A discourse analysis of  
Students’ interaction for reading comprehension  

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1. Introduction  
The purpose of this paper is to evaluate the effects of socioaffective strategies on reading comprehension by analyzing how students interact and negotiate with the use of socioaffective strategies while interpreting and translating a reading material. The implementation of socioaffective strategies in an English reading class is designed to encourage students to use their initiative, ask others for helps and participate more actively in learning to read English texts. The results of the analysis of the students’ interaction indicate that the duration of the negotiation got longer, the use of the strategic features got more frequent and the number of correctly translated clauses and words increased as the course progressed. However, two clauses out of the total 15 clauses were not correctly comprehended and translated by all the three participants even in the post-test. The failure of translating correctly can be attributed to the lack of grammatical knowledge of the students.  

2. Theoretical Background  
The use of socioaffective strategies in a reading class is based on the two theoretical backgrounds: the Interaction Hypothesis and the Sociocultural Theory. Socioaffective strategies, identified as learning strategies by O’Malley, Chamot, Stewner-Manzanares, Russo and Kupper(1985) and as communication strategies by Oxford(1990), have been further studied by those researchers working on the Interaction Hypothesis (Ellis, 1999). The Interaction Hypothesis has examined how speakers, both native and non-native, repair breakdowns in communication and how L2 learners learn second language through the process of interaction with others (Doughty & Pica, 1986; Ellis, 1985, 1999; Ellis, Heimbach, Tanaka, & Yamazaki, 1999; Gass & Varonis, 1986; Long, 1981, 1983a, 1983b, 1985, 1996; Lyster & Ranta, 1997; Swain, 1985). The Interaction Hypothesis is particularly interested in one kind of interaction, that is the negotiation of meaning. The strategic features used to negotiate meaning include confirmation checks, clarification requests, comprehension checks, repetitions, reformulation etc. These features help students modify the ways in which positive evidences and negative evidences are given and thus better understand what they are
learning and talking.

The key construct in the Sociocultural Theory is mediation of language by which students interact and cooperate to negotiate meaning and to communicate (Adair-Hauck & Donato, 1994; De Guerrero & Villamil, 1994; DiCamilla & Anton, 1997; Schinke-Llano, 1993; Upton & Lee-Thompson, 2001; Vygotsky, 1978; Wertsch, 1985, 1991). The sociocultural theory view such an interaction as a learning site where an expert can provide a novice with scaffolding that helps him/her to perform a task beyond the level of his current ability. The area between the level of the current ability and the level of the potential ability is called the zone of proximal development. The social interaction first embodies a basis for interpsychological development, and later promotes intrapsychological development through the process of internalization of what the interlocutors have performed, discussed, and learned. As they move along this developmental process, they move from being other-regulated to being self-regulated. Many researchers with the sociocultural perspective have also studied such strategic features as translation, repetitions, confirmation checks and negative feedback, which were originally identified and have been studied by the researchers working on the Interaction Hypothesis. The sociocultural researchers report the importance and effects of those features as tools which are used by the students to monitor their activities, recognize their problems, maintain shared perspectives of the tasks, construct scaffolded helps, and thus enable themselves to complete their work.

The review of the two theories, the Interaction Hypothesis and the Sociocultural Theory, indicates that the socioaffective strategies can help students better understand and communicate with each other when they are engaged in reading an English text. When the students read the English text especially with the use of their mother tongue, Korean, as a communicative tool, it is expected that their negotiation gets more active and more understandable, therefore helps them better understand the text. The two previous experimental studies, which we will briefly review in the next section, have reported the positive effects of the socioaffective strategies on reading comprehension. This paper aims to analyze how the students interact and what problems they face in the process of negotiation for meaning, and to suggest what the teacher should do to help them further understand the text.

3. The previous studies

The two separate experiments were carried out; one in the first semester of the year 2002 and the other in the first semester of 2003. The results of the first one were reported at the 7th PAAL conference held in Singapore in 2002 and also in its journal Vol. 7, No. 1. The procedures of the first experiment and the second experiment are identical. Both the experimental group and the control group of the two experiments took the pre-tests at the beginning of the semester and the post-tests at the end. For both
the pre-tests and the post-tests, the students translated a paragraph and completed 30 reading comprehension questions from a TOEFL test. For the control group, traditional teacher-led translation and grammar lectures were given. For the experimental group, the teacher/researcher gave a lecture on socioaffective strategies a week after the pre-test. In every class, the students were encouraged to find out their problems in reading comprehension and to ask the teacher and/or peers for helps. The types of questions they could use include confirmation checks, clarification requests and comprehension checks. The content of the questions they could raise may include three areas: semantic, syntactic, pragmatic.

In the experimental group, each group of three or four students had to give a presentation of an article in the classroom and to submit two translation assignments of the same paragraph they translated for the pre- and post-tests. On the other hand, in the control group, each student prepared a presentation and did their translation assignments individually. The reason for giving the same translation assignment twice—one two weeks after the pre-test and the other two weeks before the post-test—was that it was considered likely that the students would improve in analyzing their problems and clarifying questions as the course progressed. Improvements made in the translation tests were evaluated in two areas: the increased number of clauses correctly translated and the increased number of words correctly translated. In the paragraph there were 9 sentences with 102 types and 184 tokens of words. The 9 sentences were divided into 15 units including 14 clauses and 1 phrase. 66 word units including 64 content words, and 1 preposition and 1 prepositional phrase were counted. The research questions that the two experiments pursued to answer are as follows:

Q1: Which group, the experimental or the control, improved in their ability to translate clauses?
Q2: Which group increased the number of words translated correctly?
Q3: Which group showed a greater improvement in the TOEFL test?
Q4: Which level of learners, the lower-level or the upper-level, benefited more from the socioaffective strategies?

3.1 Experiment 1

For the first experiment, 50 students from a number of different departments of a university in Kyunggido, Korea participated: 32 in the experimental group and 18 in the control group. The results of the first experiment indicate that the experimental group did better in translating clauses correctly \((p = 0.008)\). For Q2, the control group showed more improvement in translating words correctly but it wasn’t significant \((p = 0.235)\). For Q3: the experimental group did slightly better on the TOEFL test, but it wasn’t significant, either \((p = 0.303)\). This result may explain that the translation assignment
and classroom activities performed throughout the semester were not directly related to
the performance of TOEFL. For Q4, the comparison between the lower-levels of the
experimental group and the control group shows that the lower-level of the experimental
group did far better in translating clauses correctly \( (p = 0.001) \).

3.2 Experiment 2

For the second experiment, 96 students from a number of different departments of
the same university participated: 59 in the experimental group and 37 in the control
group. For Q1, the experimental group did better in translating clauses correctly \( (p = 0.000) \). For Q2, the experimental group did better in translating words correctly, too \( (p = 0.001) \). For Q3, the experimental group did slightly better on the TOEFL post-test and the
control group showed more progress compared with the pre-test but the
improvement wasn’t significant \( (p = 0.233) \). For Q4, the comparison between the lower-
levels of the experimental group and the control group shows that the lower-level of the
experimental group did far better in translating both clauses \( (p = 0.000) \) and words
correctly \( (p = 0.001) \).

These results support those of the first experiment except in one area, that is the
translation of words correctly. In the first experiment, the control group showed more
improvement in translating words correctly but it wasn’t significant. However, in the
second experiment, the experimental group did significantly better. Compared with the
experimental group of the first experiment, the experimental group of the second had
much lower scores in all the pre-tests, which means their abilities were lower in TOEFL
and in translating clauses and words correctly before taking the socioaffective reading
classes. For instance, the first experimental group had an average number of 26.48
words translated correctly in the pre-test while the second experimental group had an
average number of 16.34. The number of improvement of the first experimental group
was 21.10 while that of the second was 34.66. The difference in their improvement was
highly significant \( (p = 0.000) \). For the second experiment, the students of both the
experimental group and the control group answered the same questionnaire twice: one
for the pre-test and the other for the post-test. The alpha value for the questionnaire was
0.7933, indicating its internal consistency. The difference between the pre-test and post-
test of the questionnaire was significant for the experimental group \( (p = 0.026) \) while
that of the control group was insignificant \( (p = 0.240) \). This statistical result reflects that
the students in the experimental group have become more positive and active in asking
questions, seeking for helps and participating in their reading activities.

4. Discourse Analysis

4.1 Subject

The dialogic interaction to be analyzed was performed by three female students.
S1 and S3 are freshmen in the department of English Language and Literature, and S2 is a sophomore in the department of Religion and Culture.

4.2 Analysis

Table 1 shows how each student performed in the pre-tests and post-tests of TOEFL and translation, and how much improvement they made.

Table 1

<table>
<thead>
<tr>
<th></th>
<th>TOEFL</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Words</td>
<td>Clauses</td>
</tr>
<tr>
<td></td>
<td>pre</td>
<td>post</td>
</tr>
<tr>
<td>S1</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>S2</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>S3</td>
<td>9</td>
<td>21</td>
</tr>
</tbody>
</table>

S1 did the best in both the pre- and post-tests of TOEFL. S2 shows an increase of minus 7 in TOEFL. S3 did poorly in the pre-test but shows an increase of 12. Everybody improved in translating words and clauses correctly. Table 2 shows the 15 clause units they worked on.

Table 2

C1 Despite, however, the fact that individual apes learn easily and, as individuals show remarkable progress in the acquisition of knowledge,
C2 apes as a species have never developed a culture.
C3 There are two reasons for this.
C4 Lacking language,
C5 the apes have no way of continuing in word and thought their separate experiences in the use of tools and techniques.
C6 When an ape has disposed of a problem
C7 the knowledge he has derived from the experience remains static.
C8 He may remember it when and if another problem of the same sort arises,
C9 but he does not, in between times, ponder over his knowledge and devise means of applying it to further problems.
C10 Man does.
C11 His overt experiences with practical problems are, like those of the ape, separate and distinct.
C12 But because man possesses language,
C13 he can continue his problem-solving activities beyond the actual physical experience
C14 and so develop, in thought and discussion, new applications of his knowledge and improved
means of solving problems.

C15 In short, by reason of language, man’s experiences are continuous, not discontinuous as among apes, and so show far more rapid development.

Table 3 shows how the students progressed throughout the semester. The pre-test of translation was given two weeks after the course began, and the post-test two weeks before the semester ended. The first assignment had to be submitted no later than the 5th week of the 16 week-long-semester, and the second assignment in the 13th week. There were 12 week-difference between the pre- and post-tests and 8 weeks between the first and second assignments. For the assignments they gathered outside the classroom and recorded their interaction. The teacher/researcher was not at present.

<table>
<thead>
<tr>
<th>pre-test</th>
<th>1st Assignment</th>
<th>2nd Assignment</th>
<th>post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>C3</td>
<td>C8</td>
<td>C1</td>
<td>S2 - C1, C9</td>
</tr>
<tr>
<td>C4</td>
<td>C10</td>
<td>C6</td>
<td>S3 - C2</td>
</tr>
<tr>
<td></td>
<td>C12</td>
<td>C9</td>
<td>S1, S2 - C14</td>
</tr>
<tr>
<td></td>
<td>C13</td>
<td>C11</td>
<td>All - C5, C7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>C15</td>
</tr>
</tbody>
</table>

The first column shows that every student translated C3 and C4 correctly in the pre-test. They got C8, C10, C12, C13 translated correctly in the first assignment. They did not translate C1, C6, C9, C11, C15 correctly until the second assignment. The last column shows the number of the clauses they did not correctly translate in the post-test. In the second assignment, they could all understand and translate C1 and C9 correctly. But in the actual test, S2 did not get them right. For C2, everybody seemed to be confused with the meaning of the word, species. S1 and S2 got it right in the post-test, but S3 did not. For C14, both S1 and S2 could not translate it correctly. Everybody was not able to correctly understand and translate C5 and C7 even after the two assignments.

The 15 clause unites can be divided into three different categories. The first category includes the clauses the students translated correctly in the first assignment. The second category includes the ones they failed to understand and translate correctly in the first assignment but succeeded in the second assignment. The third category includes the ones they could not successfully translate even in the last exam.

4.2.1 The first category
For the first category, the interaction for C8 is analyzed. The students translated C8 correctly in the first assignment, but they improved in negotiation for the second
assignment. The words and phrases spoken in English are italicized. The rest is spoken in Korean and translated into English.

Example 1-1  C8:  the first assignment  (43 seconds)

<table>
<thead>
<tr>
<th>C8</th>
<th>He may remember it when and if another problem of the same sort arises,</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 S2</td>
<td>And the apes may remember . . . remember it. ‘It’ is, well, another</td>
</tr>
<tr>
<td>2</td>
<td>problem of the same kind. Here for when and if, I interpreted as</td>
</tr>
<tr>
<td>3</td>
<td>when something happens. When a problem of another kind</td>
</tr>
<tr>
<td>4</td>
<td>happens . . .</td>
</tr>
<tr>
<td>5 S1</td>
<td>Yeah, if something happens, when and if another problem of the same</td>
</tr>
<tr>
<td>6</td>
<td>kind happens, he may remember.</td>
</tr>
<tr>
<td>7 S2</td>
<td>He may remember it. Let’s stop here, but he . . .</td>
</tr>
</tbody>
</table>

As you can see there is not so much interaction. There are 7 lines and 3 exchanges of turns in the interaction, which takes for 43 seconds. S3 does not even participate. S2 who is one year senior to the others seems to initiate almost every topic. From Lines 1 through 4, S2 translated when and if as just when. S1 in Line 5 corrects S2’s interpretation by translating if. Even though S2 interprets the pronoun it as another problem of the same kind in Lines 1 and 2, no one raises a question. Without any further interaction, S2 gives a sign that it is the time to move on to the next clause. In the second assignment, their interaction gets more active and takes a longer time.

Example 1-2  C8:  the second assignment  (1 minute 53 seconds)

| 1 S2       | Here he may remember it. The ape may remember it.                      |
| 2          | what is ‘it’?                                                          |
| 3 S2       | a problem, the same kind,                                              |
| 4 S1       | the knowledge!                                                         |
| 5 S3       | so does it refer to the knowledge?                                     |
| 6 S2       | If another problem of the same kind arises, then he may remember it.   |
| 7          | Here before but, he is the subject. And it stops before but so we need |
| 8          | to interpret before but. He, the ape, solving another problem of the   |
| 9          | same kind, another problem, or then, he may remember it.              |
| 10 S1      | We have to interpret the connector when, when or if another problem    |
| 11         | of the same sort arises he may remember it.                           |
| 12 S3      | The ape, once again, the ape may remember it when or if another        |
| 13         | problem of the same sort arises.                                       |

In 13 lines, 8 turns are exchanged for 1 minute and 53 seconds. The translation becomes better and clearer. In the first activity, S1 and S3 did not make either
confirmation checks or clarification requests, but now in Line 2, S3 makes a clarification request. She asks S2 what she meant by ‘it.’ S2 answers in Line 3 that it refers to ‘a problem’ as she thought so in the first interaction. Then, in Line 4, S1 says that it refers to the knowledge mentioned previously in Clause 7. In Line 5, S3 makes a confirmation check. For the first assignment, they had no such discussion about this problem. In the first assignment submitted, it looked fine since they translated the word ‘it’ into Korean. For a pronoun, it seems that translation does not always reflect learners’ correct understanding of what it refers to. Just by reading the assignment, it was not possible to see the problem. From Lines 6 through 9, S2 again tries to translate the whole clause, but it is not very clear. S1 again corrects some of the mistakes S2 made. And finally in Lines 12 and 13, S3 repeats what S1 just said as if she wants to make it clear. The second interaction shows more evidence of negotiation for meaning and serves to bring forth a better understanding and translation.

4.2.2 The second category

The second category includes the clauses that were not translated correctly in the first assignment but got much better and almost perfectly translated in the second assignment. Among them, here are the examples from the interactions for C11.

Example 2-1  C11: the first assignment  (50 seconds)

C11  His overt experiences with practical problems are, like those of the ape, separate and distinct.

1  S3  His overt . . . his experience . . . along with problems of experiences?
2  S1  particular,
3  S3  With particular problems, his overt experiences are like those of the
4   apes.
5  S2  like the same. And,
6  S1  these, like these of the ape
7  S2  (eum)
8  S1  separate and distinct
9  S3  distinct
10 S2  Right. Here . . . right . . . here, everything before separate is the
11   subject and the verb is separate, the verb is separate, and also distinct.
12 S3  Yeah.
13 S2  There are two verbs.
14 S3  Yeah.

In Lines 2 and 3, S1 and S3 mistake practical for particular. S2 does not seem to recognize the problem either. Another major problem that arises in this dialogue is that
S2 considers *separate* and *distinct* as verbs. S3 seems to agree with S2 in Lines 12 and 14. However, S1 does not raise a question about it. In the first interaction of 50 seconds, there are 14 lines and 12 exchanges of turns. But in the second interaction, they have an interaction for 6 minutes and 35 seconds in 89 lines with 68 turns. Here are some excerpts from the second assignment.

Example 2-2 (1)  *C11*: the second assignment  (6 minutes 35 seconds)
1 S1 In the particular problems, his overt experiences
2 S2 practical problems? (3 seconds) I think practical problems are
3 S3 better. His overt experiences along with practical problems

There were two major problems in the first assignment: one was concerning the translation of the word *practical* and the other was that S2 took *separate* and *distinct* as verbs. In the first example of *C11* in the second assignment, the problem of *practical* is adjusted. S1 translates *practical* as *particular* in Line 1. S2 confirms whether it’s *practical*, suggesting it may not be particular. S1 and S3 do not respond to S2’s translation. But since they show no sign of disagreement, they seem to agree with her.

Example 2-2 (2)  *C11*: the second assignment
28 S2 So man do, they separate and distinct. (3 seconds)
29 S3 do distinct?
30 S2 ‘doing’ ‘doing’ is better. Not being distinct
31 S3 His overt experiences, but man does not.
32 S1 But, *are* in the front is the verb *be*, isn’t it?
33 S2 Yeah.
34 S1 It is not ‘do separate,’ *are separate*
35 S2 Right.
36 S1 They are separate. It must be this way.
37 S2 Right.

For the rest of the conversation, they discuss the problem of parts of speech for *separate* and *distinct*. Until Line 29, neither S1 nor S3 raises a question about S2’s error. As S3 makes a confirmation check in Line 29, S1 also confirms and asserts in Lines 32, 34, and 36 that the verb of the clause is *are*, suggesting that *separate* and *distinct* are not verbs. In Lines 35 and 37, S2 seems to accept S1’s suggestion.

Example 2-2 (3)  *C11*: the second assignment
39 S1 For instance, if there is a sentence, *they are separate*, it means they
are separate. They are separate, like this.

S2 You should add –ed. If they are being separated, it is be + p.p.

S1 Well, they are not being separated but are separate. How did you interpret it before?

S2, however, goes on to argue that in order to use separate and distinct with the verb be, they should be used in a passive sentence. Therefore she keeps on saying in Line 41 that it should be separated not separate. She is suggesting that since it is not written separated but separate, it is a verb. After this interaction, they exchanged 15 turns in 25 lines and they could still not reach an agreement.

Example 2-2 (4)  C11: the second assignment

S2 Well, well, then, separate itself has the meaning of being passive?

S3 Do you want me to look it up in the dictionary?

S2 being separated (looking up in the dictionary)

S2 Well, here isn’t are separate a little strange? This is the first time for me to see this kind of sentence. Is it to make it sound more informal? (15 seconds)

S3 separate it has the meaning of do separate

S2 Isn’t there meaning of being separate?

(15 seconds)

S1 It is used as a transitive verb, an intransitive verb and also an adjective.

S2 Ah! It is an adjective. An adjective, an adjective, it is used as an adjective. Here it is not a verb but an adjective, so there is are in the front.

In Line 69, S3 suggests to look the word separate in the dictionary. When S1 and S3 mistook practical for particular and S2 corrected it, they did not argue about it at all. But when S2 makes a mistake and is corrected by a junior, it takes so many lines and turns. By looking at the dictionary, S2 accepts that the word separate is not a verb but an adjective.

4.2.3 The third category

Finally for the third kind, C5 and C7 were not correctly understood and translated even after doing the two assignments, and in the post-test. The major problem that arose in both cases was again related with grammar. But unlike C8, which had a problem with the reference of the pronoun it, and C11, which was concerning parts of speech of words, C5 and C7 had problems of phrasal structures as well as words. In C5, the first problem
arises when S1 considers *thought* as a verb and *their separate experiences* as its object in Lines 9 and 10.

Example 3-1 (1)  C5:  the first assignment  (4 minutes 30 seconds)
7  S1  in word, no way of continuing language, no way.
8  S2  Here, OK, go on.
9  S1  And in the ways of using tools and techniques, in the separate experiences, thought their separate experiences.

S2, however, suggests that *thought* is not a verb but a noun in Line 25. S1 agrees with S2 in Line 28 as she says she thought that too.

Example 3-1 (2)  C5:  the first assignment
23  S2  And here you considered *thought* as a verb.
24  S1  (eum)
25  S2  Well, I think it is not a verb.
26  S1  *in word and thought?*
27  S2  Yeah, isn’t it a noun?
28  S1  I thought that too in the beginning.

S3 does not actively participate in the interaction until S2 asks a confirmation check in Line 45. S3 does not agree with S2 and still thinks *thought* is a verb in Line 48. She begins to accept S2’s suggestion in Line 50. S2 and S1 explain the reasons for the word *thought* to be a noun, and exchanges interaction until Line 72 before they move onto the next clause.

Example 3-1 (3)  C5:  the first assignment
45  S2  Did you consider *thought* as a verb?  or as a noun?
46  S3  A verb.
47  S2  Did you think it was a verb?
48  S3  Yes.
49  S2  (eum) But, here
50  S3  But, I think you (to S2) seem to be right.
51  S2  If you think it as a verb, it means very strange. You see *thought* is past tense but there is nothing in past tense before *thought*.
52  S1  I thought that too. But after *in word and thought*, *their* follows immediately. *thought their*, it goes like that. I think there must be some kind of connection between them.
53  S2  Right. There isn’t any connector.
Even though they have reached an agreement that the word *thought* is not a verb but a noun, from Lines 53 through 55, S1 suggests that something is missing between *thought* and *their separate experiences*. S2 agrees in Line 56. In their submitted assignment they translated C5 as ‘The apes have no way of continuing word and thought because of their separate experiences in the use of tools and techniques.’ They omitted the preposition *in* and took *word* and *thought* as objects of the gerund *continuing*, and inserted ‘because of’ between *thought* and *their separate experiences*, making the whole meaning different from the original text. This problem can not be corrected even in the second interaction. For the first assignment, they had 45 exchanges of turns in 71 lines for 4 minutes and 30 seconds. For the second assignment, they had almost the same turns and lines; 50 turns and 68 lines for 3 minutes 35 seconds. However they couldn’t see that the prepositional phrase *in word and thought*, which is inserted between the gerund *continuing* and its object *their separate experiences*.

5. Conclusion

The results of both the first and second experiments show that the use of socioaffective strategies on reading comprehension facilitates reading comprehension. In both experiments, the lower-level-students of the experimental groups did far better in translating the clauses than those of the control groups. The analysis of the students’ interactions indicates that socioaffective strategies help them to help themselves and others by asking questions and negotiating for meaning. As the course progressed, their interaction got longer, exchanging many more turns and using the strategies more frequently, and the number of correctly translated words and clauses increased. The biggest problem that the students couldn’t overcome even after the two rounds of interactions seems to be concerning grammatical matters. When they face more complicated sentences, they need the help of someone who is advanced in language proficiency with a higher level of grammatical knowledge.

References


