

Helping Each Other: Scaffolding in Electronic Tandem Language Learning

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Abstract: This paper presents the results of a study that examined learner scaffolding in e-mail tandem exchanges between secondary ESL and FSL students. A group of French-speaking ESL students in a secondary school in Quebec communicated by e-mail with a group of English-speaking FSL students in a secondary school in Ontario. This study was carried out following the principles of online tandem learning (Brammerts, 1996; Little et al., 1999), a form of computer-mediated communication in which two native speakers of different languages communicate with one another for the purpose of learning the other's native language. In this type of exchange, students are asked to use the L1 and L2 in equal proportion and to correct each other's mistakes. Drawing on a sociocultural perspective (Lantolf, 2000), this study sought to answer the following question: What strategies are employed by secondary ESL and FSL students to provide scaffolding to their e-mail tandem partners? E-mails were coded using a taxonomy adapted from Villamil and Guerrero's (1996) taxonomy of "substrategies for providing scaffolding". Findings showed that both ESL and FSL students provided scaffolding to one another by resorting to a variety of strategies.

Keywords: Scaffolding, Tandem Language Learning, Computer-mediated Communication

Introduction

THE PRESENT STUDY is informed by Vygotsky's concept of learning and teaching in the *zone of proximal development* (ZPD), that is to say, the claim that more capable peers and adults play a critical role in providing the guidance and assistance that enable the learner to become an increasingly autonomous participant in the activity in which he/she engages (Vygotsky, 1978). Working within the learner's ZPD, the "expert" (e.g., an adult, a teacher, a more proficient peer, or a native speaker) helps the "novice" (e.g., a child, a learner, a less proficient peer, or a non-native speaker) move from a state of being *object-regulated* to eventually becoming *self-regulated* (Vygotsky, 1978, 1986; Wertsch, 1998). This process is facilitated through *scaffolding* (Bruner, 1978; Wood, Bruner & Ross, 1976). In 1976, Wood, Bruner, and Ross introduced the term scaffolding in the context of an analysis of adult-child interaction. They described *scaffolding* as "a process that enables a child or novice to solve a problem, carry out a task, or achieve a goal which would be beyond his unassisted efforts" (p. 90).

Studies working within a sociocultural perspective in the area of computer-mediated communication (CMC) (e.g., Belz, 2001, 2002; Belz & Kinginger, 2003; Lee, 2004; Thorne, 2003, 2006) have found that non-native speaker (NNS) and native-speaker (NS) online collaboration may promote *scaffolding* by which the NS assists the NNS in composing meaning (ideas) and form (grammar), thus enhancing performance through the NNS's ZPD. However, the settings of instruction in which the majority of these studies were conducted have been limited to higher education and adult learners. The present paper reports on data that form

part of a larger study examining the nature of the e-mail tandem exchanges between English as a second language (ESL) and French as a second language (FSL) secondary school students (Priego, 2007). The data analysis reported here seeks to investigate the strategies used by secondary second language (L2) students to provide scaffolding to their e-mail tandem partners. The specific research question asked is: What strategies are employed by secondary ESL and FSL students to provide scaffolding to their e-mail tandem partners? In the present study, *scaffolding* is defined as the strategies used by students to assist their tandem partners in extending their current L2 skills and knowledge. In other words, tandem partners in the role of NS tutor and NNS learner were expected to provide guided support to each other through e-mail interaction with the purpose of helping each other achieve task goals (e.g., improve their L2 written skills and understand the texts).

Methodology

Participants

This study involved two secondary schools in Canada: one group of 30 French-speaking ESL students in a secondary school (Secondary 4) in the province of Quebec and two groups of English-speaking FSL students (total 30) in a secondary school (Grade 11) in the province of Ontario.

Before the e-mail exchange, all students were given a background questionnaire that touched upon their general, personal and linguistic backgrounds as well as their computer skills. Students were asked to express their preference regarding the gender of the student they wished to communicate with. Pairing up of students was established on the basis of age and gender-preference. Both groups consisted of the same number of boys (n=14) and girls (n=16) aged 15 to 17. The average age of the ESL and FSL students was 15.6 and 16.4, respectively. All ESL students and their parents were native French speakers. The two FSL classes consisted of 25 students born in Canada, four in India, and one in Jamaica. For five students, the first language learned at home was not English. However, the years they had been studying in an English-speaking school ranged from 9 to 14 years.

E-mail Tandem Project Design

Following recommendations made in similar previous studies (e.g., Gonglewski, 1999; Greenfield, 2003; Pérez, 2003; Warschauer, 1996), this e-mail tandem project was integrated into the students' regular class activities in order to ensure accountability of the students. In addition, in order to sustain students' motivation, the e-mail project consisted of a series of tasks (Appel & Gilabert, 2002; Barson et al., 1993; Gray & Stockwell, 1998; Hedderich, 1997; Müller-Hartmann, 2000; Ushioda, 2000). For an overview of the tasks included in this project see Table I.

Table I: Overview of Tasks

WEEK	TASKS
A) CORRESPONDING WITH YOUR TANDEM PARTNER	
1	Send “Hello e-mail” (50% in French, 50% in English).
2	Reply to your tandem partner’s “Hello e-mail” (50% in French, 50% in English).
3	As homework, read <i>article #1</i> . Use reader response form (blue sheets). In class, sit with your team and talk about the article. Send e-mail to your tandem partner.
4	Reply to your tandem partner’s questions in French. Read your partner’s e-mail. Write a report in English. Send your report to your tandem partner.
5	In class, rewrite your report using the feedback given by your tandem partner. Use report form # 1-Draft 2 (green sheets).
6	As homework, read <i>article #2</i> . Use reader response form (blue sheets). In class, sit with your team and talk about the article. Send e-mail to your tandem partner.
7	Reply to your tandem partner’s questions in French. Read your partner’s e-mail. Write a report in English. Send your report to your tandem partner.
8	In class, rewrite your report using the feedback given by your tandem partner. Use report form #2 -Draft 2 (green sheets).
9	As homework, read <i>article #3</i> . Use reader response form (blue sheets). In class, sit with your team and talk about the article. Send e-mail to your tandem partner.
10	Reply to your tandem partner’s questions in French. Read your partner’s e-mail. Write a report in English. Send your report to your tandem partner.
11	In class, rewrite your report using the feedback given by your tandem partner. Use report form #3 -Draft 2 (green sheets).
12	Send “good bye/thank you” e-mail to your tandem partner.
B) PREPARING THE FINAL ORAL PRESENTATION	
13	Read your tandem partner’s good-bye e-mail. Take one oral presentation note-taking form (pink sheets). Compare and contrast your opinions with those of your tandem partner for each of the articles you discussed.
14	Prepare your oral presentation.
15	Oral presentation in teams.

On the first day of the project, the ESL and FSL teachers participating in the study introduced the project to the students. Students received a binder with the project description and all the task sheets pertaining to the project. Each task sheet was of a different color to facilitate its identification. The teachers also showed students how to use the WebCT (Web Course Tools) technology that served as the software platform during this project. Over the course of the project, students were asked to read three articles. For each article, students were required to complete a *reader response form* in which they were to identify several points they found to be of interest. They were also asked to give their opinion about it trying to illustrate their point of view with examples from their personal experience. Furthermore, they were also required to draft several questions which they would ask their partners in order to ascertain their opinion about the topic. Prior to sending their e-mails, topics drawn from the assigned reading were discussed in teams in students' respective L2 classes. When working in teams, students were expected to help each other to better understand the text. Consequently, they were asked to note points raised by their peers. Students then sent their partners an e-mail using their reader response forms. When they received an e-mail from their partner, they reacted to their partner's message. Following the discussion of each topic, students were instructed to write a *report* (a minimum of half a page) in which they compared and contrasted their opinions with those of their tandem partner regarding the topic they had read about in their L2. They then sent this report by e-mail to their partners and asked them to correct it. Subsequently, students were instructed to rewrite their reports, using the feedback provided by their tandem partners, and to make any other changes they deemed appropriate. At the end of the project, students were asked to prepare a *final oral presentation* in teams in which they compared their opinions on the three topics they had discussed with those of their counterparts. This final oral presentation was presented in front of the whole group.

Following the principles of tandem learning (Appel, 1997, 1999; Brammerts, 1996; Little & Brammerts, 1996; Little et al., 1999), students were instructed to compose their e-mails both in their target language (L2) and in their first language (L1)¹. However, an adjustment to the traditional 50/50 use of the students' first language and target language, as has been suggested in the tandem language learning literature, was made. As a result, students were asked to write about the L2 text they had read, to give their opinion and ask for their partners' opinions about the article's topic in their L2, and to respond to their tandem partners' questions in their L1. In this way, students could more easily use the input provided by their partners to write their reports in their L2. Students were also explicitly instructed to correct the mistakes made by their tandem partners in previous correspondence. Students could use their L1 or their L2 when correcting their partners' mistakes. Following the suggestion given by DiGiovanni and Nagaswami (2001) and Schwienhorst (2002), after students had corrected their partners' first e-mail, the L2 teachers used printouts of selected students' e-mails as a training tool to sensitize students to effective ways of giving feedback.

Data Analysis

The taxonomy used to code the e-mails was adapted from Villamil and Guerrero's (1996) taxonomy of "substrategies for providing scaffolding". This taxonomy was chosen because

¹ For the purpose of this study, L1 will be used to refer to the language of schooling (i.e., English for the FSL students and French for the ESL students).

it provides a sufficiently wide range of strategies with a limited number of categories. Their study examined the strategies employed by EFL adult learners to facilitate the face-to-face peer revision process. Consequently, definitions of some categories were adapted to better fit the data of the present study. Some categories were added drawing on Mendonça and Johnson's (1994) taxonomy of types of peer review negotiations. Finally, other categories were also added based on my own data base. This taxonomy with definitions of categories and unedited examples taken from the present study is included in the Appendix.

Although in Villamil and Guerrero's study there was a *writer* (whose composition would be revised) and a *reader* (whose task was to help the author revise his/her paper) in each dyad, strategies used by the reader and writer in their study were not coded separately. In this e-mail tandem project, writing in both languages gave students an opportunity to present themselves both as language learners (NNS role) as well as language tutors (NS role). In order to better understand this reciprocal relationship, strategies were coded separately for the two roles.

The final taxonomy with the changes integrated as indicated above was derived as a result of a reiterative verification of the coding scheme for my own database. In order to determine reliability, after all the scaffolding strategies had been coded using the adapted taxonomy, two raters (a native English speaker for the English e-mails, and a native French speaker for the French e-mails) were asked to code 70% of the scaffolding strategies independently; the remaining 30% of the items had been used for a training session with the researcher. Both raters taught second languages and were involved in graduate studies in applied linguistics. Results of the analysis revealed a 97% rate of agreement for the scaffolding strategies in the ESL students' e-mails and an 89% rate of agreement for the strategies in the FSL students' e-mails. Discrepancies were resolved by mutual consent after discussion with each rater. Following this procedure, occurrences of each type of scaffolding strategy were counted.

Finally, as no students in any of the two groups performed all types of functions, a Fisher's exact test was performed in order to determine whether significant differences existed among the proportion of ESL and FSL students that employed a given strategy at least once.

Results

The results of the Fisher's exact test showed no statistically significant differences between the two groups of learners (see Table II). This finding suggests that students from both groups performed similarly in terms of the strategies they used to provide scaffolding to their e-mail tandem partners. The type and number of scaffolding strategies employed by the students, according to the tandem role adopted, are further analyzed in the following sections.

Table II: Comparison of the Proportion of ESL and FSL Students that Employed a given Strategy at Least Once

Type of scaffolding strategy	ESL students	FSL students	<i>p</i>
NS TUTOR ROLE			
Advising	2 (6.7%)	4 (13.3%)	0.6707
Eliciting	5 (16.7%)	9 (30%)	0.3604
Reacting	7 (23.3%)	12 (40%)	0.2668
Requesting clarification	7 (23.3%)	14 (46.7%)	0.1033
Restating	1 (3.3%)	3 (10%)	0.6120
Checking comprehension	1 (3.3%)	0 (0%)	1.0000
Offering help with L2 writing	2 (6.7%)	7 (23.3%)	0.1455
Giving explicit feedback	28 (93.3%)	29 (96.7%)	1.0000
Instructing	12 (40%)	18 (60%)	0.1964
Giving implicit feedback	1 (3.3%)	0 (0%)	1.0000
Face-giving strategies	21 (70%)	27 (90%)	0.1042
Giving directives	2 (6.7%)	2 (6.7%)	1.0000
Responding to directives/ apologizing	3 (10%)	8 (26.7%)	0.1806
NNS LEARNER ROLE			
Requesting advice	2 (6.7%)	3 (10%)	1.0000
Responding to advice	0 (0%)	2 (6.7%)	0.4915
Responding to elicitation	7 (23.3%)	5 (16.7%)	0.7480
Clarifying	6 (20%)	1 (3.3%)	0.1028
Asking for feedback	12 (40%)	17 (56.7%)	0.3015
Face-saving strategies	5 (16.67%)	12 (40%)	0.0840
Thanking	12 (40%)	15 (50%)	0.6042
Giving directives	11 (36.7%)	7 (23.3%)	0.3985
Responding to directives/ apologizing	4 (13.3%)	3 (10%)	1.0000
Responding to apologies	0 (0%)	2 (6.7%)	0.4915

Native Speaker Tutor Role

As can be observed in Figure 1, when in the *role of the NS tutor*, the *ESL students* provided the full range of strategies, while the *FSL students* provided all types of scaffolding strategies, except for checking comprehension and giving implicit feedback. In both groups, *giving*

explicit feedback was the most salient strategy employed by the students when acting as NS tutors. With the exception of two ESL students and one FSL student, all of the students participating in this study provided their tandem partner with explicit feedback at least once. In general, these findings suggest that students respected the central pedagogical element of a tandem partnership: correcting their partners' errors.

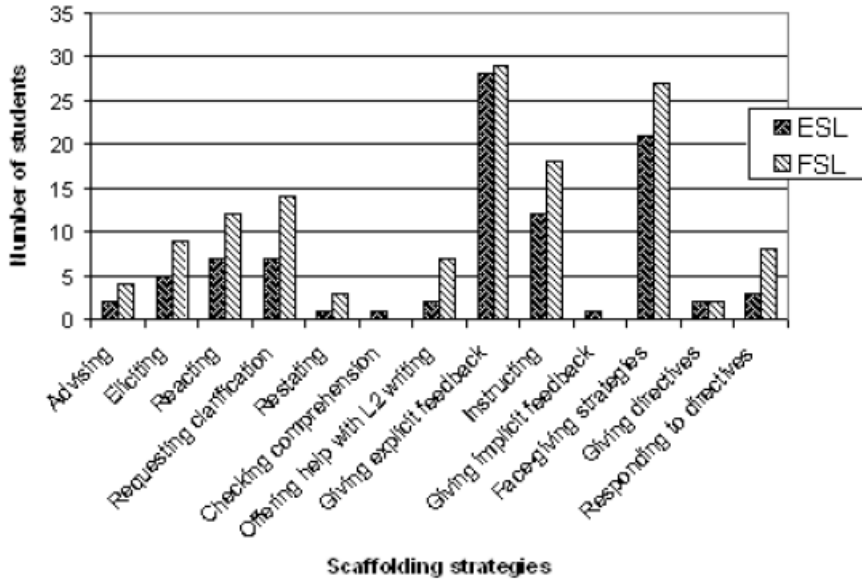


Figure 1: Proportion of ESL and FSL Students that Employed a given Strategy at Least Once: NS Tutor Role

A closer examination of the e-mails revealed that students used a number of different ways of giving explicit feedback². For instance, there were many times when the students rewrote entire e-mails and yet other times when they chose to simply correct specific paragraphs or sentences. In terms of typographical highlighting, since WebCT has the capacity to show threaded messages, the majority of students used the “reply” function and very few chose the “quote” function to automatically highlight the original message with arrows (>). Various typographical features were also used as a means of providing explicit feedback. Some students used parentheses, quotation marks, or boldfaced letters to highlight the corrections. Others used a dash, asterisks, dots or numbers to enumerate their corrections. To distinguish between the original and the corrected part of the text, some students used words or phrases such as *You said....*, *You should say ...*. Finally, some students separated the original word or sentence from the correction using an arrow (=>) or an equals sign (=).

The second most salient scaffolding strategy the tutors resorted to involved **face-giving**. Twenty-seven (90%) FSL students and 21 (70%) ESL students softened the tone of their corrections by using phrases such as *There are minor mistakes*. In general, students mitigated the word “mistakes” with adjectives such as *minor*, *few*, *little*, and *some*. In general, students of both groups first gave a positive comment about their partners' command of their L2,

² Note that quantification of ways to give explicit feedback was beyond the scope of the present study.

even in the case of numerous mistakes, then provided corrective feedback in the form of explicit feedback or instruction [e.g., “Your English is adorable. It’s excellent for your level and I was very much impressed:). A couple of things though... (FSL 20, 637)]. However, several instances of face-giving strategies were also found after the corrections [e.g., “But, it’s very good French!!” (ESL 10, message #1400)], and even others before and after the corrections [e.g., before: “First I just want to tell you some little mistakes that you did last e-mail”; after: “Except this, it is perfect” (ESL 9, message #856)]. A pattern used by some students involved a positive appreciation of their partners’ L2 skills followed by a negative judgement of their own abilities in their L2 [e.g., “I think your English is pretty good, at least it’s better than my French” (FSL 16, message #673)]. When praising their partners’ command of their L2, students used adjectives such as *good*, *excellent*, *great*, and *impressed*. Some of these adjectives were frequently emphasized by adverbs such as *very* and *really*. In other instances, students justified the fact of providing corrective feedback by reminding their partners that it was a required task [e.g., “I’m going to correct your mistakes first since that’s what we are supposed to do” (FSL 29, message #693)]. They also sometimes made it clear that they were responding to their partners’ requests for feedback (e.g., “*Comme tu me l’as demandé, je vais corriger tes erreurs*” [I’m going to correct your errors because that’s what you asked me to do] (ESL 17, message #737)). Some students made humorous comments [e.g., “And now what you waiting for THE CORRECTION TIME! I hope you enjoy this moment” (ESL 12, message #1092)], whereas others used phrases such as “Keep up the good work!!” (FSL 16, message #1109).

The third most salient strategy provided by both groups was **instructing**. Although more Anglophone students (60% or 18/30) resorted to this strategy than their Francophone counterparts (40% or 12/30), this difference was not found to be statistically significant. Students used various ways to actualize this strategy. In some instances, students gave “mini” lessons on grammar, vocabulary, stylistic conventions, or other aspects of writing [e.g., “You should say “I live in...” because live is a verb but life is a noun. (FSL 4, 669)]. In other instances, students provided a synonym, an explanation or a translation of a supposedly difficult word or expression [e.g., “Even so, don’t you find it annoying (fatigant) to always be adding accents when you’re writing in French?” (FSL 26, 659)]. There were also instances when the student resorted to English-French comparisons to explain the rule [e.g., You should say “I am 16 years old” opposed to “I have 16 years old.” The literal translation of “J’ai 16 ans” is how you said it, but it’s still said “I am 16 years old” in English (FSL 4, 669)].

Findings also revealed that 12 FSL students (40%) and 7 ESL students (23.3%) provided scaffolding to their partners in the form of evaluative comments that were not followed by corrective feedback. By resorting to the **reacting** strategy, students provided general evaluative remarks in regard to their partners’ L2 [e.g., “Your English is very good, and with a bit more practice, no one will be able to tell that English is your second language! (FSL 2, 1624)], or to the content of the e-mail [e.g., “I read your response to the racism article and I really liked your point of view” (FSL 11, message #1314)].

Data also showed that 14 FSL students (46.7%) and 7 ESL students (23.3%) **requested clarification** of intended meaning when their partners were writing in their L2 [“The article it’s a crime” (I don’t understand what you mean in this sentence) (FSL 8, 1311)]. These requests were often preceded by phrases such as: “I don’t understand this sentence”; “What did you mean by...?” It is worth noting that these requests for clarification did not often result in a response on the part of the NNSs. Indeed, the ESL students only **responded** to 6

out of the 18 requests for clarification from their Anglophone partners and the FSL students responded to only one of the 12 requests for clarification by their Francophone counterparts.

An interesting scaffolding strategy that was used by 9 FSL students (30%) and 5 ESL students (16.7%) was **eliciting**. This strategy enabled students to elicit opinions or reactions [e.g., “Drinking and driving is another major cause of accidents. What do you think about drinking and driving?” (FSL 29, message #1142)], additional information or content [e.g., “What causes stress according to the article you read?” (FSL 29, 898)] or background knowledge or understanding of the text from their tandem partners in order to encourage their participation [e.g., “You have said accurately that we agree about cheating, but don’t you want to explain it more?” (FSL 8, message #955)]. Very interestingly, the data revealed that FSL students (as NNSs) **responded** to all (n=5) of the eliciting attempts from their partners, whereas the ESL students responded to 10 out of 16. Some examples of eliciting and responding to eliciting are shown in Figure 2. As shown in these examples, by using this scaffolding strategy the NSs pushed the NNSs to articulate their thoughts and to clarify their points of view by offering additional information.

*NS’s elicitation: So what efforts do *you* make to preserve the heritage of different cultures? Have you ever defended a non-white person from racial comments or hate-crimes? (FSL 20, message #1341)*
NNS’s response to elicitation: I have already defended my friend from racist action. But this is happened there are 7-8 years, when I was to the primary school. Sometimes the children don’t know what is the consequence of their racial comments. (ESL 20, Re: message #1341)

[NS’s elicitation: What did the article say? What is your opinion about racism? (FSL 29, 1450)]
NNS’s response to elicitation: The article say every hour, someone in U.S. commits a hate crime. The article don’t give another explaine but he give a example of racisme. Me i’m not racist because i see every day a person who don’t have the same skin color like me and he is a fun guy like a person the same skin like me. I don’t understand the person who is racist. You are you racist? (ESL 29, 1484)

Figure 2: Examples of *Eliciting and Responding to Elicitation*

Non-native Speaker Learner Role

As shown in Figure 3, when in the *role of the NNS*, the *FSL students* performed the full range of strategies, while *ESL students* used all strategies except two: responding to advice and responding to apologies.

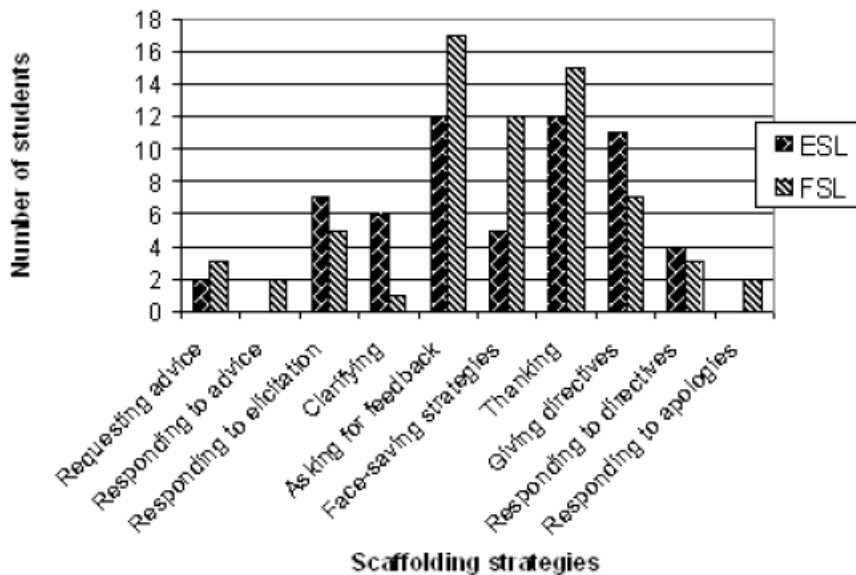


Figure 3: Proportion of ESL and FSL Students that Employed a given Strategy at Least Once: NNS Learner Role

As can be observed in this Figure, 17 FSL students (56.7%) and 12 ESL students (40%) **asked their partners for feedback** at least once [e.g., “Can you please correct my english?” (ESL 14, 1498)]. In addition, half of the FSL students (15/30) and 12 ESL students (40%) **thanked** their partners for their feedback [e.g., “Thank you for your corrections, they were quite helpful” (FSL 13, 1121)]. Very interestingly, 5 out of the 18 ESL students and 5 out of the 13 FSL students who did not ask for feedback tried to maintain a positive face vis-à-vis their partners by resorting to **face-saving strategies**. The data showed that, in their desire to be appreciated, respected, and liked by their tandem partners, some students “alerted” their partners of the fact that they might be making mistakes because they were not good in their target languages [e.g., “By the way, I am terribly sorry for my bad French grammar. Please excuse. (FSL 24, 535)]. Several instances were also found where the students’ negative self-appraisals of their own abilities in their L2 appeared to function as a means of increasing their own positive face [e.g., “I’m sorry. I don’t speak English very well” (ESL 10, 598)]. By contrast, other instances were found where students justified their errors as being “slips” [e.g., “Hopefully my French makes sense and there isn’t some weird meaning that I accidentally wrote that is the new joke in your class” (FSL 18, message #688)]. Yet, in other instances, students resorted to mentioning the fact that both of them were L2 learners and might consequently make mistakes [e.g., “I know that I’m not great at French, and I do not mind how your English is. Have fun with my French” (FSL 27, message #542)]. In addition, 7 out of 17 FSL students who explicitly asked for feedback justified any possible spelling and grammar mistakes by the fact that they were writing directly on the computer and were thus unable to check for mistakes [e.g., “For some odd reason the computer that I’m currently working on is making it very difficult for me to add accents, so I hope you didn’t have too many troubles in reading my email” (FSL 26, 659)].

Conclusion

This study investigated the strategies used by ESL and FSL secondary school students to provide scaffolding to their e-mail tandem partners. The findings revealed that even though the types of strategies employed by ESL and FSL secondary school students to provide scaffolding to their e-mail tandem partners were similar to the types of negotiations that occur during face-to-face peer review (Mendonça & Johnson, 1994; Villamil & Guerrero, 1996), tandem partners' awareness of the learning purpose of the exchange and their shared status as NNS learners and NS tutors led them to use direct failure signals in the form of *explicit feedback* and *instructing* that were in other contexts (e.g., Lee, 2004; Mendonça & Johnson, 1994) avoided by the NS interlocutors. This observation is supported by previous research in the area of online tandem learning (Appel, 1997; Belz & Kinginger, 2002, 2003; Kötter, 2002; Little et al., 1999; O'Rourke, 2005; Priego, 2002) that have shown that due to the nature of tandem exchanges, adult tandem partners provide each other explicit feedback. Very interestingly, data from the present study also revealed that the second most salient scaffolding strategy resorted to in the tutor role involved *face-giving*. This finding is consistent with previous studies (Belz, 2001, 2003; Belz & Kinginger, 2002; Priego 2002) which found that even if students were providing corrective feedback in response to the project requirements, students made use of face-giving strategies to counteract the potential face damage of the face threatening act of correcting others' mistakes (Brown & Levinson, 1987).

These findings clearly shed light on the capacity of ESL and FSL secondary school students to mutually provide scaffolding. Although the differences in medium and participants, because Villamil and De Guerrero's (1996) data stem from oral interactions between adult learners with shared native and target languages, the findings of the present study appear to substantiate their claim that providing scaffolding is a general strategy whose main function is for the tandem partners to assist each other in achieving task goals. However, in Villamil and Guerrero's study, strategies used by readers and writers were not coded separately. In the present study, occurrences of each type of strategy were tallied according to the tandem role adopted in order to better understand this reciprocal relationship. As it appears that no previous research has quantitatively investigated the strategies employed by students to provide scaffolding to their e-mail tandem partners, the adapted taxonomy used in this study can serve as a starting point of analysis for further research.

The main pedagogical implication of this study arises from the findings concerning the capacity of secondary school students to provide feedback to each other. Interpreted within a sociocultural perspective, these findings emphasize the usefulness of e-mail tandem collaboration between ESL and FSL secondary school students in terms of providing opportunities in which learners can mutually provide scaffolding, and thus assist each other in achieving task goals and in developing their L2 writing skills.

This study is not without limitations. First, this study involved 30 English-speaking ESL students in a secondary school in Quebec and 30 FSL students in a secondary school in Ontario. Therefore, the findings cannot be generalized to other L2 learners and other proficiency levels. Second, while the findings of the present study showed that participating students mutually provided scaffolding in various ways, this study does not provide evidence of effectiveness at the level of acquisition. Further research needs to be conducted in order to investigate if online interaction and scaffolding provided by tandem partners lead to language acquisition.

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Appendix

Final taxonomy of scaffolding strategies in function of NS tutor role and NNS learner role

Strategy for Providing Scaffolding	Definitions	Examples ^a
NS tutor role		
Advising	NS makes general suggestions that do not pertain to one specific item in the text.	A comment about your English, try not to just translate the French version of what you want to say into English (FSL 11, message # 632).
Eliciting	a) NS draws out opinion or reaction, additional information or content, background knowledge or understanding of text from NNS to encourage his/her participation; b) NS questions elements of the text; NS questions the logic of an argument.	What causes stress according to the article you read? (FSL 29, 898) However, I don't agree with you when you say "that's what really counts". It's not less important if you cheat at a small exam than a major. You cheated that all. No matter the exam. (ESL 28, message #887).
Reacting	NS makes evaluative comments about specific or general aspects of the NNS's email (regarding the form –L2– or the content); purely evaluative remarks that neither point nor advice. There is never any feedback that follows.	Some other phrases were a bit difficult to understand, but hopefully in time both of our writing skills will improve. (FSL 26, message #830)
Requesting clarification	NS asks NNS to clarify intended meaning. Often preceded by: "I don't understand this sentence"; "What did you mean by....?".	The article it's a crime. (<i>I don't understand what you mean in this sentence</i>) (FSL 8, message # 1311).

Restating	NS interprets NNS's response or paraphrases text on the basis of understood meaning. Often preceded by phrases such as "What you are trying to say is...?"; "I think what you were trying to say is..."; "Are you trying to say that...."	"If you want cheet you must perform." I am not sure what this means but I think you were trying to say "If you want to cheat you must act well." (FSL 15, message #808).
Checking comprehension	NS asks NNS if he/she has understood the meaning of a term or idea.	<i>Est-ce que tu comprends quand je dis «testeurs» ???</i> b(ESL 10, message #1400).
Offering help with L2 writing	a) NS offers NNS to help him/her improve his/her L2. b) NS offers NNS a model for his/her L2 writing.	If you want, I can help you for your French. (ESL 14, message #739). If you notice, I talked with really complex language (in English). Just to help you get familiar with it or so you could see it. (FSL 11, message #1350).
Giving explicit feedback	NS corrects NNS's troublesources (i.e., perceived problems, errors, or deficiencies in the text). Feedback may pertain to content, organization, grammar, vocabulary, and mechanics. Feedback may be at word, phrase, or complete sentence level. No explanation of rules is given.	It should be "I weigh" as opposed to "I weight" (FSL 3, message #656).
Instructing	a) NS gives "mini" lessons on grammar, vocabulary, stylistic conventions, or other aspects of writing.	"I read an article..." It's read instead of reed because reed is a noun and read is the verb. (FSL 4, 954)

	<p>b) NS provides a synonym, an explanation or a translation of a supposedly difficult word or expression.</p> <p>c) NS resorts to English-French comparisons</p>	<p>Even so, don't you find it annoying (fatigant) to always be adding accents when you're writing in French? (FSL 26, message #659);</p> <p>I know in French, it's "Le Trichage", but in English, you don't say "the cheating", it's just "cheating". So you would say "What do you think about cheating". (FSL 20, message #811).</p>
Giving implicit feedback	<p>NS rephrases a part of a sentence or a sentence without signalling it in any other way, such as underlining.</p>	<p>[NNS's original message: Avez-vous vu l'émission dont Jessie James fait un Celica avec un motor de réaction? (FSL 12, message #646)].^c</p> <p>NS's implicit feedback: Salut, je crois avoir vu l'émission où Jessie James modifie une Celica en y rajoutant un moteur à réaction (ESL 12, message #725).^d</p>
Face-giving strategies	<p>NS softens the tone of the critique.</p>	<p>Your English is adorable. It's excellent for your level and I was very much impressed:). A couple of things though... (Corrections) (FSL 20, 637)</p>
Giving directives	<p>NS asks NNS to take action.</p>	<p>Can you read your third article and send me your opinion about it please !!!!!!! (ESL 1, message #1463)</p>
Responding to directives and/or apologizing	<p>a) NS responds to directives</p> <p>b) NS apologizes for having interrupted communication.</p> <p>c) NS apologizes for writing a long / short e-mail.</p>	<p>I already read your first article and commented with my opinion when you first posted it. (FSL 8, message #1608, Re: message #1479)</p> <p>Sorry I didn't e-mail you but I was on March Break. (FSL 2, message #1531, Re: message #1502)</p> <p>I forgot to write a section in English for you last time, so my apologies... (FSL 26, 659)</p>

NNS learner role		
Requesting advice	<p>a) NNS asks for some information regarding rules.</p> <p>b) NNS asks for opinion about his/her L2.</p>	<p>J'aimerais savoir si le nom "T" s'écrit toujours avec une majuscule parce que je n'en suis pas certaine. ^e (ESL 11, message #851).</p> <p>What do you think about my english? It's good or bad? (ESL 11, message #1386).</p>
Responding to advice	<p>NNS accepts, rejects or questions the rationale or validity of the advice, explicit feedback or instructing provided by NS.</p>	<p>[NS's advice: <i>Fais attention à tes accents et au genre (masculin/féminin) des noms!</i> (ESL 26, message #1419)]^f</p> <p>NNS's response: merci pour les corrections de francais.. mais, comme j'ai dit auparavant, je m'excuse mais je n'ecrit pas souvent les accents quand j'ecrit les emails. (FSL 26, message #1447, Re : message #1419)^g</p>
Responding to elicitation	<p>a) NNS gives opinion or reaction, additional information or content, or background as requested by NS.</p> <p>b) NNS explains or defends choices or decisions made about the text, in response to an elicitation from NS.</p>	<p>[NS's elicitation: <i>So what efforts do *you* make to preserve the heritage of different cultures? Have you ever defended a non-white person from racial comments or hate-crimes? (FSL 20, 1341)]</i></p> <p>NNS's response to elicitation: I have already defended my friend from racist action. But this is happened there are 7-8 years, when I was to the primary school. Sometimes the children don't know what is the consequence of their racial comments. (ESL 20, Re: 1341)</p> <p>[NS's elicitation: <i>However, I don't agree with you when you say "that's what really counts". It's not less important if you cheat at a small exam that a major. You cheated, that all. (ESL 28, 887)].</i></p> <p>NNS's response to elicitation: Selon moi, c'est moins mal de tricher sur un quiz que sur un examen. (FSL 28, message #918)^h</p>

Clarifying	NNS offers clarification of meaning, as requested by NS. Frequently preceded by phrases such as “What I wanted to say is...”	<i>[NS’s clarification request: Also, what did you mean by “I like lost my time in my computer”?? (FSL 20, 637)]</i> <i>NNS’s clarification: Quand j’ai écrit “I like lost my time on my computer” cela voulait dire que je passe souvent, pendant la semaine, la soirée sur mon ordinateur. (ESL 20, message # 741 Re: 637)¹</i>
Asking for feedback	NNS explicitly asks NS to correct his/her e-mail. Frequently cued by: “Could you please correct my English?”; “Let me know about my French mistakes”.	Could you please correct my English? (ESL 8, message #952)
Face-saving strategies	NNS attempts to save his/her own positive face.	Write back soon and don’t laugh too hard at all my French mistakes. (FSL 7, message #545).
Thanking	NNS thanks NS for giving feedback.	Thank you for your corrections, they were quite helpful. (FSL 13, message #1121)
Giving directives	NNS asks NS to take action.	I would really appreciate it if you could respond to my article. (FSL 30, message #1129)
Responding to directives and/or apologizing	NNS responds to directives; apologizes for having interrupted the communication, or apologizes for writing a long /short e-mail.	I don’t read the third article because I was not here so I will do it and I will give you my opinion about that. (ESL 1, message #1199).
Responding to apologies	NNS accepts or refuses apologies.	Don’t worry about responding to all of my questions, I now know that you only have 15 minutes to respond to my letters, we get much more time that is why my letters might be longer! (FSL 30, 626)

- a. Examples provided in this table were taken from the English e-mails to facilitate reading. However, some examples in French were included if no instances had been found in the English e-mails. In such instances, the translation to English is provided as a footnote.
- b. Do you understand when I say “testeurs”???
- c. [NNS’s original message: Have you seen the program where Jessie James makes a Celica with a reaction engine? (FSL 12, message #646)].
- d. NS’s implicit feedback: *Hello, I think I saw the program where Jessie James modifies a Celica by adding a reaction engine* (ESL 12, message #725).
- e. I would like to know if the pronoun “I” is always written in capitals because I am not sure. (ESL 11, message #851).
- f. [NS’s advice: Be careful with the accents and gender of nouns (masculine/feminine)! (ESL 26, message #1419)]
- g. NNS’s response: Thank you for the corrections...but as I told you before, I’m sorry but I seldom write accents when I write my emails. (FSL 26, message #1447, Re: message #1419)
- h. According to me, cheating on a quiz is not as bad as cheating on a test. (FSL 28, message # 918)
- i. When I wrote “I like lost my time on my computer”, I wanted to say that very often, during the week, I spend the evening on my computer. (ESL 20, message # 741 Re: 637)

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