grade groups. Plus, within each grade level, a number was randomly assigned to each writing sample, yielding a unique coding number for each writing sample, such as A1, A2, B1, B2, and so on.

For the analysis of TF, the researcher and one writing teacher marked their feedback on students’ writings based on the list of feedback traits and error categories used in this study.
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(refer to Table 2). The professional writing teacher, who has experienced five years of teaching writing at a university setting, was trained about the error categories that she was going to use as well as how to code them. The interrater percentage of agreement among the researcher and the rater was 87%.

When students’ writing samples and their feedback were analyzed, only three traits (i.e., grammar, usage, mechanics) among the five (i.e., grammar, usage, mechanics, organization/development, style) were employed and modified to be used as a means of criteria for the sentence−level accuracy analysis. According to the modified list of feedback traits and error categories, all of CF and TF were coded and recorded by using MS Excel program to calculate the frequency and percentage of CF and TF received for each error category. Among the CF received, the erroneous CF was marked as WF to analyze and generate the rate of WF out of the total number of CF. Student writing samples belonged to each error category were investigated by employing interpretive analysis with an attempt to look its inside and discover peculiar or salient features of CF, WF, and TF.

IV. RESULTS AND DISCUSSION

1. Reflection on Error Trait Categories and Modifications

The original list of feedback traits and error categories designed by ETS (refer to Table 2) were reflected and modified for this study in the following five aspects in order to be used as the criteria for comparing the Criterion feedback and the teacher feedback. First, there were cases in which more than one error category represents the same area of error. This was resolved by merging these categories into one representative error category. For example, ‘Capitalize proper nouns’ and ‘Missing initial capital letter in a sentence’ were combined under the one error category called ‘Capitalization.’ Another merge of error categories was made by combining ‘Missing question mark,’ ‘Missing final punctuation,’ ‘Missing apostrophe,’ ‘Missing comma,’ and ‘Hyphen error’ into the category called ‘Punctuation.’ In the same way, ‘Fused words’ and ‘Compound words’ were combined into ‘Compound words’; ‘Wrong article’ and ‘Missing or extra article’ into ‘Article.’
### TABLE 2

<table>
<thead>
<tr>
<th>Criterion traits and error categories</th>
<th>Modified version of traits and error categories (Acronyms used in this study)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grammar</strong></td>
<td></td>
</tr>
<tr>
<td>Fragment or missing comma*</td>
<td>Fragment (FRAG)</td>
</tr>
<tr>
<td>Run-on sentences</td>
<td>Run-on sentences (RUN)</td>
</tr>
<tr>
<td>Garbled sentences</td>
<td>Garbled sentences (GARB)</td>
</tr>
<tr>
<td>Subject-verb agreement</td>
<td>Subject-verb agreement (SVAGR)</td>
</tr>
<tr>
<td>Ill-formed verbs</td>
<td>Ill-formed verbs (V)</td>
</tr>
<tr>
<td>Pronoun errors</td>
<td>Pronoun errors (PRON)</td>
</tr>
<tr>
<td>Possessive errors</td>
<td>Possessive errors (POSS)</td>
</tr>
<tr>
<td>Wrong or missing word</td>
<td>Wrong or missing word (WW, MW)</td>
</tr>
<tr>
<td>Proofread this!</td>
<td>Proofread this! (PROOF)</td>
</tr>
<tr>
<td><strong>Usage</strong></td>
<td></td>
</tr>
<tr>
<td>Wrong article*</td>
<td>Article (ART)</td>
</tr>
<tr>
<td>Missing or extra article*</td>
<td>Confused words (CONFW)</td>
</tr>
<tr>
<td>Confused words</td>
<td>Wrong form of word (WF)</td>
</tr>
<tr>
<td>Faulty comparisons</td>
<td>Faulty comparisons (COMP)</td>
</tr>
<tr>
<td>Preposition error</td>
<td>Preposition error (PREP)</td>
</tr>
<tr>
<td>Nonstandard verb or word form*</td>
<td></td>
</tr>
<tr>
<td><strong>Mechanics</strong></td>
<td></td>
</tr>
<tr>
<td>Spelling</td>
<td>Capitalization (CAP)</td>
</tr>
<tr>
<td>Capitalize proper nouns*</td>
<td></td>
</tr>
<tr>
<td>Missing initial capital letter in a sentence*</td>
<td></td>
</tr>
<tr>
<td>Missing question mark*</td>
<td>Punctuation (PUNC)</td>
</tr>
<tr>
<td>Missing final punctuation*</td>
<td></td>
</tr>
<tr>
<td>Missing apostrophe*</td>
<td></td>
</tr>
<tr>
<td>Missing comma*</td>
<td></td>
</tr>
<tr>
<td>Hyphen error*</td>
<td></td>
</tr>
<tr>
<td>Fused words*</td>
<td>Compound words (CW)</td>
</tr>
<tr>
<td>Compound words</td>
<td>Duplicates (DUP)</td>
</tr>
<tr>
<td>Duplicates</td>
<td></td>
</tr>
<tr>
<td><strong>New error categories</strong></td>
<td></td>
</tr>
<tr>
<td>Noun agreement (N)</td>
<td></td>
</tr>
<tr>
<td>Sentence construction (CONST)</td>
<td></td>
</tr>
</tbody>
</table>

Note. Asterisks (*) were inserted at the end of Criterion's error categories where any form of change or removal has been made to create the new version of feedback traits and error categories.

Second, the error category, 'Fragment or missing comma' contained two different areas of errors because fragment does not have any relationship with missing comma. Separate comments on these two appeared to be reasonable. Thus, when this feedback, 'Fragment or missing comma,' was provided for fragment, it was newly tagged as 'Fragment.' And when it was regarding comma use, it was tagged as 'Punctuation.'

Third, the error category, 'Nonstandard verb or word form' was deleted from the original list of error categories because it could be categorized under the existing categories, either 'Ill-formed verbs' or 'Wrong form of word.' Another error category,
Inappropriate words or phrases' was also removed from the list. Under these removed two categories, no single feedback was provided, giving a reflection that they might be inactive. In addition, the last error category, 'Other' was off the list because it did not designate any specific area of error and also because there was no single feedback offered under the 'Other'.

Fourth, the 'Usage' trait was not truly different from the 'Grammar' trait since the 'Usage' trait subcategories could belong to 'Grammar.' For example, items such as 'Articles' or 'Preposition error' were in relation to grammar aspects. The rationale of dividing these two traits was called into question. Therefore, the 'Usage' trait error categories were moved and combined into the 'Grammar' trait, comprising one trait of 'Grammar' instead of the separate two.

Fifth, when the instructor gave feedback on students' writings, there were cases in which it was impossible to assign an error with one of the error categories due to the absence of proper error categories. It was inevitable to create and add new error categories for those errors. On top of that, students' writings contained those kinds of erroneous phenomena frequently. The added error categories included 'Noun agreement' and 'Sentence construction.' Accordingly, the list of error categories for the teacher feedback had two more than that of the Criterion feedback, and the two newly added error categories for the teacher feedback are briefly defined in the following Table 3. Further detailed discussion about 'Noun agreement' and 'Sentence construction' will be addressed in a later section of the teacher feedback.

**TABLE 3**
Definitions and Examples of New Error Categories

<table>
<thead>
<tr>
<th>New error categories</th>
<th>Definitions</th>
<th>Student writing samples (Errors are underlined)</th>
</tr>
</thead>
</table>
| Noun agreement (N)   | Error on the agreement of a noun in number with an adjacent adjective or a formulaic number-related phrase | • An obsessive pursuit of educational achievement is one of the driving force behind the low earning rate. (B2)  
• There are so many kind of group in university; bands, study clubs, photo clubs, sport clubs, etc. (B37) |
| Sentence construction (CONST) | Error on constructing a sentence structure due to the following aspects: (a) a lack of grammatical knowledge about basic sentence structures  
(b) illogic subject-verb relationships  
(c) awkward or incorrect meaning construction  
(d) the misuse of fixed expressions | • It drives you grown up steeply and your thinking would be developed well. (B7)  
• Moreover, many people having a part time job that accumulate society experiences. (C12)  
• To be a veterinarian, I have a high English level and university grades. (B15)  
• A second time, I will have many experience in company. (D19) |
Some of the error categories, such as ‘Garbled sentences,’ ‘Proofread this!,’ ‘Fused words,’ ‘Duplicates,’ and ‘Confused words,’ were not clear enough to anticipate what each category means. For clear understanding, their meanings are clarified with the real examples of the Criterion feedback provided, as seen from Table 4. Those error categories will be investigated in detail in a later section of the Criterion feedback.

**TABLE 4**

**Meanings of Error Categories**

<table>
<thead>
<tr>
<th>Error categories</th>
<th>Criterion feedback</th>
<th>Student writing samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garbled sentences</td>
<td>- This sentence is confusing because it contains several grammatical or spelling errors.</td>
<td>• The purpose of university is that provide student with many knowledge, new experience not to be expedient preparing a career. (B2)</td>
</tr>
<tr>
<td>Proofread this!</td>
<td>- This part of the sentence contains an error or misspelled word that makes it hard to understand what you mean.</td>
<td>• I think people attend a university for get new experiences. (B13)</td>
</tr>
<tr>
<td>Fused words</td>
<td>- This word is not a compound word. Write it as two words.</td>
<td>• It's a great job for me, but I have to prepare somethings. (C44)</td>
</tr>
<tr>
<td>Duplicates</td>
<td>- You have typed two identical words in a row.</td>
<td>• First, my grade point average will be a a high point. (C33)</td>
</tr>
<tr>
<td></td>
<td>- You have typed two helping verbs in a row. You may need to take out one of them.</td>
<td>• First of all, to do accomplished my career, I will must improve my English. (D21)</td>
</tr>
<tr>
<td>Confused words</td>
<td>- You have used <em>choice</em> in this sentence. You may need to use <em>choose</em> instead.</td>
<td>• In university, many people can choice their class that they want to study. (B4)</td>
</tr>
<tr>
<td></td>
<td>- You have used <em>a</em> in this sentence. You may need to use <em>an</em> instead.</td>
<td>• I think there is no hierarchy in careers, but I think if I get a upper career, I will be likely to live my life more spontaneously. (A3)</td>
</tr>
</tbody>
</table>

2. Criterion Feedback (CF)

It is well known that error analysis itself contains an error because it failed to explain learners' avoidance strategy (Schachter, 1974). That is, when learners feel difficulty with using a certain language aspect, for example of constructing an adjective clause, they could avoid using the adjective clause and instead find another way to express the same idea that they can manage. Drawn from error analysis, an assumption can be made that the learner knows that language aspect, which was avoided in reality, due to no or little errors made on that aspect.

However, it was considered as a beneficial examination to explore which error category English language learners would feel most or least difficult when they compose an essay in
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English. Learners require negative evidence (i.e., information about which word or strings of words are not grammatical sentences) to eliminate their ungrammatical parts, and that such analysis could provide insights into which error category they demand more attention and feedback in order to prevent them from making the identical grammatical errors next time.

Displayed in Table 5, the analysis of CF revealed that the students made the most frequent errors on articles (49.8%). The next frequent error categories between 5 to 10% were spelling (9.9%), fragment (8%), subject-verb agreement (7.1%), and confused words (5%). Between 1 to 4.9%, errors were made on verb (4.1%), preposition (4%), punctuation (2.7%), capitalization (2.4%), run-on sentence (2.3%), and proofread this (1.6%). Other error categories from garbled sentence to comparison had less than 1% of error frequency.

 Unexpectedly, there was no feedback provided on the wrong word, missing word (WW, MW) error category. Interpretation on such no appearance of feedback on WW, MW could be two aspects: students made no errors of WW, MW, or this error category did not work well and seemed like inactive.

<table>
<thead>
<tr>
<th>Error categories</th>
<th>n</th>
<th>%</th>
<th>Error categories</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART</td>
<td>619</td>
<td>49.8</td>
<td>PROOF</td>
<td>20</td>
<td>1.6</td>
</tr>
<tr>
<td>SP</td>
<td>123</td>
<td>9.9</td>
<td>GARB</td>
<td>11</td>
<td>0.9</td>
</tr>
<tr>
<td>FRAG</td>
<td>100</td>
<td>8.0</td>
<td>CW</td>
<td>10</td>
<td>0.8</td>
</tr>
<tr>
<td>SVAGR</td>
<td>88</td>
<td>7.1</td>
<td>POSS</td>
<td>6</td>
<td>0.5</td>
</tr>
<tr>
<td>CONFW</td>
<td>62</td>
<td>5.0</td>
<td>WF</td>
<td>4</td>
<td>0.3</td>
</tr>
<tr>
<td>V</td>
<td>51</td>
<td>4.1</td>
<td>DUP</td>
<td>3</td>
<td>0.2</td>
</tr>
<tr>
<td>PREP</td>
<td>50</td>
<td>4.0</td>
<td>PRON</td>
<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td>PUNC</td>
<td>34</td>
<td>2.7</td>
<td>COMP</td>
<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td>CAP</td>
<td>30</td>
<td>2.4</td>
<td>WW, MW</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>RUN</td>
<td>29</td>
<td>2.3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Total n=1244; Total %=100

However, the exclusive reliance on the examination of CF would not yield correct interpretation; it is because CF not only contains wrong feedback also provides no feedback when needed. Thus, the discussion of this frequency result would be complemented with other results from error-excluded CF and Teacher Feedback (TF) to be addressed in a later section. Next, reflections on error categories of CF that raised doubts about whether they are necessary in the list of error categories, such as CONFW, PROOF, and GARB, will be folded.
1) Reflection on Confused Words (CONFW)

The necessity of this error category was in doubt because the errors belonged to CONFW could be moved to other, more suitable, categories. Among 62 CONFW errors, its majority was about the article problem with using between a and an forms, which could be reorganized to the ART category.

The student writing sample and CF provided related to the article problem are as follows. Errors are underlined, and the combination of an alphabet and a number (e.g., A1) at the end of each sentence sample denotes the ID number assigned to each student’s essay. All of the errors in writing samples are left and untouched as they are. This is true for the rest of writing samples throughout this article.

I think there is no hierarchy in careers, but I think if I get a upper career, I will be likely to live my life more spontaneously. (A3)
[CF: You have used a in this sentence. You may need to use an instead.]

Along with article-related errors, another main sort of errors belonged to CONFW was about word form, which could be again shifted to the existing category, WF. Student writing examples and CF provided are as follows:

To achieve this, I should study biology, chemistry, language, physics, and English all the time not to lose my sense toward these. (A3)
[CF: You have used loose in this sentence. You may need to use lose instead.]

In university, many people can choose their class that they want to study. (B4)
[CF: You have used choice in this sentence. You may need to use choose instead.]

Some CF in this category was wrong feedback, about which student writing samples and CF provided are as follows:

First, I will be a CEO who build the greatest in the world land mark building. (B27)
[CF/WF: You have used build in this sentence. You may need to use built instead.]

The teach will be a second parent who lead the student bright side. (D12)
[CF/WF: You have used lead in this sentence. You may need to use led instead.]

2) Reflection on Proofread This! (PROOF)

It was called into question whether this category PROOF deserves to be included as an
element of error categories. Among the total 20 errors belonged to PROOF, most of them could be reallocated to other more proper error categories rather than just saying ‘Proofread this!’ to students. Or if a certain sentence has too many errors to give comment, this kind of error was able to be named as GARB instead. Related are the following student writing samples, and the alternative category to be designated is mentioned at the end of each writing sample.

I think people attend a university for get new experiences. (B13) [→ PREP]

I thing that it deserves to challenge at young age. (B21) [→ WW]

When I high school student, my dream was teacher of science. (B24) [→ MW]

In my opinion, there are two advantages that are generated by attend a university. (B32) [→ WF]

I will have an interest in write, but if I have a prize while a student, I will go writer way. (D23) [→ WF]

For all the errors in the PROOF category, offered was the exact same CF: “This part of the sentence contains an error or misspelled word that makes it hard to understand what you mean.” However, the sentences from PROOF, as you can see from the examples earlier, were not that hard to understand the meaning of the sentences just as expressed in the CF provided. If the sentences coming before and after the problematic sentence were taken into account, it did not look like having errors that make it hard to understand its meaning. We could easily expect the writer’s intended meaning through the sentence with errors in it. If that simple meaning that these sentences were trying to say was grabbed, more appropriate feedback or categorization could have been made, instead of the supply of the same single feedback to all sentences containing a wide range of errors.

3) Reflection on Garbled Sentences (GARB)

The total 11 sentences were in the GARB error category. The whole part of each sentence was highlighted and provided with the same CF: “This sentence is confusing because it contains several grammatical or spelling errors.” Although CF says ‘confusing,’ one error was not that confusing enough to be in this GARB category, for example of B9.

There are many club in university. (B9)
Although some errors could have been simply corrected, most of the error sentences from the GARB category contained unclear meanings, so it was difficult to comprehend the writers’ intended meanings and provide adequate feedback. Possible correction is added to the parts which could have had feedback, and other parts with mysterious meanings are noted as a question mark inside a bracket ([ ]). Related student writing examples are as follows.

The purpose of university is that [→ to] provide student with many [→ much] knowledge, new experience not to be expedient preparing a career [?]. (B2)

But, not only business man from university but also people that didn’t attend university [?] can work to [→ delete to] hard and well. (B36)

Generally speaking, Attending [→ attending] university is [→ insert a] chance so [→ delete so] that you can [→ insert have] new experiences. (D1)

To be successful in [→ insert the] future, we should active progressivly for university [?]. (D3)

The biggest obstacle to be teacher is exam to be teacher [?]. (D13)

3. Wrong Feedback (WF)

1) The Rate of WF

Among the total number of CF provided to all students’ writings (1244), the number of WF was 174, from which the rate of WF or 14.0% was calculated.

$$\frac{174 \text{ (Total number of WF)}}{1244 \text{ (Total number of CF)}} \times 100 = 14.0\%$$

2) The Rate of WF per Each Student’s Writing

Also examined was the rate of WF per individual student’s writing. The total numbers of CF and WF per each student’s writing product were measured to produce the rate of WF per each student’s writing. Next, belonging to the WF rate range at a 5% interval from 0 to 70%, the number and the percent of student writings out of the total 129 were calculated, as Table 6 displays.
TABLE 6
Frequency and Percent of Students' Writings Belonging to the Rate Range of WF

<table>
<thead>
<tr>
<th>Rate of WF</th>
<th>Number of students' writings</th>
<th>Percent of students' writings</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>61</td>
<td>47.3</td>
</tr>
<tr>
<td>1~5%</td>
<td>1</td>
<td>0.0 (0.01)</td>
</tr>
<tr>
<td>6~10%</td>
<td>11</td>
<td>8.5</td>
</tr>
<tr>
<td>11~15%</td>
<td>15</td>
<td>11.6</td>
</tr>
<tr>
<td>16~20%</td>
<td>8</td>
<td>6.2</td>
</tr>
<tr>
<td>21~25%</td>
<td>15</td>
<td>11.6</td>
</tr>
<tr>
<td>26~30%</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>31~35%</td>
<td>5</td>
<td>3.9</td>
</tr>
<tr>
<td>36~40%</td>
<td>4</td>
<td>3.1</td>
</tr>
<tr>
<td>41~45%</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>46~50%</td>
<td>4</td>
<td>3.1</td>
</tr>
<tr>
<td>61~65%</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>66~70%</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Total</td>
<td>129</td>
<td>99.3</td>
</tr>
</tbody>
</table>

Note. The total percent of students’ writings is not equal to 100 due to rounding.

47.3% or 61 students’ writings received error-free feedback from Criterion (0% of WF). However, it does not necessarily mean that CF for them is flawless because we also need to take into account TF or missed feedback that Criterion did not provide. Considering the results of TF altogether, only two student writing samples (B1, C4) out of the total 129 received perfect CF and no TF (i.e., no missed feedback by Criterion) at the same time.

The second most frequent rate ranges of WF were 11~15% and 21~25%, which were both associated with 11.6% of students’ writings; the next most frequent rate ranges of WF were 6~10% and 16~20%. To sum up the percents of the students’ writings devoted to the second to fifth ranked rate range of WF, it can be roughly stated that about 37.9% of students’ writings received 6 to 25% WF out of CF. The rest of the WF rate range above 26% was spread out up to 70%, which accounted for 14.1% of the total students’ writings.

3) Four Types of WF

The nature of wrong feedback was analyzed and divided into four types: (1) Correct indication of wrongness and error category but wrong comment, (2) incorrect indication of wrongness on correct parts in place of adjacent parts which need feedback, (3) wrong feedback with the indication of wrong error category, and (4) incorrect indication of wrongness on correct parts. Detailed explanation of each type of Criterion’s WF and relevant students’ writing samples are folded.
(1) Correct Indication of Wrongness and Error Category but Wrong Comment

Criterion correctly recognized wrong parts with correct assignment of error category but provided wrong comment.

I will be a CEO who build the greatest in the world land mark building. (B27)
[CF: (CONFW) You have used build in this sentence. You may need to use built instead.]

I should make effort to my career goals from now onward. (C43)
[CF: (ART) You may need to use an article before this word. Consider using the article a.]

(2) Incorrect Indication of Wrongness on Correct Parts in Place of Adjacent Parts Which Need Feedback

Criterion incorrectly designated correct parts as wrong. Underlined parts that CF was provided are correct in fact. Instead, feedback was needed to the parts adjacent to the underlined words. For example, instead of correcting many in B33 and each in C11, the adjacent parts, parent and people, respectively require feedback to agree with many and each.

Many parent want that their son and daughter study in university. (B33)
[CF: (ART) You may have used the wrong article or pronoun.]

Each people has different aptitude. (C11)
[CF: (ART) You may have used the wrong article or pronoun.]

(3) Wrong Feedback with the Indication of Wrong Error Category

Criterion correctly recognized wrong parts, but it gave a wrong error category and wrong comment.

As I listen and analyze lots of music, I criticize and vary music. (B26)
[CF: (RUN) This sentence may be a run-on sentence. You may need to add a linking word, add punctuation, or make two separate sentences.]

People looked like go to university for there social life, after graduate university. (B37)
[CF: (ART) You may need to use an article before this word.]
Corrective Feedback that an Automatic Writing Evaluation System Can and Cannot Provide

What is worse, my friends said I’m a stingy. (C44)
[CF: (PUNC) Remember to use a question mark at the end of a sentence that is a question.]

(4) Incorrect Indication of Wrongness on Correct Parts

The fourth type of WF was that Criterion considered erroneously correct parts as incorrect and provided incorrect feedback in various aspects. The following list demonstrates students’ writing samples related to this type of WF. The underlined parts in these samples were all grammatical in themselves; nevertheless, CF gave unnecessary feedback. Prior to each sample, an explanation of which language aspect Criterion were not able to recognize will be preceded and written in a bullet form.

• Fail to recognize a gerund
  Most people in Korea think that attending university is necessary. (A5)
  [CF: (ART) You may need to use an article before this word.]

• Fail to recognize the ‘one of + a plural noun’ sentence structure
  A wave is one of physical theory, so I should understand Physics to become a music engineer. (B26)
  [CF: (ART) You may have used the wrong article or pronoun. Reread the sentence to make sure that the article or pronoun agrees with the word it describes.]

• Fail to apply an exceptional rule of an article
  I have a first exam in April and a second exam in August next year. (B16)
  [CF: (ART) You may need to use an article before this word. Consider using the article the.]

• Fail to recognize the sentence structure for causative verbs such as make
  I heard that a poor language skill makes the company lose chances to make profits and beat rival companies. (B28)
  [CF: (CONF) You have used lose in this sentence. You may need to use loose instead.]

• Fail to recognize a fragment
  Second, I study English. (C32)
  [CF: (FRAG) This sentence may be a fragment or may have incorrect punctuation. Read the sentence again to make sure that it has correct punctuation and that it has an independent clause with a subject and a verb.]

• Fail to recognize correct use of a preposition about
  I think I need to read any book about information system. (C26)
  [CF: (PREP) You may be using the wrong preposition.]
• Fail to recognize a run-on sentence
That is, I would like to write science journals. (C21)
[CF: (RUN) This sentence may be a run-on sentence. You may need to add a
linking word, add punctuation, or make two separated sentences.]

• Fail to recognize foreign proper nouns
For instance, Samsung's managers are having a university diploma. (B35)
[CF: (SP) This word is not spelled correctly. Use a dictionary or spellchecker
when you proofread your work.]

• Fail to recognize words in a contraction form
But most of them don't think about reason for attending universities. (B7)
[CF: (SP) This word is not spelled correctly. Use a dictionary or spellchecker
when you proofread your work.]

4. Teacher Feedback (TF)

TF is the feedback that teacher provided for the parts that Criterion did not provide. In
other words, TF can be considered as Criterion's missed feedback. Table 7 describes the
calculated frequency and percent of TF provided for each error category.

<table>
<thead>
<tr>
<th>Error categories</th>
<th>n</th>
<th>%</th>
<th>Error categories</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART</td>
<td>209</td>
<td>15.6</td>
<td>SP</td>
<td>27</td>
<td>2.0</td>
</tr>
<tr>
<td>PREP</td>
<td>189</td>
<td>14.1</td>
<td>FRAG</td>
<td>23</td>
<td>1.7</td>
</tr>
<tr>
<td>WW, MW</td>
<td>170</td>
<td>12.7</td>
<td>RUN</td>
<td>9</td>
<td>0.7</td>
</tr>
<tr>
<td>*CONST</td>
<td>157</td>
<td>11.8</td>
<td>PRON</td>
<td>8</td>
<td>0.6</td>
</tr>
<tr>
<td>V</td>
<td>148</td>
<td>11.1</td>
<td>POSS</td>
<td>5</td>
<td>0.4</td>
</tr>
<tr>
<td>*N</td>
<td>107</td>
<td>8.0</td>
<td>COMP</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td>WF</td>
<td>96</td>
<td>7.2</td>
<td>PROOF</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PUNC</td>
<td>64</td>
<td>4.8</td>
<td>CONFW</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>GARB</td>
<td>52</td>
<td>3.9</td>
<td>DUP</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CAP</td>
<td>41</td>
<td>3.1</td>
<td>CW</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SVAGR</td>
<td>29</td>
<td>2.2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. (a) Asterisks (*) denote the error categories added to those of CF. Also see Table 3. (b) Total
n=1336; Total %=100.

As seen from Table 7, the total number of TF provided was 1336. Compared with that of
CF or 1244, the almost same amount of feedback was missed by Criterion. The most
frequent TF was offered on articles (15.6%), followed by preposition (14.1%), wrong word,
missing word (12.7%), sentence construction (11.8%), verb (11.1%), noun (8%), and word
form (7.2%). Between 2 and 5%, errors were made on punctuation (4.8%), garbled
sentence (3.9%), capitalization (3.1%), subject-verb agreement (2.2%), and spelling (2%).
Other error categories from fragment to compound words had less than 2% of error frequency. There was no need to use PROOF and CONFW in a sense that errors were able to be assigned to other specific categories.

In particular, Criterion provided no feedback regarding wrong word, missing word, but teachers offered the third most frequent feedback on this error category. This finding could confirm the previous assumption that the WW, MW category from CF was not successfully working at all. The writing samples and TF regarding WW, MW are as follows:

Therefore I compete other student and prepare many things: GPA, English skills, many objects [WW: subjects] such as Biology, Chemistry, Organic Chemistry, Physics, Korean, etc. (B14)

Biology is filled in pharmacy. I’m [WW: It’s] hard to study because it is difficult to me. (B22)

I will write about career goal and how [MW: I] can achieve my goal. (C23)

1) Sentence Construction (CONST)

Students’ frequent error occurrence reflects where they feel huge difficulty in English writing, and one difficult area seemed to construct a sentence that demands particular linguistic knowledge or logic of ideas expressed. Providing feedback on this error category, CONST, is not easy in fact, but students desperately needed this type of sentence-level feedback, given that they made sentence-level errors like CONST very frequently. Largely, their problems with composing sentences were divided into four broad aspects: (a) a lack of grammatical knowledge about basic sentence structures, (b) illogic subject-verb relationship, (c) awkward or incorrect meaning construction deviated from the writer’s intended meaning, and (d) the misuse of formulaic expression. The following list enumerates these four aspects of problems in detail. Some of the examples related to CONST are excerpted from students’ writing products. Errors are underlined, and the possible corrections are inserted inside a bracket ([ ]), which is followed by one of the problematic aspects in CONST.

(a) A lack of grammatical knowledge about basic sentence structures
- Questions
- Negative statements
- Infinitives
• Clauses (adjective clauses, noun clauses, wh-question clauses)
• Particular verb-specific sentence structures (causative verbs such as make or have, other verbs followed by a specific form of word or sentence structure such as drive, finish, help, hope, lead, like, need, want, etc.)

Why are [→ do; question] we attend and university? (C3)

... but I am [→ do; negative statement] not completely understand that. (C36)

The reason is [→ insert to here; infinitive] find a job. (F1)

There are many people [→ insert who here; adjective clause] play the guitar very well in the world. (C34)

My plan [→ insert is that here; noun clause] I am willing to work for because I am motivated to pursue it. (A4)

Finally, they made me to go [→ go; causative verb] university. (A5)

It drives you grown [→ to grow; special verb drive] up steeply and your thinking would be developed well. (B7)

(b) Illogic subject-verb relationship (e.g., inanimate objects and action verbs)

Moreover, many people having a part time job that accumulate [→ from which we can accumulate; subject-verb relationship] society experiences. (C12)

(c) Awkward or incorrect meaning construction deviated from the writer’s intended meaning

To be a veterinarian, I have [→ need to have; meaning construction] a high English level and university grades. (B15)

(d) Misuse of formulaic expression

A second time [→ Secondly; formulaic expression], I will have many experience in company. (D19)

2) Noun Agreement (N)

Errors regarding this category appeared frequently in students’ writings. 8% of TF was
about a noun form in number. Certain parts surrounded by a noun can restrict the noun form in number. For example, a certain predetermined chunk of expression, one of the, should be followed by a plural noun (B2). In addition, when a certain determiner that has the meaning of more than one (e.g., lots of, many) modifies a following noun, the noun should be in a plural form (B3, B32). Plus, a subject should be in number agreement with a subjective complement (B24). In spite of students’ frequent mistakes, CF provided no feedback regarding this error category.

An obsessive pursuit of educational achievement is one of the driving force [→ forces] behind the low earning rate. (B2)

Lots of high school student [→ students] have no reason for attending a university in Korea. (B3)

I’m sure that many student [→ students] studying for attending a university and making ones success. (B32)

Money for studying at a America will be serious matters [→ a serious matter]. (B24)

3) Garbled Sentences (GARB)

EFL writers tend to write sentences the meanings of which readers cannot figure out, and this phenomenon would happen probably due to their lack of language ability. Their sentence comes to contain many errors, so it becomes too confusing to comprehend the writer’s intended message. Even for teachers it is very hard, or sometimes impossible, to present proper treatment. Therefore, to correct such parts with unclear meanings expressed, it would be apparent that a non-human or technology cannot read the writer’s mind from the text written and provide proper feedback. Students’ sentence samples related to GARB are excerpted as follows:

In university, we minutely learn my interesting knowledge and deeply out of high school. (B8)

Recently, graduated university is not choosing anymore. (B11)

Many people tell that when you grew up, you will become anyone people. (B14)

Mother and father think they can’t their goal and too danger. (C9)

Coffee is very interesting, because it is difference according made person a taste, perfume, milk steam for cappuccino. (D15)
5. Comparison of CF vs. TF: What Criterion Can vs. Cannot

The frequency of CF and TF provided for each error category can be synthesized and analyzed from a different perspective. As seen from Table 8, it shows (a) the number of CF received for each error category in the CF column, (b) the number of TF (i.e., Criterion’s missed feedback) offered for each error category in the TF column, (c) the number of feedback that students should have received in the CF+TF column, and (d) the number of CF provided insufficiently for each error category in the CF-TF column.

*CF+TF* refers to the number of feedback for each error category that students should have received, and it in turn uncovers on which language features students need feedback and desperate assistance the most to foster the development of their writing skills. They had difficulty dealing with articles, prepositions, wrong word or missing word, sentence construction, spelling, fragment, subject-verb agreement, noun, and word form, if listed from the most difficult to the least.

<table>
<thead>
<tr>
<th>Error categories</th>
<th>CF</th>
<th>TF</th>
<th>CF + TF</th>
<th>CF - TF</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART</td>
<td>619</td>
<td>209</td>
<td>828</td>
<td>410</td>
</tr>
<tr>
<td>PREP</td>
<td>50</td>
<td>189</td>
<td>239</td>
<td>97</td>
</tr>
<tr>
<td>V</td>
<td>51</td>
<td>148</td>
<td>199</td>
<td>-170</td>
</tr>
<tr>
<td>WW, MW</td>
<td>0</td>
<td>170</td>
<td>170</td>
<td>-170</td>
</tr>
<tr>
<td>*CONST</td>
<td>-</td>
<td>157</td>
<td>157</td>
<td>-157</td>
</tr>
<tr>
<td>SP</td>
<td>123</td>
<td>27</td>
<td>150</td>
<td>96</td>
</tr>
<tr>
<td>FRAG</td>
<td>100</td>
<td>23</td>
<td>123</td>
<td>77</td>
</tr>
<tr>
<td>SVAGR</td>
<td>88</td>
<td>29</td>
<td>117</td>
<td>59</td>
</tr>
<tr>
<td>*N</td>
<td>-</td>
<td>107</td>
<td>107</td>
<td>-107</td>
</tr>
<tr>
<td>WF</td>
<td>4</td>
<td>96</td>
<td>100</td>
<td>92</td>
</tr>
<tr>
<td>PUNC</td>
<td>34</td>
<td>64</td>
<td>98</td>
<td>30</td>
</tr>
<tr>
<td>CAP</td>
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<td>41</td>
<td>71</td>
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</tr>
<tr>
<td>GAR</td>
<td>11</td>
<td>52</td>
<td>63</td>
<td>41</td>
</tr>
<tr>
<td>CONFW</td>
<td>62</td>
<td>0</td>
<td>62</td>
<td>62</td>
</tr>
<tr>
<td>RUN</td>
<td>29</td>
<td>9</td>
<td>38</td>
<td>20</td>
</tr>
<tr>
<td>PROOF</td>
<td>20</td>
<td>0</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>POSS</td>
<td>6</td>
<td>5</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>CW</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>PRON</td>
<td>2</td>
<td>8</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>COMP</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>DUP</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

In the last column CF-TF if it has a minus (-) in number, it means that CF was not provided sufficiently, so the number of TF gets bigger than that of CF, making a number a
Corrective Feedback that an Automatic Writing Evaluation System Can and Cannot Provide

minus. The error categories where Criterion failed to provide sufficient feedback comprise *wrong word or missing word, sentence construction, preposition, noun, verb, and word form*, if listed from the most insufficient to the least. On the other hand, the error categories where Criterion offered satisfactory feedback are indicated by the plus numbers in the CF-TF column, which include *article, spelling, fragment, subject-verb agreement*, and *run-on sentence*. For the plus error categories, it appears not to be too difficult to offer feedback. However, the minus error categories look like more tricky ones than the plus ones not only because they are not mechanically done but also because they necessitate understanding of the writer’s intended meaning and suggesting an alternative to an error part.

More critically, the minus error categories (i.e., *wrong word or missing word, sentence construction, preposition, noun, verb, word form*) would play a more crucial role of making sentences have better quality and clearer meaning than the plus error categories. For example, correcting a wrong word to a suitable one or a sentence construction error could contribute to making a well-formed sentence than correcting errors on articles, subject-verb agreement, or spelling. Besides, the minus error categories are the ones that students would need guidance indeed, considering the list of error categories with which students feel difficulty. Unfortunately, Criterion was not served as a sufficient feedback provider, especially for the minus error categories, which are the critical areas to help students develop their English writing ability.

V. CONCLUSION

This study lends itself to sharing a reflection on using the ETS’ Criterion automatic writing evaluation system, which has begun to receive attention from educators and researchers in the field of English education in Asian countries including Korea. It is because Criterion gives off its attraction, and users, especially writing teachers, tend to feel its fascination when they first experience the speed of providing feedback on 40 error categories.

The first impression on this fancy Criterion before actual use, however, has been changed after approximately one year use in a university setting and the detailed analysis through this study. Criterion provides very speedy, automatic feedback for countless writings simultaneously, which is impossible for writing teachers, making it possible to relieve them of an enormous and stressful workload to provide feedback for each student’s writing. On the other hand, the detailed analysis of its inside revealed some drawbacks.

First, some error categories of Criterion were problematic in the following aspects: (a) the absence of proper categories for errors students frequently made, such as *noun*
agreement and sentence construction; (b) error categories in doubt, such as confused words or proofread this!, which can be reassigned into more proper and specific error categories; (c) inactive error category of wrong or missing word, on which teachers offered the third most frequent feedback.

Second, the comparison of the total number of CF (1244) and that of TF (1336) indicated that Criterion missed almost half of the feedback students should have received. Although they admitted the limit of technology, CF could be regarded as insufficient feedback.

Third, Criterion was not played as a sufficient feedback provider for critical error categories (i.e., wrong word or missing word, sentence construction, preposition, noun, verb, word form) on which students need guidance indeed to facilitate their English writing ability. The reason might be that giving feedback on these categories is not simply done by replacement with an alternative form. In particular, sentence-level errors (i.e., sentence construction) that were generated from students’ lack of knowledge about basic sentence structures, subject-verb relationship, and formulaic expression were not treated properly at all.

This study has limitations in several aspects. The findings of the study might not be generalized because the participants were selected not by random sampling from the whole population. What was discussed here may be subjects-specific. If analyzed with different students’ writing samples, it might generate dissimilar results and interpretation. Likewise, if different human raters had provided feedback on students’ writing samples, it might bring in different figures and results regarding TF. Another limitation lies in that the impossibility of tracking negative evidence makes it hard to find truth because learners tend to employ avoidance strategy when they feel difficulty with a certain language aspect or function. In that sense, the results of this study may contain faulty results and interpretation. The last limitation would be that different raters of writing could yield varying

In conclusion, the Criterion service appears to be well served as a diagnosis system to diagnose users’ writing proficiency within a very short period of time and used effectively as an alternative to diagnostic or placement writing test. However, it was in doubt if it can be played as a teaching/learning tool to provide feedback that EFL writers need indeed to facilitate their writing ability. Computer automatic feedback systems should be improved enough to resolve weaknesses addressed in this study and provide beneficial feedback to help ELLs improve their writing skills at both sentence and discourse levels.

Thus, it is imperative to consider first before use what the purpose of using Criterion is. More critically, educators and researchers in the field of English education should be well aware of on which language aspects and features EFL writers necessitate feedback to facilitate their writing development, unlike from L1 writers. Teacher’s hands could not be
absolutely replaced by an even state-of-the-art technology.

REFERENCES


APPENDIX

A Sample of the Trait Feedback Analysis Report

Career Goals

Submitted: December 03, 2009, 04:12:36 PM KST

Score: 4 out of 6

Question:

All students are faced with the decision of what to do after graduation. Think about the career goals you have beyond graduation. Write an essay about what your career goals are, what you will do to reach your career goals, and how you will achieve your goals, being as specific as possible in describing the obstacles and challenges you might face on the road to success.

Category: Grammar

Type: Fragment or Missing Comma
Essay:
I will write about what my career goals are, what I will do to reach my career goals, and describing the obstacles and challenges I might face on the road to success in this essay.

First, I will be a CEO who build the greatest in the world landmark building. When you travel aboard, you will see the structure first. Maybe you see a specific structure first, so it is important to build big and specific structure for advertising country or company. Nevertheless big and specific structure use huge energy. The energy make with fossil fuel; as a result environment of Earth polluted with carbon dioxide. I want to use clean energy for our circumstance. I will use the solar energy, the heat of earth and velocity of the wind. As a result clean building use no fossil fuel, and make more electric energy to sell another place.

Second, in order to reach my goals, I will study foreign language. I will study English and Chinese. I will be expert in conversation with foreigner. Because I will work with international people, and sometimes I am going to work abroad. Also I study hard about alternative energy technology and architectural engineering. I will be specialist in clean energy building.

Third, sometimes I face on difficult obstacles and challenges. To reach my dream I face on many hard and difficult situation, but I never give up my goal. Sometimes when I am lazy, I will think about my ten years later successful figure. When I am afflicted at my failure or difficult problem, I will keep going. I will study and get ready, and perhaps my chance will come.

Fragment or Missing Comma:
1. This sentence may be a fragment or may have incorrect punctuation. Read the sentence again to make sure that it has correct punctuation and that it has an independent clause with a subject and a verb.

Category: Grammar
Type: Subject-Verb Agreement

Essay:
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Subject-Verb Agreement:
1. The subject and the verb in this sentence may not agree. Reread the sentence and look closely at the subject and the verb.

Category: Usage
Type: Missing or Extra Article
Essay:
I will write about what my career goals are, what I will do to reach my career goals, and describing the obstacles and challenges I might face on the road to success in this essay.

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Missing or Extra Article:
1. You may need to use an article before this word. Consider using the article a.
2. You may need to use an article before this word.
3. You may not need to use an article here.

Category: Usage
Type: Confused Words
Essay:
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Confused Words:
1. You have used build in this sentence. You may need to use built instead.

Category: Mechanics
Type: Missing Comma

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Missing Comma:
1. You may need to use a comma after this word.

Category: Mechanics
Type: Compound Words

Essay:
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**Compound Words:**

1. These two words belong together. Write them as one compound word.

**Category:** Style

**Type:** Repetition of Words

**Essay:**

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**Repetition of Words:**

1. You have used these words several times in your essay. You will improve your essay by using some different words. Ask your instructor for advice.

Applicable levels: secondary education, higher education

Key words: criterion, writing feedback, error category, English as a Foreign Language (EFL)

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