Applying Toulmin: Does Peer Response Play a Role in Korean EFL College Students’ Revision Quality?

Myung-Hye Huh
(Korea University)
Inhwan Lee
(Korea University)


The skill of argumentation is problematic for EFL students who are linguistically and rhetorically deficient in expressing academically appropriate forms in English. In fact, many EFL students struggle to write highly elaborate arguments. In this study, we investigated whether EFL students’ skills for argumentation improved after receiving peer feedback. We also investigated which elements of argumentation were related to the quality of argumentative writing. To this end, we used the Toulmin model of argumentation. We collected 34 EFL students’ first drafts and revisions as well as reviewers’ written feedback, and analyzed their drafts and revisions with a range of quantitative and qualitative approaches. We found that peer feedback had a positive effect upon overall writing quality. Peer feedback made meaningful contributions to the development of students’ argumentative strategies they employ. It seems apparent that peer response prompted the students to reflect on whether the logic of their argumentation made sense to the readers.

**Key words:** EFL writing, argumentative writing, peer feedback, Toulmin element

1. **INTRODUCTION**

The skill of argumentation has long been acknowledged as an integral component of academic writing. Especially at the college level, there is a great demand for argumentative writing (Cooper et al., 1984; McCann, 2010; Németh & Kormos, 2001; Rex, Thomas, & Engel, 2010; Varghese & Abraham, 1998). Argument is at the heart of
academic discourse, the kind of writing students need to know for success in college. Notably, argumentative writing is a difficult mode of discourse for students. It is particularly problematic for students of English as a Foreign Language (EFL), who are linguistically and rhetorically deficient in expressing academically appropriate forms in English. In fact, many EFL students struggle to write highly elaborate arguments.

The Toulmin model of argumentation has been used extensively in accounting for the various elements marking the progress of an argument in English argumentative writing (Connor, 1990; Crammond, 1998; Hillocks, 2010; Knudson, 1992; McCann, 1989). Indeed, the Toulmin model has been used as a heuristic tool to teach the logic of English argumentation and to identify and generate well-established arguments for students (Lunsford, 2002; Varghese & Abraham, 1998). It has proven to be an effective teaching tool because it provides a comprehensive yet straightforward concept of the structure of arguments (Warren, 2010). Considering the development of argumentative writing skills, EFL writing teachers can apply Toulmin to teach logical reasoning and argumentative writing (Rex et al., 2010).

Although EFL students likely take teacher feedback more seriously than peer responses (Connor & Asenavage, 1994; Zhang, 1995), we teachers may turn to the students in the class to assist in the feedback process. Indeed, as part of the process approach to teaching writing, peer response (or peer feedback) is an increasingly common practice in EFL contexts. The notion of peers giving each other feedback tends to generate interest and excitement among teachers and students. Other students in the class provide valuable feedback in the form of peer response, which serves to build the critical skills in analyzing peers’ writing and also to increase the ability to analyze their own writing. While various potential benefits of peer response are certainly compelling in and of itself, research evidence is conflicting about the effects of peer response on revision (see Ferris, 2003). Moreover, few studies have observed whether peer feedback is helpful for EFL students’ argumentation to advocate their viewpoint on a given issue while writing the argumentative writing.

Accordingly, we decided to investigate whether EFL college students’ argumentation improved after receiving peer feedback. Further, we investigated which elements of argumentation were related to the quality of argumentative writing. To this end, we used the Toulmin model of argumentation, proposed by the British philosopher Toulmin (1958, 2003), because incorporating the Toulmin elements successfully is a key factor for high-quality argumentative writing, as we will see in the next section. We collected 34 EFL students’ first drafts and revisions as well as peers’ written feedback, and analyzed their drafts and revisions with a range of quantitative and qualitative approaches.
2. LITERATURE REVIEW

2.1. The Toulmin Model and Toulminian Studies in L2 Contexts

The first systematic study of the organization of argumentation was carried out by Toulmin (1958). Toulmin’s argument model is a type of textual dissection that allows us to break an argument into its different parts so that we can make judgments on how well the different parts work together. Toulmin asserts that most arguments typically consist of three main elements: claim, data and warrants. Toulmin further claims that there may be some second-level elements such as qualifiers, backing, and rebuttal in an extended argument structure (Toulmin, Rieke, & Janik, 1979, 1984). The Toulmin model asserts that a typical argument explicitly states at least some, though not necessarily all, of the elements (Lunsford, 2002; Warren, 2010).

In the Toulmin model, arguments begin with a claim supported by data. Claim refers to the position or assertion being argued for, and data is the reason or supporting evidence used to prove the argument. More often, especially in serious arguments, our readers will want explanations of why the data we produce support the claims we make and are trying to demonstrate. This is the function of the warrant. A warrant is the principle or the general, logical statement that serves as a bridge between the claim and the data.

As an example, Warren (2010) claims that “[t]eachers should make higher salaries” based on the data, and that “[t]eachers are as well-trained and hard-working as other, higher-paid professionals.” If at the point the audience is satisfied with our reasoning, then we need not address the assumption that justifies our leap from data to claim. But if our audience does ask for our justifying assumption, then we must bring forth “general, hypothetical statements, which can act as bridges, and authori[z]e the sort of step to which our particular argument commits us” (p. 91). These bridges are what Toulmin calls warrants. Emphasizing the job of the warrants, Crammond (1998) says:

The presence of warrants [. . . ] can be seen as evidence of the author’s engaging in a type of audience-centered activity that involves recognizing the need to explain or justify the link made between the data and claim. More than this, however, the inclusion of warrants is understood to be a powerful rhetorical strategy; it involves establishing mutually agreed upon premises, beliefs, and feelings, or a shared context with the audience [. . . ] (p. 250).

Additional Toulmin elements (namely, qualifier, rebuttals, and backing) were also identified as parts of well-developed argumentation. The argument sketched out above,
for example, relies on the following warrant: “Professionals who are similarly trained and hardworking should receive similar salaries” (Warren, 2010, p. 42). If this value is shared by the readers of the argument, then the warrant is likely to be perceived as being reliable. If, on the other hand, the warrant is unshared, the writer has to provide further backing for it (in the form of data, expert testimony, rules, laws, agreed-on common sense, scientific findings, etc.) in order to make the warrant reliable (Varghese & Abraham, 1998). Backing is a statement that serves to justify or support the warrants.

Words that limit the force of a statement are called qualifiers (e.g., “Nearly all teachers should make higher salaries”). The qualifier indicates how strong a warrant entitles the claim to be. Qualifiers include words such as “most,” “usually,” “necessarily,” “probably,” or “presumably” (Toulmin, 1958, pp. 100-101). Despite the careful construction of the argument, there may still be a rebuttal. For example, when teachers are incompetent, one could argue, they do not deserve higher salaries.

Obviously, as Rex and colleagues (2010) note, Toulmin’s approach to conceptualizing argumentation was appealing to us because “the process of setting out a logical series of ideas . . . appear[s] persuasive to readers” (p. 57). They firmly tell us that “[e]ach discipline (e.g., law, philosophy, or English language arts) may have its unique definition of argument with different specific requirements, but it is possible to view all effective arguments in all disciplines according to the basics of Toulmin’s model” (ibid.).

Although the Toulmin model of argument structure has been widely used in teaching and researching argumentative writing (e.g., Crammond, 1998; Ferretti, MacArthur, & Dowdy, 2000; McCann, 1989; Nussbaum & Kardash, 2005; Page-Voth & Graham, 1999; Varghese & Abraham, 1998; Yeh, 1998), most research has focused on its frequency or the qualities of Toulmin elements within English among first language learners (e.g., Crammond, 1998; McCann, 1989). Recent studies have expanded beyond this context, examining its use for English as a second or foreign language learners.

The work of Ferris (1994) analyzed 60 persuasive texts by university freshman composition students, half of whom were native speakers and half of whom were non-native speakers of English for 33 quantitative, topical structure, and rhetorical variables. The results showed clear differences between the essays of native and non-native speakers. It was found that the native speakers wrote longer essays, attained higher Toulmin scores, and more frequently included counterarguments in their writing than their non-native English speaker counterparts.

In another study, Varghese and Abraham (1998) examined the effectiveness of instruction in argumentation at a university in Singapore. Varghese and Abraham offered explicit instruction on the Toulmin argument model to English-major undergraduates. Students performed a pre-instruction writing task, underwent eight weeks of explicit instruction in argumentation, and then performed the task again. The researchers found...
that students made concrete progress after instruction, producing more explicit claims, more specific and developed data, and more reliable warrants.

In a study of EFL college students, Qin and Karabacak (2010) analyzed Chinese EFL university argumentative writing based on an adapted Toulmin model of argument structure. After coding each student’s argumentative writing based on claim, data, counterargument claim, counterargument data, rebuttal claim and rebuttal data, they found that the Chinese students mainly included claim and data in their argumentative writing and that claim and data were not correlated with the overall writing quality. On the other hand, a few students who did incorporate counterargument and rebuttal elements scored higher, which indicates that presenting and refuting the opposing positions contribute to the effectiveness of arguments.

More recently, Paek (2012) analyzed 33 argumentative essays written by 33 Korean EFL high school students. The majority of the students were found to use a basic argument structure to organize their essays, which included claims, data, and warrant. In addition, without effective warrants, their writings were often poorly reasoned and minimally developed. From the previous research in L2 contexts, warrants—the explicit reasoning that links data and the claim—are the most difficult of the three main elements for L2 students to write. All in all, the ability to identify warrants accurately is an essential critical reasoning skill.

2.2. Studies on Peer Feedback in L2 Contexts

When the use of peer response became an early key component of teaching writing as a process in the L1 context, many L2 teachers embraced the idea of having students read each other’s papers for the purpose of providing feedback and input to each other as well as helping each other enhance a sense of audience (Ferris, 2003). In reality, proponents of peer response have made many claims about its cognitive, affective, social, and linguistic benefits, most of which have been substantiated by empirical evidence (Byrd, 1994; de Guerrero & Villamil, 1994; Lockhart & Ng, 1995; Mangelsdorf, 1989; Mendonça & Johnson, 1994; Min, 2005; Mittan, 1989; Peterson, 2003; Tsui & Ng, 2000; Villamil & de Guerrero, 1996).

A number of L2 studies have been undertaken to empirically investigate the validity of using peer feedback in L2 writing classes. They have attempted to probe the effects of peer feedback on students’ subsequent revisions, and the research has yielded mixed findings. In an earlier study, Connor and Asenavage (1994) compared the amount and types of revisions made by students enrolled in an ESL freshman writing class. Their finding showed that only 5 percent of revisions resulted from peer responses. In a similar study of ESL students involved in peer response, Mendonça and Johnson (1994) noted
that their advanced ESL students utilized peer feedback in 53 percent of their revisions. Although students used their peers’ comments to revise their essays, they incorporated peers’ suggestions into their revisions only selectively, “deciding for themselves what to revise in their own texts” (p. 745). The researchers have supported the need to include peer reviews in ESL writing instruction.

Tsui and Ng (2000) investigated the roles of teacher and peer comments in revisions in writing among secondary ESL learners in Hong Kong. They found that peers’ comments induced less substantial revisions than teachers’ comments. Indeed, all learners “saw the teacher as a figure of authority that guaranteed quality” (p. 147). However, they also show that “peer comments have roles to play that cannot be filled by teacher comments” (p. 151). In the EFL context, Kamimura (2006) found that peer feedback was found to be useful for Japanese EFL student writers, who came from a non-Western rhetorical/cultural tradition. Thus, peer comment brought significant improvement to the rewrites produced by the students with high as well as low English proficiency levels, compared to their original drafts.

Several studies conducted in Korean EFL contexts have found that peer response is beneficial for EFL students (Cho, 2005; Choe & Yu, 2012; Huh & Lee, 2011; Joo & Kim, 2010; Kang, 2008; Kim, 2007; Yi, 2010). For example, Huh and Lee (2011) argue that students gain understanding of readers’ needs by receiving feedback from their peers, and were able to revise their texts in light of their peers’ responses. Yet there exists some disagreement about the effectiveness of peer response. To consider the overall effects of peer feedback, we researchers need to look at a number of questions more extensively. One question of primary interest to us, indeed, is whether peer feedback help EFL students logically relate ideas and information to argue well.

As noted above, the Toulmin Method is a means of conducting a very detailed analysis, in which we break an argument into its various components and decide how effectively those components contribute to the overall whole. Thus, to examine the impact of peer response on students’ argumentative writing, this study attempts to investigate (a) to what extent quantity and quality of students’ writing were improved in subsequent drafts after receiving peer feedback, (b) whether students made any changes in the use of Toulmin elements in constructing revisions of their texts, and then (c) which elements of the Toulmin model were related to the overall writing quality in revision.
3. METHODS

3.1. Participants and Data Collection

The present study involved 34 EFL college students (27 female and 7 males), all juniors, studying at a large, research-oriented university in Seoul, Korea. All the students were English language education majors enrolled in a course entitled “Teaching EFL Writing.” This teacher preparation course focused entirely on EFL writing and was taught by one of the authors. The instructor believes that preparing future teachers to respond to EFL writing becomes an important aspect of any pre-service training course. Thus, she spends substantial time (e.g., in this course, 3 weeks of a 16-week syllabus) on response issues, including teacher written commentary, error feedback, and peer response options.

Students were trained in how to respond effectively to the content of a writing and systematically to sentence-level errors. In order to respond to the content of a writing, the instructor taught them how to provide constructive feedback, in accordance with the following guidelines suggested by Bates, Lane, and Lange (1993, p. 23): 1) write personalized comments; 2) provide guidance or direction when necessary; 3) make text-specific comments; and 4) balance positive and negative comments. Students did have a hands-on training to practice giving feedback to some sample writings which came from ESL college students and EFL high school students. The students were thus able to gain practice in reading and analyzing other students’ papers.

Meanwhile, students had the opportunity to write a timed essay in class and to engage in a peer response activity. The instructor asked students to focus exclusively on responses to contents and to point out weakness in contents, including organization and development. During the peer feedback session, feedback was given by peers working in self-selecting pairs using written communication, following Paulus (1999). After students completed their peer response in class, students revised their drafts at home and handed in the final products a week later.

The topic used in this study was from the TOEFL Test of Written English (TWE): “Many people visit museums when they travel to new places. Why do you think people visit museums? Use specific reasons and examples to support your answer.” This topic was chosen because it requires students to use their analytical ability to persuade readers with specific reasons and examples as well as to synthesize their sources of information in a coherent manner. Students were given 30 minutes to write the essays, as ETS currently limits the Test of Written English to 30 minutes.
3.2. Data Coding and Scoring

To assess students’ writing quality, the 6-point scale for the TWE scoring rubric was adopted. The rubric contains five subsections, namely, criteria for contents, organization, vocabulary, language, and mechanics. Two trained independent raters, both of whom have taught EFL writing at a university, carefully read the drafts and revisions to assess essay quality (a total of 68 texts). The score for each paper was the average of two scores from the raters. In case the two scores were more than one point apart, the two raters would discuss and negotiate their scoring until they reached agreement. They achieved an interrater reliability coefficient of .86, showing a high degree of agreement on the scores.

For the Toulmin analysis, after ensuring the coders’ understanding of the different elements, two authors independently identified the Toulmin elements in 15 papers randomly selected from the data, as it is recommended for the raters to code 15-20% of the whole data to check their degree of agreement. Before negotiation, inter-rater reliability for coding the four Toulmin elements (claim, data, warrant, and rebuttal) according to a Cohen’s Kappa test was .94, .78, .74, and .87, respectively, and overall inter-rater reliability was .86. Qualifier and backing were not found in most of the students’ essays, which led us to exclude those two elements in the coding and analysis. The co-author conducted the analysis of the remaining students’ papers for practicality. The following four elements were analyzed: claim, data, warrant, and rebuttal. The definitions and examples of the four Toulmin elements are presented in Appendix 1.

3.3. Data Analysis

To explore and then describe in rich detail the phenomena being investigated, a quantitative study was first conducted to investigate the three research questions. Then a qualitative study was designed to probe the major findings from the quantitative study, and the qualitative phase was built on the quantitative data. Quantitative data were analyzed using both descriptive and inferential statistical analysis in SPSS.

The qualitative analysis was conducted to trace some intricate qualitative changes exhibited between each student’s original draft and rewrite that could not be captured by the formal quantitative statistical analyses. Out of 34 students, two were selected for in-depth study. Both received low scores in the first drafts, 2.25 and 2.75, respectively, but after revision, one received the highest score, 5.25, and the other increased the score to 3.75. The changes made by these two student writers in their argumentative writing were qualitatively analyzed in the framework of the Toulmin model. Figure 1 presents the visual diagram of the mixed method design procedures in this study.
4. RESULTS AND DISCUSSION

Essentially, in the first part of the analysis we were investigating whether the quantity and quality of students’ writing improved in subsequent drafts after receiving peer feedback. There was clear evidence of enhanced performance when students utilized peer suggestions in revision; they wrote longer and better essays. The final drafts were longer and of superior quality than the first drafts. The final drafts were almost 90 words longer (201.9 vs. 291.8 words), suggesting a greater amount of content. This is confirmed in the ratings, as the raters considered the final drafts superior in quality (the group mean scores of 2.75 for the first versus 3.49 for the final).

Paired \( t \)-tests were conducted to examine the effects of peer response on writing length and quality by comparing scores before and after peer response. The resulting value was \( t = -7.297 \) and \(-6.388\), respectively. This is significant at the \( p < .01 \) level. This means that the length and quality of the students’ writing significantly increased after revisions of their texts (see Table 1).

**TABLE 1**

Differences in the Length and Quality of the First and Final Drafts (\( N = 34 \))

<table>
<thead>
<tr>
<th>Variable</th>
<th>First draft ( M (SD) )</th>
<th>Final draft ( M (SD) )</th>
<th>( t )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>201.9 (66.4)</td>
<td>291.8 (79.2)</td>
<td>-7.297</td>
<td>.000*</td>
</tr>
<tr>
<td>Quality</td>
<td>2.75 (.78)</td>
<td>3.49 (.79)</td>
<td>-6.388</td>
<td>.000**</td>
</tr>
</tbody>
</table>

* \( p < .01 \)

\( \textit{Note.} \) Length: the number of words; Quality: TWE scale (1-6, with 6 high)
We also focused on the differences in the students’ use of the Toulmin elements between the first and the final drafts. This was done by counting the number of Toulmin elements tallied\(^1\) in both the first and the final drafts. As seen in Table 2, in the first drafts, the average use of claims, data, warrants, and rebuttals was 2.00, 2.58, 0.26, and 0.24, respectively. In the final drafts, the average use of claims, data, warrant, and rebuttal was 2.11, 3.67, 0.79, and 0.27, respectively. On average, the use of all of the Toulmin elements increased in the final drafts. However, not every paper in both drafts had warrant and rebuttal, because the average numbers for these elements in a paper were less than 1.

Paired \(t\)-tests were conducted to determine whether there was significant change in students’ use of Toulmin elements in their revisions. The statistically significant differences between the first and final drafts appeared in the use of data (\(t = -5.354, p < .01\)) and warrant (\(t = -5.480, p < .01\)), which indicates that the number of data and warrant significantly increased in subsequent drafts. However, \(t\)-tests for significance indicate that no differences in the use of claim and rebuttal were statistically significant.

TABLE 2

<table>
<thead>
<tr>
<th>Number of Toulmin elements</th>
<th>First draft</th>
<th>Final draft</th>
<th>(t)</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claim</td>
<td>2.00 (.60)</td>
<td>2.11 (.53)</td>
<td>-1.676</td>
<td>.109</td>
</tr>
<tr>
<td>Data</td>
<td>2.58 (1.13)</td>
<td>3.67 (1.39)</td>
<td>-5.354</td>
<td><strong>.000</strong></td>
</tr>
<tr>
<td>Warrant</td>
<td>0.26 (.51)</td>
<td>0.79 (.72)</td>
<td>-5.480</td>
<td><strong>.000</strong></td>
</tr>
<tr>
<td>Rebuttal</td>
<td>0.24 (.50)</td>
<td>0.27 (.51)</td>
<td>-1.000</td>
<td>.315</td>
</tr>
</tbody>
</table>

\(p < .01\)

A correlation analysis was conducted next to examine the relation between the overall writing quality and the use of the Toulmin elements. In other words, the correlation between each Toulmin elements (claims, data, warrants, and rebuttal) and the overall writing quality was run four times respectively for each draft. As can be seen in Table 3, in the first draft, the use of claims was moderately related to the overall writing quality (\(r = .495, p < .01\)), and the use of data showed a marginally significant relation with the overall writing quality (\(r = .420, p < .05\)).

In the final draft, however, the use of claims was no longer significantly correlated with writing quality, while the use of data was still found to have a weak correlation with writing quality (\(r = .429, p < .05\)). There was no correlation between the use of warrants

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\(^{1}\) Since our research goal concerns itself with the frequencies of Toulmin elements in EFL students’ revisions, essentially, we did not look for the quality of the Toulmin elements. To score the quality of each element, see the scoring system used in Connor’s (1990) study.
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and the writing quality in the first drafts. In contrast, the use of warrants showed significant correlations with writing quality ($r = .588, p < .01$) in the final drafts, as shown in Table 3. In fact, the use of warrants significantly increased in revision (see Table 2).

<table>
<thead>
<tr>
<th>Toulmin elements</th>
<th>First drafts</th>
<th>Overall writing quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claim</td>
<td>.495</td>
<td>.323</td>
</tr>
<tr>
<td>Data</td>
<td>.420*</td>
<td>.429*</td>
</tr>
<tr>
<td>Warrant</td>
<td>.296</td>
<td>.588*</td>
</tr>
<tr>
<td>Rebuttal</td>
<td>.190</td>
<td>.075</td>
</tr>
</tbody>
</table>

*p < .05, p < .01

At this point, a simple linear regression analysis was conducted to determine whether warrant has the effects in predicting writing quality of final drafts. As shown in Table 4, the result indicates a significant linear relationship, $F(1, 33) = 14.497, p = .001$. This result shows that warrant is a strong factor that explains 30.5% of the variation in the writing score. Thus, it can be generally assumed that the more warrant elements a writer uses, the higher writing quality one can attain, i.e., the use of warrants, in particular, contributes to effective argumentative writing and results in superior writings.

A stepwise multiple regression analysis was conducted to examine which Toulmin elements are factors that can predict higher writing quality of final drafts (Table 5). Among the four elements, warrant was found to be the strongest predictor of writing quality, explaining 30.7% of the variation in the writing scores, while data contributed an additional 8.2% to the prediction. The use of rebuttal was not correlated with the students’ writing quality at all in both the first and the final drafts. The primary reason is that the writing task itself was to identify reasons or supporting evidence for why people visit museums, and thus students did not necessarily have to include an opposing opinion and refute it to make their arguments more effective.
Here, we report on the results of the qualitative analysis, showing actual comments made on the original drafts by a peer and how these comments were incorporated into the rewrites. The following essay (shown in Figure 2) is written by Nam (pseudonym). The length of essay increased from 170 words to 242 words, and the writing score also increased from 2.75 to 3.75. As shown in her first draft, Nam included two claims, each of which has been supported by two data. Her peer pointed out that the thesis statement was not clearly written and that she needed to rewrite it more specifically.

Accordingly, in revision, she rewrote the second claim in a more argumentative style and added one more data. In her first draft, warrants were implicit and hence unstated. This allowed an opportunity for her peer to ask Nam to dig deeper, requiring more explanation. At this point, since Nam has worked through all the evidence rather thoroughly, she added the warrant that allows the readers to interpret the evidence.
ask questions and get helps. [data] They can get pamphlets which inform the good places to visit and delicious foods they might not want to miss. [data] They can rearrange or improve their overall travel plans by visiting museums.

Travelers also visit museums because they can gain useful information for their traveling that place. [claim] They may have some difficulties while traveling because they may have little information about that place or they didn’t plan detailed itinerary. [warrant] Usually, museums have staffs who can speak foreign languages, so travelers can ask questions in their languages and get helps from them. [data] Museums have much information about that place so they can get brochures which inform the good places to visit, find accommodations, or delicious foods in nice restaurants they might not want to miss. [data] So by visiting museums, they can rearrange or improve their travel plans.

End comment

You explained the reasons why people visit museums. You wrote two paragraphs. The thesis statements are the first sentences of each paragraph, but they should be clearer. You provide the specific example in the first paragraph. It was good and persuasive. I understand your second point, but you should specify your thesis statement to include the rest paragraph. Your writing was concise and rather clear except for the thesis statements.

Note. The sentences that represent Toulmin elements are underlined; their classification then appears in brackets immediately following. Grammatical errors were not corrected.

As seen in Figure 3, Joo (pseudonym) first proposed his point of view, which was then followed by four data to support the claim in his first draft. Following the peer comment, he completely rewrote his essay while maintaining his two original claims, while including four more data and one more warrant. The length of the essay substantially increased from 135 to 524 as a result of this extensive revision. Not only the quantity but also the quality substantially improved, from 2.25 to 5.25. Joo did utilize peer suggestions in revision. For example, the peer suggested adding more specific examples, by asking “Does this sentence have any evidence?” To be sure, the peer has encouraged using more relevant data to support claim.

In other words, the peer encouraged Joo to be specific about the claim, asking questions to produce more specific details. Joo tended to begin with general statements that needed to be specified. Joo grappled with the feedback he received. Consequently, Joo rewrote his essay in a way to address his claim being argued for by providing reasons and supporting evidence to bolster his position. Joo’s revised draft still requires work to be proficient. Nevertheless, Joo has greatly developed his written expression of reasoning in revision: his draft has a clear position and supporting evidence, and it states warrants appropriately. Most importantly, a warrant was added to improving the quality of his argumentation. Through a few comments, he finally arrived at the following revised draft:
When people visit new countries, they tend to go to museums in the country. It seems that visiting museums is mandatory for most people. The reason why people always go to museums is that people can get to know and understand the culture and history of the country easily and quickly. Museums preserve the country’s cultural heritages and history.

When people take a trip to other countries, their purpose involves understanding the country better than before. People have limited time, museum is the best place for them. People can get the most information about the country in one or two places. Museums usually have most information that people want to know about the country. When I visited Sweden and Norway, I wanted to learn about Northern Europe history. So, I went to history museums.

Furthermore, most trips have limited amount of time to learn all the history or every aspect of that country. In order to feel the country or city as much as possible in a short time, visiting museums is an efficient way of doing so because people can get the most information about the country in one or two places. There are many relics that contain the region’s history, and there are also curators who help visitors understand the implicit meanings of the cultural heritage. For example, when one visits China, it is impossible for him or her to see and try every unique customs of the large country. However, by visiting its national museum that collected the artifacts...
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or parts of relics of Chinese culture, one can look around and understand how people lived and what happened throughout the history. [data] By understanding the stories related to the basis of the culture, people would be capable of experiencing the root of the culture in a short time. [warrant]

End comment

Your writing is well-organized and has logical reason. But I think it would be better to write more specific example. Your travel example is very good, so if you write it more specifically, it will be good writing.

Note: The sentences that represent Toulmin elements are underlined; their classification then appears in brackets immediately following. Grammatical errors were not corrected.

The results of the quantitative analysis revealed that peer feedback was found to be significantly useful for the Korean EFL students, i.e., that peer feedback had a positive effect on overall writing quality. Additionally, this attests to Kamimura’s (2006) observation that “peer comments led the [students] to produce longer rewrites compared with their original drafts” (p. 32). Another noteworthy result is seen in the effects of peer feedback on building logical reasoning and writing logical arguments.

In fact, peer response prompted the students to reflect on whether the logic of their argumentation makes sense to the readers. In their revisions, they elaborated their first drafts by incorporating peers’ comments, which helped them expand the use of Toulmin elements. Therefore, they included more data and warrants in revision, which seems related to a substantial increase in both quantity and quality of their writings. After receiving feedback from peers, they seemed to recognize that the inclusion of warrants is a powerful rhetorical strategy (Crammond, 1998) for advancing arguments in their writing.

As found in Cooper et al.’s (1984) study of American university freshmen’s argumentative papers, the less effective argumentative papers were lacking in certain Toulmin elements, such as data and warrants, whereas the more effective papers were more elaborate in using Toulmin elements, such as data and warrants. In general, in insufficient writings, students failed to use some important features of argumentative writing, such as warrants, in elaborating and developing argument.

These results indicate that the students used a basic argument structure to organize their essays, including claim and data. Again, however, the lack of relationship between the use of claims and the writing quality in the final drafts was indicated. It is not surprising that the use of claims was not related to the overall writing quality, probably because these students begin with their primary assertion so that this element would not differentiate the overall writing quality in revision.

However, considering that the use of data was moderately correlated with the...
quality in both drafts, this indicates that students showed the ability to frame and defend their arguments. The use of data—the reasons—a writer gives are the first stage in developing an argument. That is, to respond analytically to an argument is to do much more than to state a basic agreement or disagreement with it. It is to determine the basis of our agreement or disagreement. For the students, “[t]o mak[e] an argument is to convince an audience of the rightness of the claims being made using logical reasoning and relevant evidence” (Hillocks, 2010, p. 25).

Most crucially, the more effective writings were more elaborate in using warrants, as shown in Table 3. This result indicates that warrant is a crucial factor that distinguishes higher levels of argumentative writing (Warren, 2010). Thus, this result corroborates findings of previous studies, which have reported that a majority of low level students did not incorporate warrants in their argumentative writing, while their higher level counterparts did (e.g., Burkhalter, 1995; Connor, 1990; Crammond, 1998; Kundson, 1992; McCann, 1989). Undoubtedly, peer feedback made meaningful contributions to the development of students’ argumentative strategies that they employ.

5. CONCLUSION

In this study, we found that peer response played a role in improving argumentative writing quality. The available evidence does suggest that responding to peers’ writing improves students’ logical reasoning skills needed to analyze and revise their own writings (Leki, 1990; Mittan, 1989). After receiving peer feedback, they can assess their own competence in performing arguments for particular purposes, and they have increasingly come to be better persuaders as well. Students gain a clearer understanding of audience needs by receiving feedback on how they intentionally put ideas and information together to persuade readers of their positions.

Some potential limitations of the study are in its design, particularly, the possible effect of time limits imposed. The first draft was composed in a timed-essay setting, whereas the final draft did not have any time limit. Time may be a key variable in EFL writing. We do not know whether the amount of time allowed for writing facilitated addition of Toulmin elements and improvement in writing quality. However, in a study examining ESL student performance on home versus class essays, Kroll (1990) found that additional time did not lead to improved writing. In fact, “[t]ime could not buy them anything” (p. 152).

Most important, to structure peer feedback as “gateway activities” (Hillocks, 2005) for argumentation, teachers should provide a short list of directed questions that students address as they read their peers’ writing (Weigle, 2013). Indeed, the students in this
study can already reason in the manners they need to reason when they are writing argumentative writing, but they do not know how to articulate that reasoning in ways that are conventional in English. Furthermore, if EFL students go through carefully designed training in peer feedback, such training could “increase the expertise of the students as reviewers” (Rahimi, 2013, p. 87), which in turn, would help students hold their peers’ feedback in high regard.

REFERENCES


Applying Toulmin: Does Peer Response Play a Role in Korean EFL College Students'...


**APPENDIX**

**Definitions and Examples of Toulmin Elements**

<table>
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<th>Element</th>
<th>Definition and Illustrative Examples</th>
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| Claim     | An assertion in response to a contentious topic or problem  
Example: Teachers should make higher salaries. |
| Data      | Evidence to support a claim in the form of experience, facts, statistics, or occurrences  
Example: Teachers are as well-trained and hard-working as other, higher-paid professionals. |
| Warrant   | General statements that validate the supportive relationship between the *claim* and *data*  
Example: Professionals who are similarly trained and hardworking should receive similar salaries |
| Rebuttal  | Statements in which the writer responds to a counter-argument by pointing out the possible weakness  
Example: Teachers who are incompetent do not deserve higher salaries. |

*Note.* Examples are adopted from Warren (2010).

Applicable levels: Territory

Myung-Hye Huh  
Department of English Language Education  
College of Education, Korea University  
145 Anam-ro, Seongbuk-gu
Applying Toulmin: Does Peer Response Play a Role in Korean EFL College Students’ ... 23

Seoul 136-701, Korea
Phone: 02-3290-2355
E-mail: myunghuh@korea.ac.kr

Inwhan Lee
Department of English Language Education
Graduate School, Korea University
145 Anam-ro, Seongbuk-gu
Seoul 136-701, Korea
Cell: 010-4430-5468
E-mail: rachel.lee713@gmail.com

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