The Effectiveness of Incidental Focus on Form for English Learning in Text-Based Online Chat*

Young Woo Cho
(University of Illinois at Urbana-Champaign)


This study investigated the effectiveness of incidental focus on form for second language (L2) learning mediated by text-based online chat. Twelve ESL learners interacted one-on-one with an ESL teacher for a role-play task using Windows Live Messenger. Immediately after the task, the learners reviewed their chatscript and reported their perceived learning outcomes. A week after the task, the learners took an individualized posttest which measured the learners’ ability to recall the specific forms addressed during the role-play task. The learners were also tested for their ability to self-correct their errors which had not been treated during the task. The posttest results indicated that the learners’ performance was significantly better on the test items about the forms addressed during the task than on the items about the untreated errors. Logistic regression analyses identified simple feedback as a primary indicator of the correct test scores. Directness and post-task report were also found to be two other features that contributed to the correct scores, depending on the learner. Implications are discussed for incorporating incidental focus on form into L2 teacher training courses and also into an online learning program for L2 learners who seek an additional opportunity to improve their L2 proficiency.

I. INTRODUCTION

Numerous empirical studies of instructed second language acquisition (SLA) have relied on the notion of focus on form, which generally refers to an instructional effort to imbed attention to form in a meaning-focused communicative second language (L2) lesson

* This article is a revised version of an earlier draft presented at KATE 2007 International Conference (July 6th-7th). I am grateful to Melissa Bowles for her guidance and invaluable comments on an earlier version of this article.
to balance the development of fluency and accuracy (Long, 1991; Long & Robinson, 1998). Ellis (2001) discussed two major types of focus on form: planned and incidental focus on form. The former is typically understood as involving one or more target linguistic forms and attention-drawing techniques predeterminded by the teacher or the researcher. In contrast, the latter involves spontaneous treatment of linguistic issues by the teacher or the learner (cf., spontaneous focus on form in Williams, 2005).

Ellis (2001) made an important distinction between two types of incidental focus on form: reactive focus on form and preemptive focus on form. Reactive focus on form corrects learner errors either implicitly or explicitly and is commonly known as corrective feedback. Preemptive focus on form is fundamentally different from reactive focus on form in the sense that, without making or observing an actual error, a teacher makes the L2 an object of learning spontaneously by asking a question about the L2 or an L2 learner makes an explicit request for help with a problem with the L2.

Previous research has concentrated on planned focus on form. There have been fewer studies of incidental focus on form largely due to its unpredictable and spontaneous nature, which poses a considerable challenge to researchers who usually determine the target forms and attention-drawing techniques a priori. For this reason, many empirical studies of incidental focus on form were descriptive, not measuring its influence on L2 learning (Ellis, Basturkmen, & Loewen, 2001; Loewen, 2003, 2004; Williams, 1999). These studies have found that incidental focus on form arises commonly in L2 classroom discourse.

Other studies (e.g., Loewen, 2005; Loewen & Philp, 2006; Williams, 2001), however, measured the effectiveness of incidental focus on form for L2 learning by employing an individualized tailor-made posttest, which is a learner-specific test that measures a learner’s ability to retain a linguistic form which was the object of learning in an incidental focus on form episode that the learner participated in. This means that each learner receives a different version of the test, depending on the number and type of forms addressed in the focus on form sequences the learner was involved in. This unique testing instrument enables the researcher to measure learning gains pertinent to each individual learner rather than general learning gains across different learners.

At the theoretical level, incidental focus on form is important because it is a process involved in conversational interaction that facilitates L2 learning (Long, 1996). At the pedagogical level, incorporating incidental focus on form into meaning-focused L2 instruction may help L2 teachers address learners’ various form-related needs and concerns within the context of communicative instruction and also help L2 learners improve their knowledge of various L2 forms, yet lessening their burden of engaging in intensive rote learning of L2 grammatical rules and vocabulary. These theoretical and pedagogical justifications for incidental focus on form motivated the current study to investigate its effectiveness for L2 learning within the context of text-based online chat, a
The Effectiveness of Incidental Focus on Form for English Learning in Text-Based Online Chat

type of Synchronous Computer-Mediated Communication (SCMC).

The choice of text-based SCMC as a medium of communication was primarily motivated by a significant increase in research on this area with the advent of computer and information technology. Text-based online chat has become an object of productive research especially among interactionist SLA researchers and those interested in focus on form (Chapelle, 2005). However, few studies (e.g., Shekary & Tahirian, 2006) have directly measured the effectiveness of incidental focus on form for L2 learning particularly within an SCMC context. Further empirical research is essential to broadening the scope of research on this important area.

The current study addressed two methodological issues commonly found in previous studies of incidental focus on form that utilized individualized posttesting. Most previous studies based their analysis of learning solely on a form retention rate, which indicates how many forms the participating learners in general retained as a result of having exposed to incidental focus on form. Such a single percentage form retention rate, albeit useful, provides little information regarding to what extent incidental focus on form is more effective than purely meaning-focused interaction that does not tackle any errors or linguistic problems.

Moreover, the individualized posttesting instruments used in previous studies were not sensitive enough to detect the influence of learner prior knowledge on the test result, which points to the need to employ a posttesting method that may tap better into the direct influence of focus on form on posttest scores. Thus, this study contributes to this growing body of research by providing empirical evidence of the effectiveness of incidental focus on form in comparison with non-focus on form in the context of text-based online chat, employing an interactive individualized posttesting procedure.

II. Literature Review

1. Justifications for Text-Based Online Chat for Focus on Form

Text-based online chat is a tool for synchronous online communication, during which learners type their messages on the computer screen. Text chat offers several advantages for focus on form, which requires meaningfulness of communication and spontaneous attention to form in relation to its meaning and context. Researchers have found that, in the chatroom, L2 learners tend to produce a larger amount of language than in the traditional classroom (Böhlke, 2002; Kern 1995; Roed, 2003) and also to use a wide range of L2 forms including lexis, morphosyntax, and discourse features (Abrams, 2003; Chun, 1994). These benefits of text chat may be related to the finding that L2 learners participating in
text chat experience lower-level anxiety about interaction (Kern, 1995). Text chat also provides a benefit for researchers who rely on transcribed data. Typical text chat software programs automatically save chatscripts, which obviate the need on the part of the researcher to transcribe a massive amount of interaction data. This chatscript retrieval function may also help L2 learners consolidate their learning by reviewing their interaction.

From the viewpoint of interactionist SLA theory (Gass, 2003; Long, 1996; Mackey, 2007), text-based online chat may create a favorable interactional context for negotiation of meaning, prompting learners to make various linguistic and conversational modifications. This has been confirmed in various learning contexts including online task-based learner-learner interaction (Blake, 2000), learner-native speaker interaction in a university-level instructional setting (Toyoda & Harrison, 2002), and learner-native speaker interaction in a natural setting (Tudini, 2003). Most importantly, text-based online chat promotes noticing, which is believed to be an initial psycholinguistic step toward L2 learning (Doughty, 2001; Schmidt, 2001). Chapelle (2005) stressed the value of text chat as a facilitator of noticing by stating that “one might sum up the benefits proposed by interactionist theory as means of prompting learners to direct their attention in useful ways to linguistic input...All these types of interaction can occur during CALL tasks” (p. 56).

Empirical studies have found that the unique hybrid modality of text chat combining oral and written communication makes L2 forms perceptually more salient, and thus more easily noticeable (Blake, 2000; Smith, 2005). Lai and Zhao (2006) found that text chat interaction promotes noticing significantly better than face-to-face interaction. A stimulated recall protocol revealed that the learners self-corrected their errors more frequently during the text chat task than during the oral interaction task because they were better aware of their linguistic errors in the text chat mode. This result is explained by the nature of the aforementioned written modality of text-based communication. More specifically, text chat allows learners to spend more time to plan and/or monitor their L2 messages. With enough time and their reliance on written language, learners may better recognize their own errors. In short, text chat promotes both fluency and attention to form, rendering itself an effective interactional context/tool for focus on form.

2. Previous Research on Effectiveness of Incidental Focus on form

Several descriptive studies have found that incidental focus on form is part of common L2 pedagogic discourse (Ellis, Basturkmen, & Loewen, 2001; Loewen, 2003, 2004; Williams, 1999). These studies reported that both preemptive and reactive focus on form episodes were almost equally available in the L2 classrooms where the studies were conducted. Based on these descriptive studies, researchers have investigated the
effectiveness of incidental focus on form for L2 learning by analyzing Language Related Episodes (LREs) (e.g., Shekary & Tahirian, 2006; Williams, 2001) or Focus on Form Episodes (FFEs)¹ (e.g., Loewen, 2005).

Williams (2001) reported that L2 learners in her study obtained correct scores on the individualized posttest for 45 up to 94% of the LREs depending on the proficiency and type of interlocutor. More proficient learners scored higher on the test, regardless of whether they initiated attention to form or provided feedback. The learning gain percentages varied depending on the initiator of focus on form. For learner-generated preemptive LREs, the average retention rate was 53.25%. Teacher-generated reactive LREs were retained for 42.5%. When the learners received corrective feedback from their peer, the rate dropped down to 4.25%. The target forms provided by the teacher were better retained probably because the learners found their teacher a more reliable source of linguistic information than their peers.

Loewen (2005) measured the effectiveness of incidental focus on form based on his previous descriptive studies conducted earlier at an English language institute in New Zealand (Loewen, 2003, 2004). This was the first study to employ a logistic regression analysis to identify some specific linguistic and interactional features of incidental focus on form that are predictive of L2 learning. The researcher observed teacher-learner interactions in 12 ESL classes and identified 491 FFEs. Then, a tailor-made posttest was given to each of the learners who participated in pertinent FFEs. This means that the learners received a different set of test items, depending on the number and linguistic content of the FFEs that they participated in. The test results indicated that the learners supplied correct forms for 47.6% of the test items on the immediate posttest. The retention rate was 39.3% on the delayed posttest administered two weeks later. When partially correct answers were included, the percentages went up higher (i.e., 62% on the immediate test; 50% on the delayed one).

Three logistic regression analyses indicated a significant effect of successful uptake on L2 grammar and vocabulary learning. This result suggests that L2 learners may benefit from incorporating corrective feedback or new linguistic forms correctly into their subsequent utterance upon receiving feedback from their teacher. The results obtained from the regression model for pronunciation-related FFEs, however, showed a slightly different pattern, as simple FFEs (i.e., focus on form lasted for one turn) and message-related FFEs (i.e., FFEs triggered by misunderstanding) in addition to FFEs containing successful uptake were also significant predictors of L2 learning. This result may be an indication that pronunciation needs intervention different from that needed for

¹ Even though the terms and definitions are different, FFE and LRE are almost identical as a unit of analysis. Compared with FFE, LRE seems to be more specific in its operational definition of incidental focus on form.
grammar and vocabulary.

In a follow-up study that analyzed 228 FFEs that involved corrective recasts, a subset of the same data set used in Loewen (2005), Loewen and Philp (2006) found that the learners retained about half the recasts (53%) correctly on the individualized posttest. A logistic regression analysis found several key recast features that predict L2 learning: interrogative intonation, shortened length, and one change of turn. Considering that these three features may significantly lessen the learner's burden of detecting the corrective intent and the location of the error, the findings of this study seem to suggest that the corrective intent of recasts needs to be made direct, or explicit, in order to help learners easily identify their errors and recognize the target-like forms provided in the recasts.

Shekary and Tahririan (2006) partially replicated Loewen's (2005) study within the context of text-based SCMC. Compared to Loewen (2005), which focused on teacher-learner interactions, this study investigated learner-learner interactions. Sixteen Persian-speaking EFL learners in eight mixed-proficiency dyads participated regularly on dictogloss, jigsaw, and free discussion tasks online for a month and produced 718 FFEs. The results from the immediate and delayed individualized posttests indicated slightly higher retention rates than the rates reported in Loewen (2005): 70.3% on the immediate posttest and 56.7% on the delayed posttest, respectively. This appears empirical evidence that supports the role of text chat as a facilitator of incidental focus on form.

Three logistic regression models (i.e., supplication, spelling, and correction) indicated that successful uptake was a significant variable that accounted for the occurrence of correct scores. Timing, which referred to whether feedback was supplied immediately or more than one turn after the error or question, was a significant variable only in the (error) correction model, with delayed attention to form being more effective than immediate attention to form. Thus, based on these regression models, it can be concluded that successful uptake facilitated the retention of the linguistic forms. Moreover, delayed feedback significantly helped the learners retain the target form especially when the trigger was an error rather than a question about a linguistic issue.

To summarize, previous studies have found that L2 learners can retain approximately 50% of the target linguistic forms discussed in FFEs. From a methodological perspective, however, such a simple percentage did not provide clear evidence of the superiority of focus on form over non-focus on form because there was no control with which focus on form could be compared with. Episodes that contain an error but do not involve any kind of focus on form may serve as a useful control because such non-focus on form episodes may be used as a basis for an individualized posttest that measures learners' ability to self-correct their errors without any corrective feedback from the teacher. This study, therefore, compared FFEs with Error Episodes (EEs), which only contains an error but does not have any focus on form element, (see the next section for its definition) to
investigate to what extent incidental focus on form is more effective compared with non-focus on form.

Drawing upon interaction theory of SLA and recent empirical studies of incidental focus on form, and particularly Loewen (2005) and Shekary and Tahririan (2006), this study sought to find the features of FFEs that explain successful recall of linguistic forms addressed in FFEs. Two research questions were formulated.

1) Is L2 learners’ involvement in incidental focus on form during communicative interaction mediated by text-based online chat sufficiently more effective than purely meaning-focused interaction that does not treat learner spontaneous errors for L2 learning?
2) Which features of incidental focus on form explain successful short-term L2 learning?

III. METHOD

1. Participants

Twelve ESL learners participated in this study (ten women and two men, mean age = 25). They were students enrolled in the intensive English program at a U.S. university. They volunteered to participate in this study as part of their effort to improve their English proficiency. The learners consisted of four Chinese first language (L1) speakers and eight Korean L1 speakers. They reported their proficiency level on the basis of the in-house proficiency test they had previously taken at the institute. According to their reported proficiency levels, there were one advanced, three high-intermediate, six intermediate, and two low-intermediate learners. Eight of them reported their official TOEFL score. The scores ranged from 523 to 610 \((M = 568, SD = 31.87)\). Their length of stay in the U.S. ranged from 3 to 12 months \((M = 5.6, SD = 2.71)\) and their mean length of previous English study ranged from 6.50 to 22 years \((M = 12, SD = 5.44)\). The learners also reported their mean hours of English use per week (e.g., English classes, personal English use, interactions with other English speakers, etc.): 31 hours \((SD = 6.73)\).

The interactors consisted of a confederate of six ESL teachers including the researcher. All of them were native or near-native speakers of English who had at least one year of ESL or EFL teaching experience. They either had obtained their MA degree in TESOL or were enrolled in the MA TESOL program at the same university. The TESOL program emphasized communicative and task-based approaches to L2 teaching, and thus the ESL teachers were familiar with the concept of focus on form. The ESL teachers were given
general instructions regarding responding to learners’ requests for help and correcting learner errors during interaction. However, no specific instructions were given as to how to balance between FFEs and EEs in order to give them enough leeway for managing their interaction with the learner.

2. Materials

1) Text Chat Software

This study was conducted using Windows Live Messenger, formerly known as MSN Messenger, which is one of the most widely used free chat software programs around the world. This program was used due to its wide availability and the learners’ general familiarity with its main features. All the participants reported having already installed this program on their personal computer before participating in the project. Another reason for choosing this software was that it allows the researcher to retrieve the chat log immediately after a chatting session, a crucial advantage for data collection on the part of the researcher and also a benefit on the part of the learners who can review their interaction during or immediately after the task.

2) Role-Play Task

The role-play task was a dyadic problem-solving communicative task designed to facilitate meaningful and contextualized interaction. The task instructions and the worksheet described for the learners two scenarios that illustrated problems that the learners might actually experience in their real lives (see Appendix A). This task required participants to assume their relevant participant roles (teacher and learner) and to produce a meaningful dialogue relevant to the given situation.

3) Individualized Posttests

The test was given in the form of an interactive interview in which the researcher met with each of the learners one-on-one online and gave the learners test items created out of the FFEs and EEs the learners participated in earlier. The researcher asked the learners questions about the grammatical structures and/or lexical items that had been discussed or negotiated during the role-play task, presenting their error or question along with a brief description of the context and the focus of the pertinent FFE/EE. This testing method was similar to the one used in Loewen (2005) and in Shekary and Tahirian (2006). However, a major departure from those previous studies was that the testing procedure of this study
was more interactive and time-controlled to increase the possibility that the testing method would measure the L2 learner's ability to recall the forms addressed in the FFEs rather than their ability to use their prior explicit knowledge about the forms. By limiting the time to respond to the test prompts, this testing method made it difficult for the learners to spend enough time to access their explicit L2 knowledge. Thus, if a learner spent more than 40 seconds reading and responding to the test prompt, it was considered incorrect, even if the learner eventually supplied a correct form. Then, the researcher asked the learner whether the error was just a mistake or an actual error. Thus, it can be said that the testing procedure of this study tapped into the learners' ability to recall the linguistic information provided in the pertinent FFEs rather than their ability to access their internal L2 knowledge base. The following example illustrates this testing procedure.

**Episode 1 (FFE): Teacher 1 (T1) – Learner 1 (L1)**

L1: I will get there by flight because it is *convenience*. (trigger: error)

T1: How about "because it is *convenient*"? (corrective feedback: direct)

L1: Oh, I see. I will get there by flight because it is *convenient*. (uptake: successful)

T1: Well done!

**Test Item for Episode 1 (FFE): Researcher (R) – Learner 1 (L1)**

R: Let's also think about the second sentence you completed.

Do you remember what you said about how you will get there?

(Presentation of the trigger part of Episode 1)

R: I will go there by flight because it is conveni...

L1: Ah, it is *convenient*.

R: Excellent! I also have a question about this. Was this just a mistake?

   I mean you said "convenience"

   Were you not aware of the issue before the teacher gave you the correction?

L1: No, I didn't know that difference between "convenience" and "convenient" before.

**Test result: Correct**

The fact that L1 provided the correct answer immediately following the presentation of the test prompt suggests that the learner retained the target form (*convenient*) correctly and the learner's response acknowledging her lack of prior awareness of the form indicates that the correct score resulted primarily from the teacher corrective feedback rather than the learner's prior knowledge about the form. Thus, this test item was classified as correct.
3. Procedure

Upon completing a background questionnaire, each learner was invited by the researcher into an online chatroom and was asked to interact with one of the six ESL teacher interactors. When the learners were interacting with their ESL teacher interactor, the researcher was present in the chatroom throughout the session to help them to deal with any possible communication or technical difficulties. The learner-teacher dyads had to complete the role-play task within 50 minutes. Immediately after the task, the learners were given a post-task questionnaire and were asked to report on their learning experience based on a review of their chatscript. Finally, an individualized posttest was administered a week after the task to measure the learners’ short-term L2 learning gains involving the target forms of the FFEs generated during the role-play task.

4. Analysis

1) Identification and Coding of FFEs

An FFE in this study was defined as “part of discourse where the learner asks the teacher for help with an anticipated communication problem involving a grammatical or lexical form or where the teacher provides corrective feedback on the learner’s grammatical or lexical error either implicitly or explicitly.” This definition of an FFE was adapted from the definition used in Ellis et al. (2001)\(^2\) and also from Williams’ (2001)\(^3\) definition of an LRE. Due to the text-based nature of the learner-teacher interactions that constituted the data of this study, there was no FFE involving pronunciation problems. Also, simple spelling mistakes were not included in the analysis because it was not clear to what extent such spelling mistakes reliably represent competence-related L2 learning. However, orthographical issues that were clearly indicative of learners’ lack of pertinent vocabulary knowledge were included in the analysis.

An EE was defined as “part of discourse where the learner makes a grammatical or lexical error but neither the learner nor the teacher makes any attempt to address the error.” The following examples illustrate the difference between the two types of episode.

Episode 2 (FFE): Learner 3 (L3)-Teacher 3 (T3)

\(^2\) “...the discourse from the point where the attention to linguistic form starts to the point where it ends, due to a change in topic back to message or sometimes another focus on form” (p. 294).
\(^3\) “(1) learners talk or ask about language, or question, implicitly or explicitly their own language use, or (2) the teacher or another learner talks or asks about language, or questions, implicitly or explicitly the language of the learner, in response to a learner problem or error” (p. 328).
L3: I want to study *about* urban planning at the UIUC, because I want to be an urban planner and the UIUC has great programs for students (trigger: error)

L3: *Yes, I see.* (uptake: unsuccessful)

T3: You can omit "about" after the word "study." (corrective feedback: direct)

This is a good start.

Episode 3 (EE): L3-T3

L3: Actually I have a plan to apply *at* UIUC's bachelor's degree. (trigger: error)

T3: Oh, really? In which department? (no focus on form: topic continuation)

L3: Architecture!

T3: Of course!!

As is shown above, an FFE involves either a teacher- or learner-initiated attempt to resolve a linguistic issue whereas an EE does not involve any such attempt.

The FFES, once identified in the chatscripts, were coded as independent variables based on their major characteristics, using a similar coding scheme in Loewen (2005) and Shekary and Tahirrian (2006). Emphasis, complexity (physical length of feedback), and timing, three of the variables coded in both the studies were not included in the current analysis primarily because those variables were not of high theoretical and empirical significance and also because they were not the major foci of the current study.

Thus, nine FFE features were coded as independent variables in the current analysis on the basis of their theoretical and empirical significance. The distinction among grammar and lexis was coded as *linguistic focus* because they represent two major dimensions of L2 learning and also they indicate the linguistic source of the learner error that triggers a focus on form episode. *Source* was coded based on two major aspects of language use (comprehension and production) and also indicates the reason for the generation of an FFE. *Type* (preemptive and reactive) represents the manner in which an incidental focus on form episode is initiated (Ellis, 2001). The inclusion of *directness* (or explicitness) was motivated by previous SLA research that indicated the importance of explicitness of corrective feedback (e.g., Ellis, Loewen, & Erlam, 2006). *Response* is based on research into the relative effectiveness of recasts and prompts that has found their differential effects on L2 learning (Ammar & Spada, 2006; Lyster, 2004). Uptake and successful uptake were selected because they received special attention in recent SLA research due to their significance as an indicator of the learner's recognition of corrective feedback (e.g., Loewen, 2005; Lyster & Ranta, 1997; Mackey & Philp, 1998).

*Post-task report* was also coded as one of the independent variables because this unique feature of text-based online chat allows L2 learners to review their conversation to reinforce their learning. The other new variable was *feedback complexity*. Saxton's (1997)
Direct Contrast Hypothesis, also discussed in Gass (2003) within the context of SLA, stated the benefit of corrective feedback in terms of juxtaposing an error and a more target-like form, which helps L2 learners to compare their error with the correct form. Simple feedback that contrasts the error with the target-like form is expected to be more effective than complex feedback that addresses more than one error and/or supplies a target form that is significantly different from the error in its form or structure. Finally, posttest, the dependent variable, was coded as correct or incorrect responses. These variables are presented in Table 1 below.

| Table 1 |
|---------|---------------------------------|
| Variable | Description                     |
| Type     |                                 |
| Preemptive | Learner-initiated request for help with a linguistic issue |
| Reactive | Teacher-initiated corrective feedback |
| Source   |                                 |
| Message  | A problem with comprehension of meaning |
| Form     | A problem with production of form |
| Linguistic focus |             |
| Lexis    | Vocabulary or formulaic expressions |
| Grammar  | Morphology or sentence-level syntax |
| Feedback complexity |               |
| Complex | Feedback on multiple problems or supplying a target form different from the error in its form/structure |
| Simple  | Feedback on only one problem and supplying a target form resembling the error |
| Directness |                                 |
| Indirect | Feedback provided rather implicitly |
| Direct   | Feedback conspicuous enough to be recognized as such |
| Response |                                 |
| Elicit   | The correct form is elicited from the learner rather than provided |
| Provide  | The correct form is provided rather than elicited |
| Uptake   |                                 |
| No uptake | No apparent indication of recognition of feedback |
| Uptake   | Apparent indication of recognition of feedback |
| Successful uptake |                     |
| Unsuccessful | Uptake that does not contain the correct form |
| Successful | Uptake containing the correct form |
| Post-task report |                 |
| No report | No written report of learning of the target form |
| Report   | Report of the target form addressed during an FFE |

The following is an example of the coding scheme used for Episode 4 (FFE).
Episode 4 (FFE): Learner 2 (L2) - Teacher 2 (T2)

L2: And for the second, the reason why I want to study more in Master course emphasize my motivation.

T2: Yes, in graduate school.

L2: Yes, right.

**TABLE 2**

Coding Scheme for Episode 4 (FFE)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>1 Form</td>
<td>Incorrect form</td>
</tr>
<tr>
<td>Linguistic Focus</td>
<td>0 Lexis</td>
<td>Formulaic expression</td>
</tr>
<tr>
<td>Type</td>
<td>1 Reactive</td>
<td>Corrective feedback</td>
</tr>
<tr>
<td>(Teacher) Response</td>
<td>1 Provide</td>
<td>Provision of a correct form</td>
</tr>
<tr>
<td>Complexity</td>
<td>0 Complex</td>
<td>The correct form does not resemble the error</td>
</tr>
<tr>
<td>Directness</td>
<td>0 Indirect</td>
<td>No explicit error indication</td>
</tr>
<tr>
<td>Uptake</td>
<td>1 Uptake</td>
<td>Recognition of feedback</td>
</tr>
<tr>
<td>Successful uptake</td>
<td>0 Unsuccessful</td>
<td>Uptake does not contain the correct form</td>
</tr>
<tr>
<td>Post-task report</td>
<td>0 No report</td>
<td>The learner did not report learning of this form</td>
</tr>
<tr>
<td>Posttest</td>
<td>0 Incorrect</td>
<td>Failure to recall the correct form</td>
</tr>
</tbody>
</table>

A doctoral student specializing in second language studies served as the second rater and reviewed 20.7% (22 FFEs) of the coded data to obtain the reliability scores of the coding results. The researcher and the second rater reached a consensus on all the coding results except for directness. The simple percentage reliability score for directness was 86.4%.

2) Statistical Analysis

First, a descriptive statistical analysis was performed for the FFEs and EEs generated by the six teacher-learner dyads and then for the posttest results. Then, a chi-square test was performed with two dichotomous categorical variables, category (i.e., EE or FFE) and posttest (correct or incorrect), to measure their association. Finally, a logistic regression analysis was performed to address the second research question regarding the influences of the nine FFE features on L2 learning. An alpha level of $p < .05$ was set for all the statistical analyses.

Logistic regression was an appropriate choice for the statistical analysis for the current data because the dependent variable, posttest, was a dichotomous categorical variable (Loewen, 2005). There is an important assumption of logistic regression, however, which
is not strictly met in this type of analysis in interaction-based research, because each learner produces a different number of FFEs. This violation of the independence assumption might inflate the likelihood of making Type I errors (Saito, 1999). This is a persistent issue in interaction-based SLA research in general. Loewen (2005) explicitly addressed this issue by entering learner as an additional variable into the analysis, following the suggestion made by Saito. The model was compared with the main model without the learner variable. The results indicated that the original model was not substantially changed after the inclusion of the learner variable. This appears to be some evidence that the dependence issue may not pose a significant threat to the validity of a statistical analysis that involves interaction data. The current study also ran multiple models depending on the inclusion/exclusion of learner as a block in the analysis to see whether learner individual differences other than the FFE features have a significant influence on the posttest results.

The logistic regression analysis was performed in a series of stages guided by previous research and current SLA theory. Loewen (2005) identified uptake and successful uptake as significant predictors of correct scores on the delayed individualized posttest. Loewen ran his logistic regression model by choosing the forward stepwise entry option due to the scarcity of previous research findings regarding significant variables predicting L2 learning mediated by incidental focus on form.

Shekary and Tahirian (2006), a partial replication of Loewen’s study, also used the same entry option. In view of the pioneering nature of these two studies, it was appropriate that the researchers chose the forward stepwise entry method for their exploratory investigations. Those studies motivated the current study to perform a confirmatory analysis including the aforementioned nine FFE-related variables in the analysis due to their theoretical and empirical significance.

This study used Forced Entry Method, which is an option for a confirmatory investigation based on theory and previous research findings. The first step was to run a chi-square analysis for each of the independent variables to find their individual association with the dependent variable, posttest. The second step was to run a logistic regression analysis with all the nine variables. Then, to see whether learner individual differences in test performance might have also influenced the results, following the suggestion made by Saito (1999), learner was entered into the model as an independent block to see the result after the learner effect was taken into consideration. All statistical analyses were performed in SPSS 16.0.
IV. RESULTS AND DISCUSSION

1. To What Extent are FFEs more Effective Compared with EEs?

The descriptive statistical analysis results indicated that the 12 learner-teacher dyads produced 106 FFEs and 72 EEs in total. The reason for the lower frequency of EEs is that the linguistic types of errors contained in the EEs were matched to the type of forms addressed in the FFEs. Errors involving a form that had not been addressed in the FFEs were removed in order to make the comparison between the FFEs and EEs as valid as possible.

The 12 dyads produced a mean of 8.75 FFEs ($SD = 3.6$). Dyad 1 (Learner 1-Teacher 1) generated the fewest number of FFEs ($N = 3$) whereas Dyad 12 (Learner 12-Teacher 6) generated the largest number of FFEs ($N = 17$). Of the 106 FFEs, 57 revolved around grammar (lexical categorization, verbal morphological marker, tense, etc.), whereas 49 forms were either single lexical items (e.g., convenient, aquarium) or multiword lexical sequences (e.g., apply for, in charge of). The learners’ retention rates for the FFEs ranged from 33.3% to 100%, with the overall retention rate being 58.5%. The test results regarding the EEs showed a lower retention rate (22.2%). It should be noted that some learners successfully identified and corrected their errors despite the fact that there was no focus on form in those EEs. These individualized tailor-made posttest results are summarized in Table 3 below.

<table>
<thead>
<tr>
<th>Learner</th>
<th>FFE</th>
<th>EE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Items Correct</td>
<td>Items Tested</td>
</tr>
<tr>
<td>#</td>
<td>%</td>
<td>#</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>100.0</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>80.0</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>66.7</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>62.5</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>50.0</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
<td>61.5</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>42.9</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>33.3</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>90.0</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
<td>37.5</td>
</tr>
<tr>
<td>11</td>
<td>6</td>
<td>50.0</td>
</tr>
<tr>
<td>12</td>
<td>10</td>
<td>58.8</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>58.5</td>
</tr>
</tbody>
</table>
To answer the first research question regarding the relative effectiveness of FFEs and EEs for L2 learning, a chi-square test was performed to determine the relationship between category (106 FFEs and 72 EEs) and posttest. The results indicated that FFEs were significantly associated with correct scores on the posttest ($\chi^2 = 22.910, df = 1, p < .001$) whereas EEs were significantly associated with incorrect scores. The effect size value of $\Phi = .359$ ($p < .001$) indicated that their association was moderately strong. An odds ratio of 4.93 was also obtained indicating that the L2 learners were almost five times more likely to be correct on the posttest for FFEs than the test for EEs. This is clear evidence of the benefit of incidental focus on form compared with non-focus on form.

Loewen (2005) and Shekary and Tahririan (2006) reported 50% and 56.7% form retention rates for linguistic forms targeted during FFEs, respectively. Those studies, however, did not show how those percentages were compared to the baseline non-focus on form. The current study shows that the significant difference between 58.5% (FFEs) and 22.2% (EEs) and, more importantly, the odd ratio of 4.93 more clearly represents the superior effect of focus on form over non-focus on form on L2 learning. Thus, there seems to be good reason to address learner errors during communicative interaction rather than to focus exclusively on communication.

The inclusion of 72 EEs provides an important insight into drawing valid inferences about the individualized posttest results. As noted earlier, there was no focus on form element in all EEs. Nevertheless, 16 out of 72 were correct on the posttest, which implies the involvement of a certain level of learner prior knowledge in the correct responses other than the provision of needed linguistic information by the teacher. The following contrast between an FFE and an EE produced by the same learner clarifies this point further.

**Episode 5 (FFE): Learner 1 (L1) - Teacher 1 (T1)**

L1:  I will go to New York because it is *really famous city*.
     I will get there by cheap flight because I think that is good flight to me.
     I will see some famous musicals during the trip because I like musicals.

T1:  Good job! *But I think you missed "a" in front of the noun. Can you try it again?*
    Test result: Correct

**Episode 6 (EE): Learner 1 (L1) - Teacher 1 (T1) Test result: Incorrect**

L1:  Actually, I really want to go to New York this summer!
     *But I don’t have idea about that because I have never been to another city.*

T1:  Sounds fantastic!

Test result: Incorrect
The results are not surprising because the FFE has a [+ ] focus on form feature and the EE has none. Thus, an inference can be made on the basis of this contrast that the correct score is ascribed to the presence of the [+ ] focus on form in the FFE. However, a different picture emerges immediately after looking at another pair of FFE and EE below.

Episode 7 (FFE): Learner 2 (L2) - Teacher 2 (T2)
L2: Actually, I decided to go 1 week trip in the US.
T2: To take a one-week trip in the US?
L2: Yes, but I could not choose which city to go.

Test result: Correct

Episode 8 (EE): Learner 2 (L2) - Teacher 2 (T2)
L2: Then, so far, I made outline. Would you check it again?
T2: Sure.

Test result: Correct

The correct test score for Episode 8 (EE) was an unexpected result because there was no focus on form treatment. Without corrective feedback, the learner was able to self-correct her error. Thus, it can be inferred that the correct score has no relationship with focus on form (because there was no corrective feedback) and thus a valid interpretation may be that the error may have been a simple mistake and thus the learner was able to self-correct her own error based on her prior knowledge of the form.

Another possibility is that the error was a true interlanguage-related error, but she must have used her metalinguistic knowledge to identify and correct the error at that time the test item was given. Thus, caution should be exercised in interpreting the test results for the FFES because it is conceivable that on the test items for FFES, some learners may have corrected their errors by using their prior knowledge rather than recalling the teacher feedback. There is little doubt about the superiority of FFES over EEs in view of the chi-square analysis results. However, some learners may have corrected certain types of forms without exposure to focus on form. Taking this issue into consideration may help draw valid inferences regarding the relative effectiveness of focus on form over non-focus on form.

2. Which FFE Features Explain the Effectiveness of Focus on Form?

Given the finding that incidental focus on form is significantly more effective than non-focus on form, the second research question was concerned with which FFE features
explain the correct scores on the posttest. As discussed above, 62 items out of 106 FFEs were correct (58.5%) on the posttest. The exploratory chi-square test results indicated that type, complexity, directness, uptake, successful uptake, and post-task report were significantly related to the test results. The remaining three variables (source, linguistic focus, and response) were not significantly associated with the test results. Overall, the chi-square test results were considered to be congruent with current interaction-based SLA theory, which suggests that corrective feedback and learner response to feedback are beneficial for L2 learning (Mackey, 2007). These preliminary results are also partially consistent with Loewen’s (2005) and Shekary and Tahirian’s (2006) finding that uptake and successful uptake were predictive of L2 learning.

The results from the logistic regression analysis with all the nine variables indicated that feedback complexity, directness, and post-task report were significant indicators of correct scores (Table 4). When the learner variable was entered into the model as an independent block, the results indicated that learner differences in test performance did not have a significant effect on the test results ($p = .304$, $df = 11$). However, it was found that the significant effect of post-task report disappeared, as the results indicated that feedback complexity and directness were significant indicators of correct scores (Table 5).

**TABLE 4**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sig.</th>
<th>Exp. $b$</th>
<th>95% CI for exp. $b$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback complexity*</td>
<td>.016</td>
<td>3.95</td>
<td>1.29</td>
</tr>
<tr>
<td>Post-task report*</td>
<td>.019</td>
<td>6.97</td>
<td>1.37</td>
</tr>
<tr>
<td>Directness*</td>
<td>.028</td>
<td>4.08</td>
<td>1.17</td>
</tr>
</tbody>
</table>

* $p < .05$. Model ($\chi^2 = 34.629$, $df = 9$, $p < .001$), $R^2 = .375$ (Nagelkerke)

**TABLE 5**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sig.</th>
<th>Exp. $b$</th>
<th>95% CI for exp. $b$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback complexity**</td>
<td>.008</td>
<td>13.29</td>
<td>1.95</td>
</tr>
<tr>
<td>Directness**</td>
<td>.007</td>
<td>10.15</td>
<td>1.87</td>
</tr>
</tbody>
</table>

** $p < .01$. Model ($\chi^2 = 47.221$, $df = 20$, $p < .001$), $R^2 = .484$ (Nagelkerke)

Finally, only those six variables that were significantly related to the posttest results individually were entered into the model. This model without source, linguistic focus, and response produced the result that feedback complexity and post-task report were significant indicators of correct test scores. However, when learner individual variation was included in the model again, feedback complexity and directness were significant, but
the significant effect of post-task report disappeared again. These results are summarized in Table 6 and 7 below.

**TABLE 6**  
Logistic Regression Model 3: Six Significant FFE Variables Entered

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sig.</th>
<th>Exp. b</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback complexity*</td>
<td>.021</td>
<td>3.26</td>
<td>1.19</td>
<td>8.92</td>
</tr>
<tr>
<td>Post-Task Report*</td>
<td>.018</td>
<td>5.43</td>
<td>1.34</td>
<td>21.94</td>
</tr>
</tbody>
</table>

*p < .05. Model ($\chi^2 = 29.668$, df = 6, $p < .001$), $R^2 = .325$ (Nagelkerke)

**TABLE 7**  
Logistic Regression Model 4: Six Significant FFE and Learner Variables Entered

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sig.</th>
<th>Exp. b</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback complexity**</td>
<td>.006</td>
<td>9.66</td>
<td>1.89</td>
<td>49.41</td>
</tr>
<tr>
<td>Directness*</td>
<td>.017</td>
<td>5.87</td>
<td>1.38</td>
<td>25.01</td>
</tr>
</tbody>
</table>

*p < .05. ** $p < .01$. Model ($\chi^2 = 44.053$, df = 17, $p < .001$), $R^2 = .458$ (Nagelkerke)

To summarize, feedback complexity was consistently the only significant variable across all the models. The inclusion of the learner variable did not contribute to the model significantly. However, its presence in the model caused the effect of post-task report to disappear. This result seems to suggest that certain learners benefited more from conscious reflection of their interaction than others. For example, the retention rate for Learner 4 (L4) was 62.5% (five correct/eight tested), as shown in Table 3. She reported four of the test items on her post-task report, all of which were correct on the posttest. Of the other four items that were not reported, only one item was correct on the test. Thus, for L4, post-task report seems to have exerted a significant influence on the test result.

In contrast, Learner 11 (L11) retained six out of twelve test items correctly on the posttest, even though he reported no learning outcomes from the text chat session. Obviously, L11 relied less on post-task reflection. Directness was another significant variable in three of the models (1, 2, and 4). Even though it was not included in Model 3, this variable should be considered a crucial variable involved in determining the effectiveness of incidental focus on form because the other three models indicated its significance. The reason it was excluded in Model 3 on the significant variable list seems to be related to the presence of post-task report in the model as its odds ratio of 5.43 indicates that post-task report was serving as a stronger variable than directness.

These results need to be examined in relation to the findings reported in pertinent previous studies. In Loewen (2005), uptake and successful uptake were two significant predictors of correct scores both on the correction test and on the supplience test models.
Considering that his logistic regression models were exploratory ones that set the alpha level at .15, a different analysis with the alpha level of .05 would have identified successful uptake as the only significant variable in the models. Shekary and Tahririan (2006) also reported the same finding that successful uptake was the only predictor that was significant in the suppliance and spelling logistic regression models. In the correction model, timing was another significant variable. However, its significance \( (p = .15) \) seems to stem from the fact that the alpha level was set at .15. Given the findings of the two studies, successful uptake appears to be a crucial variable involved in L2 learning. However, as indicated earlier, it was not found to be a significant variable in the current analysis, even though it was significantly associated with test results individually.

This discrepancy may be explained by the inclusion of the stronger predictors, complexity, directness, and post-task report in the current models. This study lends support to the primary importance of the quality of feedback (feedback complexity and directness) that subsequently influences learner responses to feedback (uptake and successful uptake). Also, depending on the learner, an opportunity to review the chasertscript and to reflect on the linguistic content of the FFEs (post-task report) seems to be of significance especially within the context of text-based online chat.

The results from the four logistic regression models in this study and the findings of Loewen (2005) and Shekary and Tahririan (2006) were used to build a model of incidental focus on form. This model provides a helpful insight into the relationship between specific elements of incidental focus on form and short-term learning of the L2 (Figure 1). First, an error or a learner request for help triggers a FFE sequence. The next stage involves feedback. At this stage, feedback complexity and directness determine the efficacy of feedback supplied to the learner. The next stage concerns the learner's reaction to the feedback (uptake and successful uptake), which is followed by the opportunity for post-task reporting. Finally, the linguistic form addressed in the FFE undergoes learner-internal processing, the outcome of which is measured on the individualized posttest.

Figure 1 illustrates the influences of the independent variables on the posttest results. Chi-square tests were performed to see their association with each other and the arrows in the figure indicate a significant association as determined by the chi-square test results. This figure shows that feedback complexity and directness are the two key features of effective incidental focus on form (indicated as * in Figure 1). In the current data, the absence of these features led to more likelihood of an incorrect test score. In comparison, uptake, successful uptake, and post-task report can be viewed as facilitative features rather than necessary features because the learners retained many forms that were not influenced by these variables, yet their presence in the FFEs clearly led to increased likelihood of a correct score. Considering that the effects of these three variables are dependent upon the
provision of simple and direct feedback, their roles in effective incidental focus on form
should not be understood as primary. This model, albeit only cursory, helps understand
how incidental focus on form may influence L2 learning.

FIGURE 1
An Exploratory Incidental Focus on Form Model

V. CONCLUSION AND IMPLICATIONS

The findings of this study suggest that incidental focus on form in text-based online chat
has crucial implications for L2 learning. The direct statistical comparison between FFEs
and EEs made it possible to see the extent to which incidental focus on form is more
effective than purely meaning-focused interaction that does not address learner errors. At
the methodological level, the correct retention rate of 22.2% (16 correct out of 72 tested
for EEs) obtained for EEs revealed a potential pitfall in interpreting the results from an
FFE-based individualized posttest items with respect to the effect of incidental focus on
form on L2 learning.

A post-hoc analysis was conducted to identify the linguistic foci of the target forms of
the EEs the learners self-corrected. The results showed that all the forms were found to be
rule-based grammatical features except one lexical feature. This result may be interpreted
as the evidence that, on a posttest like the one used in this study, L2 learners may bring up
their explicit grammatical knowledge to supply correct answers to the test items targeting
grammatical structures. Although some of the errors may have been true indications of the
learners' gap in their productive knowledge involving those forms, some of the other errors
might have been simple mistakes or forms that they had at least some prior knowledge of.
Their prior knowledge may have helped them to self-correct their errors without exposure to corrective feedback.

Another implication is that, when providing corrective feedback, teachers should make the corrective intent sufficiently clear (+directness) and ensure that the feedback is simple so that learners may easily recognize the key difference between their erroneous form and the target-like form provided in the feedback (-complexity). Depending on the learner characteristics and the context of instruction, teachers should also encourage learners to incorporate the target-like form into their subsequent utterance (+successful uptake). Depending on the learners’ preference, teachers should help learners to reflect on their task performance to integrate their new discoveries about L2 form-meaning relationships into their L2 use. Text-based online chat seems to be a helpful tool for focus on form in that regard because the chatscripts made available immediately after the task may facilitate learners’ post-task reflection and reporting of their learning experience.

Teachers’ ability to provide effective corrective feedback may require some training. Teacher education programs may offer an appropriate training opportunity for novice L2 teachers to sharpen their interactional skills to manage incidental focus on form. Mackey, Polio, and McDonough (2004) showed that inexperienced L2 teachers may have difficulty dealing with linguistic issues simultaneously along with other content-related issues in communicative ESL classrooms. The teacher workshop the researchers provided for inexperienced teachers on incidental focus on form was found to be effective for improving the teachers’ knowledge and skills to implement incidental focus on form in their classroom. This finding seems to suggest that L2 teachers need to be equipped with knowledge of incidental focus on form and effective skills to maximize the efficacy of their focus on form techniques. The findings of this study could be used to develop a supplementary course module for English teaching methodology courses offered by many TESOL certificate programs and graduate schools in Korea. In such a course module, text-base online chat may be used as a tool for L2 teachers to interact with each other and exchange feedback on the effectiveness of their focus on form techniques based on their chatscripts.

Teaching English through English (TETE) in some public and many private English classrooms in Korea is another area that may benefit from the findings reported in this study, because TETE requires English teachers to have adequate skills to manage ongoing classroom interaction and to respond to learners’ various questions and errors at the same time. The findings of this study may be used to offer EFL teachers a helpful insight into how to provide optimal help for their students when the needed help involves questions about English or spontaneous errors. Also, public schools or other educational institutions may organize an additional English learning program for students who wish to improve their proficiency in an online context, which requires neither much physical space nor
expensive equipment.

Despite the contributions of this study to research on incidental focus on form in an SCMC context, several limitations need to be addressed in future research. First of all, only 12 ESL learners participated in this study. Larger data collected from more diverse populations of ESL/EFL learners need to be included in the statistical analysis to verify the internal and external validity of the findings reported in this study. More importantly, the potential influences of learners’ prior knowledge and individual differences on the posttest results need to be taken into account to establish a more valid causal link between incidental focus on form and L2 learning. A fine-grained analysis of learner-related variables such as working memory, proficiency level, and familiarity with text chat may be important in comparing the effect of learner variables with FFE variables. By taking these limitations into account, future studies are warranted to make more valid inferences about key variables involved in explaining the benefit of incidental focus on form for L2 learning and also to offer more practical pedagogical implications for ESL/EFL teachers and learners who seek to find effective ways of improving their L2 teaching skills or proficiency.

REFERENCES


82, 338-356.

**APPENDIX A**
Role-Play Task

**Situation 1: Sharing Travel Experience**

You are a student at the IEI, _____ University. You have decided to go on a seven-day trip this summer. This is your first time to plan a trip in the U.S., so you have no idea about where to go and what to do. You only have $500 to spend on this trip. Ask your ESL teacher for help because you
know that he/she has traveled to many places in the U.S. Based on your discussion with your teacher, decide on where to go, how to get there, and what to do during the trip. Also provide a short explanation of why you have made that decision.

- I will go to ____________ because...
- I will get there by ____________ because...
- I will ____________ during my trip because...

**Situation 2: Writing a Personal Essay**

You are taking an English composition class at the IEI, ________ University. You are planning on a bachelor's/master's-doctoral degree in __________ at ________ University (note: alternatively, this could be an application for a company). You know that the university/company requires you to submit a personal statement describing your motivation, relevant experience/education, and other important skills. The problem is that you have never written a personal statement like this before. You know that your ESL composition teacher is in his/her office today. Ask your teacher to help you to make a *detailed outline* of your five-paragraph personal statement. Each paragraph should have a main topic and relevant supporting details.

- Paragraph 1:
- Paragraph 2:
- Paragraph 3:
- Paragraph 4:
- Paragraph 5:

Applicable levels: tertiary education
Key words: focus on form, computer-mediated communication, text-based online chat

*Young Woo Cho*
Department of Educational Psychology
The University of Illinois at Urbana-Champaign
Room 226 Education Building
1310 6th St., Champaign, IL, 61820
Tel: 217-979-2102
Email: ywcho@illinois.edu
Received in June 2008
Reviewed in July 2008
Revised version received in August 2008