Four Questions for Error Diagnosis and Correction in CALL

RON COWAN
HYUN EUN CHOI
DOE HYUNG KIM

University of Illinois at Urbana-Champaign

ABSTRACT
Four important questions relevant to error diagnosis and correction in CALL are posed. These relate to the diagnosis of persistent L2 learner grammar errors, whether these can be corrected, what types of feedback from the computer are most efficient for focusing the students’ attention on this task, and the assessment of CALL programs designed to correct errors. A large corpus of L2 learner errors is shown to be highly beneficial for identifying persistent L1 transfer errors. The application of concordancing programs for this purpose is demonstrated. CALL courseware designed to serve as a platform for investigating correction of persistent grammatical errors made by Korean students learning English and variable feedback provided at different stages in the program are described. The evaluation of how effective error-correction courseware is at eliminating persistent mistakes requires follow-up studies using traditional evaluation measures. Insights into what program features promote focus on form and noticing may be obtained by user-tracker technology.

KEYWORDS
Second Language Acquisition, Corpus Linguistics, L1 Transfer Errors, Variable Feedback, Evaluation

1. INTRODUCTION
In this paper we intend to pose four important questions relevant to error diagnosis and error correction in CALL programs. These questions are motivated by unresolved issues in second language acquisition (SLA) research, and we believe that attempting to answer them will expand our general knowledge of how instructed second languages are learned and will provide a basis for developing more effective CALL programs. In the course of discussing how these questions may be investigated, we will refer to an experimental CALL program at the University of Illinois—the ESL Tutor—which is intended to be a research platform for exploring issues related to error correction. We will demonstrate how this platform is currently being used to investigate variables such
Four Questions for Error Diagnosis and Correction in CALL

as structured negative feedback and the promotion of noticing in student feedback that are of theoretical as well as practical interest.

2. DIAGNOSING PERSISTENT ERRORS

The first question concerns error diagnosis and may be formulated as follows: Which error types can be identified as persistent over time as the learner’s proficiency increases? It is generally accepted that grammatical errors may have multiple sources, among which are overgeneralization, L1 transfer, imperfect learning, and performance phenomena similar to those that occur when speaking a native language. Most language teachers and researchers take the position that many grammatical errors will vanish as learner proficiency increases, but it is equally clear that some grammatical errors continue to appear as L2 learners attain higher levels in the development of their interlanguage. Such errors would seem to warrant special emphasis in CALL programs, which, we believe, hold considerable potential for correcting them, even though it is not at all clear that mature language learners can eradicate them permanently. These “persistent” errors represent the ultimate challenge to correction, but their existence is supported largely by anecdotal evidence. Consequently, an empirical basis for identifying them is necessary before pedagogy can be initiated. The research program that we have undertaken has the goal of determining whether persistent errors can be corrected, and, if so, which methods are most effective for correcting them.

3. THE USE OF A CORPUS FOR IDENTIFYING PERSISTENT ERRORS

Granger (2002) makes an extremely persuasive argument for drawing on large corpora to investigate L2 learner errors. She refers to the procedure we have used in our project as “computer-aided error analysis,” noting that although error analysis “often arouses negative reactions,” it is nevertheless “a key aspect of the process which takes us towards understanding interlanguage development and one which must be considered essential within a pedagogical framework” (Granger, 2002, pp. 13-14). Incorporating and expanding on Granger’s (1998) recommendations, we believe that a corpus for determining persistent grammatical errors of L2 learners should have the following characteristics. It should (a) encompass different levels of proficiency, (b) consist of extensive samples of learner language that facilitate analysis of grammatical errors caused by phenomena beyond the boundaries of the sentence, (c) be labeled so that researchers and materials developers can determine whether the total number of errors of a given type is produced by a small number of learners or by many different learners, and (d) be fairly large (see Granger, this volume). Of course, written or spoken corpora provide equally valid data, but written corpora have two advantages. First, written grammar errors provide the ultimate record of linguistic competence because L2 learners can edit their written language to the fullest extent that their competence permits and correct slips, something they
cannot readily do when speaking. Second, written corpora are easily converted into electronic data, which permit the use of concordancing and tagging programs in error analysis.

At the University of Illinois we have begun to assemble a corpus consisting of texts produced by Korean, Spanish, and Japanese ESL students enrolled in courses at the Intensive English Institute (IEI) and for four proficiency levels of remedial writing courses (ESL Service Courses). The IEI prepares students for entry into other universities and colleges; the ESL Service Courses are required for those international students at UIUC who still need additional English instruction to bring their writing up to a level adequate for academic performance. The cline of proficiency ranging from the students in the IEI up through those in the Service Courses facilitates the identification of persistent errors since only these errors will continue to be found in the highest levels of the Service Courses. We currently have an electronic data bank of 395 essays encompassing a total of 210,547 words for the Korean students in the Service Courses. The distribution of words and essays by course is shown in Table 1.

Table 1
Error Corpus for Koreans in ESL Service Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Number of essays</th>
<th>Number of words</th>
</tr>
</thead>
<tbody>
<tr>
<td>114/115</td>
<td>84</td>
<td>56,844</td>
</tr>
<tr>
<td>400</td>
<td>15</td>
<td>4,417</td>
</tr>
<tr>
<td>401</td>
<td>227</td>
<td>131,137</td>
</tr>
<tr>
<td>402</td>
<td>33</td>
<td>18,139</td>
</tr>
</tbody>
</table>

The distribution of the data sets are bimodal, and the smaller data sets for ESL 400 and 402 will undoubtedly affect the frequency counts that we obtain for targeted items in these courses. Also, the data differ in terms of length and essay type across levels. The writing samples from the IEI courses consist of smaller paragraphs, whereas the Service Course samples are complete essays on a given topic. Instructors usually assign only one of several types of essays in EIL 114/115. A greater variety of longer essays is assigned in the other three levels—EIL 400, 401, and 402. In 402, students write longer essays about topics in their fields. Using just the corpus drawn from the Service Courses, we will demonstrate how concordance programs can assist in targeting persistent errors for correction research. We omit the data from the IEI since they are substantively different, for the reasons stated above, and hence are not as germane to this demonstration.

4. SELECTING GRAMMATICAL TOPICS FOR ERROR RESEARCH

Our diagnosis of errors that could constitute good candidates for error correction research is guided by two factors: (a) published SLA reports of errors that
Four Questions for Error Diagnosis and Correction in CALL

are made by ESL/FL students who speak languages typologically similar to Korean, and (b) errors, discovered from sampling essays produced in all of the above courses, that appear to occur with very high frequency. When a small number of errors that fall into these two categories is found, we apply the Concordance 3.0 program to the entire corpus to determine whether the overall frequency of occurrence throughout the higher level courses could justify targeting them for research. The following example that relates to published SLA research illustrates the procedure.

The overpassivization of unaccusative verbs by L2 learners of English with L1s ranging from Chinese to Arabic has been noted by a number of scholars. Two of the most extensive treatments, Yip (1995) and Ju (1997, 2000), discuss this phenomenon with reference to Chinese ESL learners, who overpassivize English unaccusatives that do not have transitive counterparts (happen, occur, disappear, etc.) producing sentences like *the accident was occurred early in the morning. They also overpassivize unaccusatives that have transitive counterparts (increase, decrease, improve, change, continue, etc.) where the inchoative sense is the only appropriate choice, producing errors like *over the past decade the birthrate was changed instead of over the past decade the birthrate has changed. Yip proposed a “transivitization” hypothesis to account for this phenomenon. She hypothesized that Chinese learners view unaccusative verbs as underlyingly transitive. When they see a verb which has a subject in a patient role, they feel the need to make it equivalent to true passives with transitive verbs by adding passive morphology. An alternative explanation offered by Zobl (1989) is that L2 learners acquire a lexical rule which is subsumed under the passive rule. Korean appears to be closer to this second explanation. Korean verbs that are equivalent to English unaccusatives appear in L1 sentences with the passive morpheme. When we began to spot-check essays in various courses, we found a number of cases where Korean ESL students had incorrectly passivized both types of English unaccusatives. As a result, we ran Concordance 3.0 on 30 unaccusative verbs of both types on our entire learner corpus. The results for each course level are shown in Table 2. The percentage of errors is shown for each verb followed by the total number of instances of the verb in a given subcorpus. For example, 30% (10) indicates that the total error percentage is computed on a total of 10 occurrences of that verb in the essays for this course level. A zero in a column means that no instances of error for that verb occurred. An entry like 0 (7) indicates that 7 instances of the verb were found, all without error.

The larger total number of occurrences for each verb in the 401 course compared to the 114/115 courses is due to the larger size of that subcorpus and perhaps also to the fact that students in 401 write a greater variety of essay types. The subcorpus for 402 is much smaller than either 114/115 or 401, which would account for the smaller number of errors found. The size of the ESL 400 corpus is so small that no errors of this type were found. Overall, more errors occur with unaccusatives that have transitive counterparts than those that do
Ron Cowan, Hyun Eun Choi, and Doe Hyung Kim

Table 2
Overpassivization Errors in the Korean Corpus

<table>
<thead>
<tr>
<th>Verb</th>
<th>ESL 114/115</th>
<th>ESL 401</th>
<th>ESL 402</th>
</tr>
</thead>
<tbody>
<tr>
<td>change</td>
<td>30.0% (10)</td>
<td>62.9% (27)</td>
<td>50.0% (2)</td>
</tr>
<tr>
<td>consist</td>
<td>0.0% (2)</td>
<td>0.0% (7)</td>
<td>33.3% (3)</td>
</tr>
<tr>
<td>continue</td>
<td>16.7% (6)</td>
<td>38.8% (18)</td>
<td></td>
</tr>
<tr>
<td>decrease</td>
<td>12.5% (8)</td>
<td>43.5% (16)</td>
<td></td>
</tr>
<tr>
<td>disappear</td>
<td>25.0% (4)</td>
<td>40.0% (5)</td>
<td></td>
</tr>
<tr>
<td>exist</td>
<td>66.7% (3)</td>
<td>25.0% (4)</td>
<td></td>
</tr>
<tr>
<td>happen</td>
<td>0.0% (8)</td>
<td>10.5% (19)</td>
<td></td>
</tr>
<tr>
<td>improve</td>
<td>50.0% (2)</td>
<td>66.7% (12)</td>
<td></td>
</tr>
<tr>
<td>increase</td>
<td>0.0% (12)</td>
<td>25.0% (36)</td>
<td></td>
</tr>
<tr>
<td>last</td>
<td>25.0% (4)</td>
<td>0.0% (6)</td>
<td></td>
</tr>
<tr>
<td>occur</td>
<td>18.0% (11)</td>
<td>19.2% (26)</td>
<td></td>
</tr>
<tr>
<td>originate</td>
<td>0.0% (0)</td>
<td>20.0% (5)</td>
<td>100.0% (1)</td>
</tr>
<tr>
<td>result</td>
<td>0.0% (0)</td>
<td>18.0% (11)</td>
<td>50.0% (2)</td>
</tr>
<tr>
<td>suffer</td>
<td>0.0% (11)</td>
<td>25.0% (12)</td>
<td></td>
</tr>
<tr>
<td>vanish</td>
<td>0.0% (0)</td>
<td>12.5% (8)</td>
<td></td>
</tr>
</tbody>
</table>

not, but the percentages for the latter are still quite high. The fact that errors in both types of verbs are found at all three of the upper level courses, including instances of repeated errors for individual students, indicates that this is a persistent problem worth targeting for correction research. Interestingly, **exist**, a stative verb, was also passivized, suggesting that some overgeneralization to other verbs is occurring.

On the basis of these data, we concluded that a unit in our CALL program that addresses both types of unaccusative verbs should be developed, but greater emphasis should be placed on getting Korean students to recognize those errors where unaccusative verbs with transitive counterparts are being incorrectly passivized, that is, in those contexts in English where only an inchoative meaning is appropriate. Basing the selection of errors to be targeted for correction research on empirical data yields a more realistic picture of what kinds of errors do not disappear as L2 learners attain higher levels of proficiency, and it also provides us with many examples of error types that can be built into the CALL program. The application of the concordance program to the corpus also yields a frequency breakdown of kinds of errors within a given syntactic category. An example of this was found for an L1 transfer error that is not part of published research—English demonstrative determiners. Korean has only one morphemic representation of the demonstrative determiners **this/these** (i-) and one for **that/those** (ce-). As a result, Korean ESL learners place singular forms in front of plural head nouns (e.g. *this mistakes*) and plural forms in front of singular nouns (e.g. *these argument*). The concordance program revealed that although both types were found in our corpus, twice as many errors involving plural demonstrative forms occurred than singular forms.
Four Questions for Error Diagnosis and Correction in CALL

In addition to the two persistent errors discussed above, we currently have isolated eight other error types for Korean students that are clearly induced by L1 syntax: quantifiers (*most of students for most students and most of the students), articles (Korean contains no equivalent hence both indefinite and definite articles are omitted), prepositions following verbs (*focus in the effects for focus on the effects) and preceding NPs (*living at the 21st Century) as well as the inclusion of prepositions which are not necessary with English verbs (e.g. *answering to the questions for answering the questions), pseudo-tough movement structures (*Koreans are difficult to learn English for It is difficult for Koreans to learn English), conditional sentences (incorrect tense sequences across future, hypothetical, and counterfactual conditionals), tense (present progressive used in contexts where the simple present is required), modals (the “obligation” meaning of must used in contexts where the “advisability” meaning of should is appropriate), and certain types of anaphora (“sentence” anaphora with demonstrative pronouns—He helped the poor people. *I was impressed by it for I was impressed by that). The concordancing program has been helpful in identifying errors that are governed by lexical classes (e.g., pseudo-tough movement), but some types of grammatical errors such as the wholesale omission of articles can only be located by reading entire texts and recording the omissions. (See Granger’s comment on “underuse” in tagging in this volume.)

5. ERROR CORRECTION

The second question concerns error correction and the issue of “learnability” in SLA. It may be framed as follows: Is error correction effective in changing persistent errors? There is still considerable debate as to whether negative evidence in some form—correction with or without reference to the source of the error—is effective. Researchers within the UG paradigm have consistently maintained that only positive evidence, that is, L2 input without error correction, is sufficient for shaping the learner’s interlanguage (Schwartz & Gubala-Ryzak, 1992). This theoretical position holds that some errors may not be amenable to correction; transfer errors that arise because the L1 value of a parameter fixed at the initial state of learning (Schwartz & Sprouse, 1996) may conflict with the setting of the L2 parameter. Correcting these transfer errors results in only transient short-term effects, but only one study (White 1991, 1992) supports this assertion. Yip (1995) demonstrates that some errors made by Chinese ESL students are produced by pattern resemblance to English constructions as well as overgeneralization. Her research suggests that negative evidence can be effectively applied in certain cases but that other errors will correct themselves if instruction simply supplies additional positive evidence (more examples) of the grammatical construction in question.

Many CALL programs, especially those incorporating natural language processing, are predicated on the assumption that the correction of all student errors is beneficial, and there is some evidence to support this conclusion (Nagata
1995, 1997, 2002). However most of this research relates to the use of CALL programs with learners who have low and intermediate proficiency and provides little evidence of whether instruction involving error correction has a lasting effect. To the best of our knowledge, there are no published reports of the effectiveness of error correction on “persistent” L2 transfer errors. We therefore regard this issue as an important question that has implications for SLA as well as for the development of CALL materials.

6. THE ESL TUTOR

The ESL Tutor CALL program provides a platform for investigating whether persistent errors can be eradicated. It has been developed to assist students who make the types of persistent grammatical errors described above. It utilizes negative feedback in the form of lessons which draw the students’ attention to the cause of the types of errors they make and provides subsequent practice in recognizing and correcting them.

In an instructional setting the program would be used as follows. The composition teacher selects one or more grammatical topics in the Tutor menu that address the errors which have been discovered in the students’ essays and directs students to the Tutor lessons which enhance their ability to recognize and avoid making these errors. After logging in, the students choose a mini-lesson that covers the type of error that the teacher has indicated as helpful for this purpose. Section A of the lesson refreshes the students’ memory of the rules relating to that grammar topic. After the students study the content of this section, they proceed to section B, in which they are asked to supply grammatical judgments in a series of sentences. The sentences contain correct examples of the grammar rule and one or two others that involve errors typically made by speakers of Korean. They receive feedback on incorrect judgments that leads them to section C, where they see a pedagogical explanation that shows how the L1 induces the grammatical error in question and provides tips about what to watch out for in the future.

An example of a pedagogical explanation for the overpassivization errors that Koreans make is shown in Figure 1. This explanation addresses unaccusative verbs which do not have transitive counterparts. Unaccusatives that have transitive counterparts are covered in another frame, omitted here because of space limitations.

After reading this mini-lesson, the students are presented with a series of sentences and short paragraphs which do or do not embody the error type they have studied. If the students detect an error, they highlight it with the cursor. If they correctly identify the error, they are asked to type in a correction. If the correction is on target, the students are advised of their correct answer and complimented. However, if students repeatedly supply deviant corrections, they are provided with variable feedback intended to draw their attention to the grammatical structure that was taught in the previous mini-lesson. After they work through this practice, the students take a chapter achievement test that involves
Four Questions for Error Diagnosis and Correction in CALL

recognizing and correcting errors in larger passages. Later, they are directed to a summary achievement test that involves recognizing and correcting errors from several different chapters in longer passages. A diagram of a typical lesson is shown in Figure 2.

Figure 2
Typical Lesson Structure
7. CALL FEEDBACK FOR ERROR CORRECTION

The variable feedback that the students receive in the lessons is intended to provide data that will answer the third question that has become a legitimate research issue for CALL programs: *What kind of feedback supplied to the learner is most effective in correcting (in this case, persistent) grammatical errors?* Chapelle (1998) points out that CALL programs must promote noticing (focus on form) that will result in the improvement of students’ existing grammatical knowledge, and Hegelheimer and Chapelle (2000) present an excellent account of previous approaches taken in investigating noticing in CALL. Research on noticing will obviously depend to some extent on the linguistic skills that the CALL program emphasizes. Our research strategy is to construct different types of feedback to be provided during the students’ efforts at identification and correction and to study which of these types of feedback leads to more frequent satisfactory results with the fewest number of correction attempts.

We have designed different types of feedback for different sections of the program, but they all have one feature in common—the learner is induced to focus on the grammatical knowledge necessary for correctly identifying or correcting an error. For example, if students do not correctly highlight an overpassivization error in a sentence, they receive a response: “Wrong choice. Try again.” If the next attempt fails, they receive the following prompt: “Remember that you are focusing on *Passive.* Try again.” If the third attempt fails, students are given the prompt: “Uh-uh. Have a look at the instructions for highlighting the error” followed by pop-up directions. Learners receive metalinguistic feedback if they correctly identify an error but then type in an erroneous correction. If students type “is lasted” to correct “will be lasted” in a sentence such as *Although we have had a lot of success with this program, it is hard to know how long it will be lasted,* they receive the prompt “Is lasted?” In the test units that follow the corrections, we insert feedback similar to the negotiation of form approach exemplified by Van den Branden (1997) in which the computer response is a more direct attempt to encourage “self-repair.” If students are unable to highlight the overpassivization errors in the following sentence, *Traffic has been rapidly increased in many metropolitan areas in the course of the last 30 years,* feedback similar to what a teacher might say in a face-to-face interaction is supplied, that is, “Has BEEN rapidly INCREASED?”

Our attempts at building in variable feedback modeled on noticing research have not been entirely satisfactory. Some failed attempts by students at error identification are due to incorrect highlighting, but this situation can usually be corrected by lengthening the boundaries around the errors. Typing errors are more difficult to deal with, hence one of the feedback measures must entail an admonishment to pay attention to spelling. Still, we have not found the most efficient approach to getting the students to focus on form, and our future endeavors will involve close comparisons of different types of responses in both the identification and correction phases of the program.
8. EVALUATING THE EFFECTIVENESS OF ERROR CORRECTION

The fourth question that needs to be posed with regard to error correction in CALL is: What approaches to evaluation will provide valid and reliable answers as to whether persistent errors can be eradicated? Both quantitative and qualitative evaluation have been advocated for CALL programs. Although we are just beginning to apply evaluation measures in our research, we believe that a mixture of these approaches will yield the most useful data. To examine whether the CALL program we designed actually leads to improved performance, we ran a preliminary study using a quasi-experimental pre-/posttest design with passages containing some of the error types made by Korean students. Twenty-two Korean students who had been at the university for at least four semesters and who had taken one of the service courses were asked to read extended passages that had 5 errors in each of three syntactic categories (passives, indefinite articles, and noun plurals) and 5 correct instances in each. The subjects were asked to correct any grammatical errors they found. The next day, they completed the lessons on these topics in the ESL Tutor. When given the same passage as a posttest and asked to perform the same task again, their gain scores for finding and correcting errors in the three categories improved significantly, t(62) = 8.78, p < .0001. A repeated-measures ANOVA revealed a significant interaction between structure type and differences on pre- and posttests (F(2, 60) = 5.01, p < .01). Tukey HSD tests revealed a significant difference in gain scores, performance on passive being significantly higher than on plurals (p < .01). Learners also improved more on passives than indefinite articles, but not significantly. There were no significant differences in improvement between indefinite articles and plural nouns.

This preliminary investigation suggests that it may be possible to correct persistent errors and that errors which are lexically determined, such as unaccusative verbs, may be easier to correct than errors which are syntactically or pragmatically determined, such as the use of articles. However, the issue of whether persistent errors can be eradicated can be determined only by running follow-up tests of this type after a longer period of time has elapsed. Such tests are seldom run in CALL or SLA research, but we intend to include them in our research program. Taking a cue from Collentine (2000), we also feel that user-tracker technology can be usefully employed to study the interaction of the student with the computer. We believe that we may get a more accurate reading of which features of our program may impede the noticing process and what kinds of phenomena hold learners’ attention by programming time-on-task measurement and recording the words and phrases which the students incorrectly highlight as errors. Future studies will incorporate both of these measures.

9. CONCLUSION

In this paper we have posed four questions that are relevant to error diagnosis
and correction in CALL programs. These questions can serve as guidelines for research that can advance our general knowledge of the extent to which L2 learners’ interlanguage grammar can be permanently modified. Just as Chapelle (1998) has suggested that the results of SLA have much to offer CALL design, so we would claim that CALL offers an excellent platform for rigorously testing hypotheses derived from SLA theories. However, we have noted that some types of errors which appear to be particularly resistant to correction do not fall within the parameters of current theoretical models. Targeting these errors for correction research through CALL may produce data that lead to a more comprehensive picture of L1 transfer. One tentative hypothesis that we might pose on the basis of our initial pilot study is that the relative resistance to correction may be due to the type of error, as suggested in the following hierarchy ranging from most to least difficult to correct: pragmatically determined > discourse determined > syntactically determined > lexically determined. Testing such hypotheses requires the use of conventional designs supplemented by computer technology that could provide insights into the cognitive processes that learners deploy while engaged in learning tasks. Finally, we have shown that the use of technology applied to a corpus of learner errors is useful in identifying errors that persist in the L2 learner interlanguages, and we have indicated how CALL holds promise for examining the effectiveness of feedback and learner noticing. This suggests that future collaboration between SLA researchers, corpus linguists, and CALL specialists has considerable potential for advancing our general knowledge of how second languages are learned as well as for the development of more effective CALL instruction.

NOTES

1 One reviewer suggested that the type of essays (e.g., argumentative and contrastive) as well as the topics that the students are assigned may contribute to the number of instances of unaccusative verbs. This explanation seems plausible. The interaction of essay type, topic, and syntactic construction could be a subject of future investigation.

2 There is one interesting Ph.D. dissertation, Mogilevski (2002), that studies this issue with students of French.

3 The importance of tracking student errors in CALL was pointed out as early as 1988 by Garrett.

REFERENCES


Four Questions for Error Diagnosis and Correction in CALL


**AUTHORS’ BIODATA**

Ron Cowan is Associate Professor in the Division of English as an International Language and the Department of Linguistics at the University of Illinois at Urbana-Champaign (UIUC). His areas of interest are psycholinguistics, SLA, research methodology, and pedagogical grammar. He is the author of the *ESL Tutor* and the director of the research project described in this article.

Hyun Eun Choi is a Ph.D. candidate in Educational Psychology at the University of Illinois. She is a consultant at WebTech and the UIUC Language Laboratory and coordinator for the team of graduate students carrying out the linguistic research for this project.

Doe Hyun Kim is a Ph.D. candidate in Educational Psychology at the University of Illinois. He is the chief programmer and designer for the *ESL Tutor*. He is a computer consultant in the School of Education at the University of Illinois.

**AUTHORS’ ADDRESSES**

Ron Cowan
University of Illinois at Urbana-Champaign
3070 Foreign Languages Building
707 S. Matthews Street
Urbana, IL 61801
Email: j-cowan@uiuc.edu

Hyun Eun Choi
University of Illinois at Urbana-Champaign
Educational Psychology
226 Education
1310 Sixth Street
Urbana, IL 61801
Email: hyunchoi@students.uiuc.edu

Doe Hyun Kim
University of Illinois at Urbana-Champaign
Educational Psychology
226 Education
1310 Sixth Street
Urbana, IL 61801
Email: dkim12@uiuc.edu
Come see why we were visited over 10,000 times last month

AGORA LANGUAGE MARKETPLACE

www.agoralang.com

for comprehensive listings of language publishers, schools, study abroad, learning center services, and other professional language services