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L2 Learners' Uses of Cultural Tools of Authority during Synchronous Computer-mediated Communication

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This study examines how L2 learners frame collaboration by means of cultural tools of authority (Wertsch, 1991; Wertsch & Rupert, 1993) during on-line chat from the perspective of socio-constructivist model on learning. Ultimately, this study attempts to identify empirically contributions of the interactional dimension of L2 synchronous computer-mediated communication (SCMC) to the configuration of collaboration. The data consist of the scripts of more than sixty hours of L2 on-line chat sessions of intermediate-advanced-level English learners enrolled in a college. Tasks assigned to these learners include activities on the grammaticality of different English sentences. The qualitative, empirical analysis reveals that while trying to configure the collaborative framework, the participants primarily depend upon four different types of cultural tools of authority: internet resources; a dictionary; handouts; and the professor. These tools, once they are embedded into the on-line interaction in a well-designed manner, function to define who the more capable learner is, which in turn affects the validity of the suggested solution and organization of the talk on the given task. These findings indicate that in order to properly handle L2 tasks on-line, L2 learners need to be cognizant of how collaboration is framed depending upon their use of the context-specific, cultural tools of authority.

[cultural tools of authority/synchronous computer-mediated communication/socio-constructivist model]

I. INTRODUCTION

As the goal of second language (L2) learning in Korea moves towards communicative and interactional aspect of the L2, English classroom has continuously been challenged to

change from predominantly teacher-centered instruction to more learner-centered pair or group work. The assumption behind the emphasis on the learner-focused activities is that learners are co-participants in the meaning-making process and they can build their own cognition through participations in the interactions with other peers. This rationale has a strong bearing on the sociocultural perspective of learning (Vygotsky, 1978; Wertsch, 1991); while learners are engaged in a certain interaction, they could acquire assistance from a more capable interactant, which is critical for leaning to occur. What is in the core of this view is the notion of situated learning (Lave & Wenger, 1991), which explains learning as the product of the learner's participation in a certain task or activity and continuous adaptation to the unfolding circumstances and activities that constitute talk-in-interaction. The emergence and development of human cognition, therefore, cannot be separated from social factors that interactants bring to the talk (Wertsch & Rupert, 1993).

Studies conducted in conversation analysis (CA) as well as in the sociocultural frameworks have provided empirical evidence suggesting that the social realm cannot be reduced to a mere background factor for activities but is an integral part of cognitive development itself (e.g., Mondada & Doehler, 2004). In fact, when L2 learners are engaged in different activities and tasks, there are many moments when their roles are hardly predetermined not only in terms of L2 knowledge, but also in terms of the knowledge of other sociocultural factors implicit in the interaction in which the talk is situated. Those social factors include an instructor or other peers that the interactants refer to during the interaction and the medium of communication such as computer mediated communication (CMC).

Synchronous CMC (SCMC), such as on-line chat, has increasingly become a crucial context for learning and casual interaction. L2 researchers have noted that on-line chat exhibits features of speech, but to be more advantageous than face-to-face oral exchanges in that it provides strong motivation, equal participation and the increase of target language production (Warschauer, 1996, 1998). These advantages have been examined in terms of negotiation of meaning, and its contribution to improving L2 oral competence (e.g., Blake, 2000; Fidalgo-Eick, 2000; Shim, 2007; Smith, 2001).

Amid the growing attention to on-line language learning and the demands of interaction-based English instruction in Korea, it is still not well known how collaboration is framed in English teaching practices. It is, therefore, necessary to investigate dynamics of collaboration that affects learners' participation and interaction in a specific setting of interaction. This study aims to identify empirically contributions of the interactional dimension of L2 SCMC to collaboration and participant alignment.

1. Co-construction of Context during Talk in Interaction

Schegloff (1987) identifies mundane talk as the primordial locus for sociality. Talk itself has been recognized as being situated in a social organization, which is prone to change according to the momentary interaction of the participants in the talk. Against the approaches to context as a set of variables that statically surround strips of talk, Goodwin and Duranti (1992) argue that context and talk are interdependent, with talk shaping context as much as context shaping talk. The reflexive relationship between talk and context is more intricate as well as explicit in the CA tradition. The production of talk is "doubly contextual" (Heritage, 1984, p. 242) not only in that a subsequent utterance relies upon existing context for its production and interpretation, but also in that an utterance is in its own right an event that shapes a new context for the action that will follow it. Schegloff (1988) also points out that "parties to real conversations are always talking in some sequential context" (p. 61). In other words, the sequential context is formulated in terms of more or less proximately preceding talk rather than in terms of social context (e.g., offices, classrooms or families). Interactants, thus, utilize context in particular sequential organizations to both understand and produce the talk in which they are engaged (Goodwin & Goodwin, 1992).

Human learning occurs based upon individuals' interaction with a constantly changing context, and, thus, learning processes cannot be isolated from interaction (Firth & Wagner, 1997). From this interaction-oriented perspective, researchers have claimed that a learner is considered as a co-constructor of joint activities, where linguistic and other competencies are put to work within a constant process of adjustment to other social agents (Gajo & Mondada, 2000; Hall, 1993; Lantolf, 2000; Mondada & Doehler, 2004 etc.).

CMC, then, as a context of L2 learners' interaction, is expected to make significant contributions to L2 learning processes and outcomes. Hansson (2005) discusses the effect of this virtual instruction on collaboration and motivation of the participating learners. He says, in a virtual learning environment, collaboration and verbal exchange are prerequisites for motivation, learning and development of proficiency in English. He further concludes that interaction and cooperation rather than competition and individualism are important motivators for the dot-com generation.

2. Cultural Tools and Task Accomplishment

One of the key aspects of the Vygotskian perspective on language is the regulatory functions that speech exercises in human interactions (Vygotsky, 1978). In other words, in a learning situation, individuals use language as a way of gaining control over the situation

rather than just as the means of transmitting information (Wertsch, 1991).[1] An inherent property of language as a meditational means is that it is situated (Wertsch & Rupert, 1993). In other words, specific languages, like other mediational means, virtually never emerge for the first time on the basis of an individual's isolated action or reflection. They are always culturally, historically, and institutionally situated, which is why the mediational means are called "cultural tools" (Wertsch & Rupert, 1993).

In a qualitative study of a 9-year-old girl's conversation with their parents, Wertsch and Rupert (1993) explain how effectively the girl uses a word of authority to change the structure of authority during the interaction. She invokes a name of a formula, a mediational means, which is relevant to the talk, and as a result is capable of gaining the floor in the way she wants. Wertsch and Rupert demonstrate that value and authority are inherent and critical factor for any type of human interaction. They further claim that essential dimensions of the intermental functioning can be adequately understood only if they are considered in light of the cultural, historical, and institutional forces that shape them.

In the socio-cultural theory, tasks are viewed as activities that are both locally and historically shaped. Researchers have recently examined activities occurring in an L2 classroom from the perspective drawn from both CA and sociocultural theory (e.g., Ellis, 2003). Tasks are practices that are reflexively defined and accomplished by learnerss, and collaboratively (re)configured in relationship to partners, either present, virtual, or absent (e.g., Mondada & Doehler, 2004). The type of tasks has been discussed as an important factor that affects the interactional structure of L2 learners' conversation (e.g., Brock, Crookes, Day, & Long, 1986; Pica, Holliday, & Morgenthaler, 1989). In these studies, the learners were found to modify their L2 productions more often while dealing with goal-oriented, task-based interaction than in casual conversation.

In the context of CMC, diverse tasks can be processed as L2 learners work collaboratively on them. This study, thus, focuses on L2 task-based activities rather than casual conversation as it attempts to examine the ways in which L2 learners employ cultural tools of authority and the consequences that the employed cultural tools of authority bring to the talk and the task processing.

3. Synchronous CMC and Electronic Communicative Competence

Interaction-oriented researches on CMC have generated a number of L2 studies on negotiation of meaning (e.g., Blake, 2000; Pellettieri, 2000; Toyada & Harrison, 2002;

[1] Vygotsky's list of mediational means includes items such as maps and mnemonic aids, but his primary focus was on human language.

Werry, 1996; Yates, 1996). According to Pellettieri (2000), the word "chatting" underscores its resemblance to oral interaction and, thus, can share the benefits of oral interaction for L2 development. In the study of dyadic task-based chats between non-native speakers, she revealed that the text-based mode of CMC made more contributions to development of L2 grammatical competence than oral exchanges because on CMC learners have more time to process and monitor their interlanguage. Chun (1994) also noted that students involved in electronic discussions took active roles in discourse management while producing a wide range of discourse structures and speech acts. Similar findings have been reported by Kern (1995) such that students in electronic discussions used various discourse structures and this variety was greater in the electronic discussions than in the oral discussions.

Drawn from these studies, some researchers have examined SCMC interactions of Korean learners of English (e.g., Chu, 2006; Lee, 2006; Shim, 2007). Lee (2006) attempted to characterize CMC in terms of oral versus written language, and found that on-line chat, even if it is text-based, displays oral features and, thus, is likely to show more similarities to speech. Chu (2006) investigated various triggers of negotiations occurring on-line chat, which revealed that the majority of negotiations were generated either by content meaning or by vocabulary, whereas few negotiations were triggered by grammar. Meanwhile, in interactions between an L2 teacher and students on CMC, the teacher frequently signaled problems with understanding in order to elaborate her understanding of what the students had said (Shim, 2007). By contrast, in face-to-face interactions, the L2 teachers tended to produce the signals purely to decode the students' messages. Thus, CMC, despite its similarities to face-to-face oral interactions, shows its distinctive features as an interactional means and as a context.

Simpson (2005) presents that since SCMC is quite different in many ways from spoken conversation, established approaches to spoken discourse analysis do not necessarily map directly onto a novel form of discourse. Using the notion of the conversational floor, he shows that the development of certain floor types is associated with (1) the roles of the participants in the discourse; (2) the topic of the discourse; (3) the current communicative action. Simpson also notes that different types of knowledge are realized in the turn taking on SCMC, which include a knowledge of the linguistic system, a knowledge of the discourse patterns involved, a knowledge of the technology and a knowledge of the sociocultural rules of a particular virtual community. He then calls attention to a nascent theory of electronic communicative competence.

4. Research Questions

Although previous studies on interaction occurring in L2 classrooms and in virtual space have significantly promoted our understanding of intricacies implicit in the social plane of

L2 learning, few studies have investigated how collaboration is framed in the process towards the task accomplishment in the virtual practice. Thus, the present study attempts to reveal specifically how interaction itself is coordinated by the participants' uses of cultural tools in the context of L2 on-line discussion of a task. By examining qualitatively how the learners manage collaboration as they seek the correct solution of diverse grammatical problems in English sentences, this study aims to provide answers to the following two research questions.

1. What are the major cultural tools of authority that the participants in the L2 on-line activities depend upon for the configuration of collaboration?

2. In what ways do the different means affect the synchronous on-line talk during the discussion of English grammar?

II. METHOD

1. Participants

The data came from scripts of more than sixty hours of on-line communication of L2 speakers who participated in one-on-one synchronous communication. The participants, as intermediate-advanced level English learners, discussed grammaticality of different English sentences. The participants were solicited while they were taking a course on English grammar. The course was offered mainly for sophomores of English majors and minors and taught in English by a nonnative English speaking instructor. Only English was allowed in the class for the discussion of the subject matter and other types of class activities.

The students were allowed to choose their chat partner and the date and time for the chat. The total of 52 (38 females and 14 males) students participated in the study. All of the participants used the chat program offered by nate.com (2008). The students were instructed to discuss on-line one of four different sets of tasks of their choice. Each task consisted of chapter exercises which were available in the class textbook (Yarber & Yarber, 2007).[2] Following is the number of the pairs who participated in each of the four sets of the tasks.

[2] An example exercise is provided in Appendix.

TABLE 1
Number of Paired Groups per Task

	Task 1	Task 2	Task 3	Task 4	Total
Number of the paired groups	8	7	2	9	26 (52 students)

2. Procedure

The study has been conducted during the spring semester of the year 2008. The researcher contacted the instructor before the semester began. The design of the class and the number of the assignment, thus, were available to the researcher earlier in the semester. The students were asked to submit the assignment and the script of the chat, if they chose to chat on the assignment. In order to prevent possible misunderstanding of the study, such as relationship between the participation in the on-line chat and the evaluation they would receive in the class, the researcher emphasized that their English proficiency shown on the chat transcripts would not affect the evaluation. For comprehensive understanding of the task, the researcher had conferences with the instructor and some of the participants after the class. The talks with the participants and the instructor, however, were excluded from the analysis since it occurred after class in a casual manner.

In the third week of the semester, the class had a lab session in which the students had a chance to participate in on-line chat and to have a practice discussion on a grammatical problem offered by the instructor. At the time of the practice session, all of the students reported that they were comfortable using the chat program. The researcher attended all the class sessions in order to understand the participants and the goals of each task that the participating students were handling on-line. In order to prevent the effect of the presence of the researcher or the instructor, the researcher did not monitor the students' chat sessions.

3. Data Analysis

The purpose of this analysis of the L2 participants' chats is mainly descriptive and concentrates on the participants' uses of specific cultural tools while collaborating for task accomplishment. Based upon Wertsch and Rupert's study (1993), the current study defines the cultural tools of authority as language items that the participants commonly understand as authoritative and powerful in the context of on-line discussion of tasks concerning English grammar.

Once the 26 sets of the scripts of the on-line chats were collected at the end of May, 2008, they were qualitatively examined by the researcher. The analysis included repeated

reviews of the scripts of the participants' interactions during the on-line chat. As repetitive interactional domains deemed, the fragments relevant to the domains were excerpted from the beginning to the end of the interaction for a specific task. For the analysis of different types of cultural tools employed by the participants, the cultural tools of authority were identified and classified as different categories. All of the instances were tallied and examined for the effect on the collaboration between the participants.

4. Scope and Limitations of the Study

This study aimed to describe qualitatively L2 learners' uses of cultural tools of authority in the on-line context. Although this method of analysis was appropriate for addressing the research questions, some of the aspects that would have been revealed with quantitative method had to be excluded beyond the foci of this study. Among those excluded in the scope of this study was a quantitative comparison of effects of different types of cultural tools of authority on task accomplishment. Although it was not impossible to examine statistic significance of the effects of cultural tools of authority, this study did not attempt to address this aspect.

The study has limitations within the collected data. First of all, the dyads of the participants were created upon the students' choice, which could affect homogeneity of the dyads in terms of familiarity of a participant with his/her partner and knowledge of chat partner's English proficiency. Second, the researcher does not have objective evaluation of the participants' English proficiency in the form of standardized scores other than general information of their English proficiency. Although these limitations are related to the quality and quantity of the on-line interactions, the amount and diversity of current data and the qualitative analysis of them still provide viable information of how L2 learners configure collaboration through the uses of cultural tools of authority. It is expected that the results will shed light on understanding interrelationship between the mediational means employed by the participants and the framework of collaboration in the context of on-line communication.

III. RESULTS AND DISCUSSION

The participants in the present study were found to employ four different cultural tools or meditational means of authority (Wertsch, 1991; Wertsch & Rupert, 1993) in the process of configuring collaborative framework on-line. Those cultural tools included the professor, a dictionary, handouts, and internet resources. The frequencies of the occurrences of the different types of the cultural tools are indicated in the following table.

TABLE 2
Frequency of Different Cultural Tools of Authority

	Professor/ teacher	Dictionary (naver dictionary)	Handouts	internet resources	Total
Frequency of the occurrences	15	11(8)	9	7	42
Percentage (%)	35.7	26.2 (19.0)	21.4	16.7	100

It is interesting to note that the students used "professor" or "teacher" most as the powerful means while collaboratively working on a certain task. Although internet resources such as 'google' were found least employed, their effects upon the collaboration should not be considered less significant than the others. If "naver dictionary," which was classified under "dictionary" in the present study (19%), were to be reclassified under internet resources, then references to internet resources would be as frequent as "professor/teacher." Therefore, it is difficult to discuss the differences in the distribution of different cultural tools of authority produced by the participating L2 learners.

These cultural tools were culturally, historically, and institutionally situated in the on-line chat. In other words, the participants had shared understanding of the powerful effect of these cultural tools on the task processing, uses of which, thus, had significant effects on the configuration of who was more capable, or more authoritative. These tools also affected organization of the subsequent turns such that the speaker of specific cultural tools of authority created longer turns or more turns while taking charge of the process of solving the given grammatical problem. In the following, the effects of the uses of the cultural tools during collaboration will be discussed in terms of task accomplishment, turn organization, and interactional management.

1. Task Accomplishment and Collaboration

The following fragment showcases how a participant coordinates a cultural tool of authority in the activity. Here, the task is to identify the types of the verb in the two English sentences in terms of an action versus a linking verb. The English sentences included in the task are:

(1) My nephew's new house appeared to have enough room for his gadgets.
(2) Every year a new trend appears.

Fragment (1) T1G7[3]

1. A: verb-appear
2. B: it is quite easy to define
3. A: No.1…it should be linking verb?
4. B: yeah – it looks like 'seemed to' –
5. B: and the second one is
6. B: action verb –
7. B: how can I explain the meaning of 'appear' as an action verb>?
8. → B: in a dictionary – it says that if something appears,
9. B: it moves into a position where you can see them
10. A: if you say that something appears to be the ways you describe it,
11. A: -_-sorry
12. B: what you said is linking verb meaning – right?
13. A: okok//
14. B: then move to next question –no 3
15. B: ah, wait
16. → B: let's clear up what we talked about –
17. B: what we talked seems quite disarranged
18. A: ok, let's do it
19. A: 1) the verb 'happen' – linking verb, but second 'happen' –action verb
20. B: and the verb 'appear' is an action verb in no 2 sentence, and a linking verb in
21. 1st sentence.
22. → B: let's talk about other questions

As the participants move to the task number (1), B first evaluates the level of difficulty of the task at hand. B says, "it is quite easy to define" (line 2). Given A's candidate solution, B acknowledges it and continues to offer the solution of the next problem, i.e., "action verb," as the verb type of sentence (2) in the task. B then produces more turns to add meaning of the verb "appear" as an action verb. In doing so, B refers to the "dictionary" he used (line 6) and provides the dictionary meaning of "appear" as an action verb (lines 6-7). A does not understand it and offers her own understanding of action verbs, which turns out incorrect (line 10). A immediately finds the problem with her turn and apologizes (line 11). B asks a confirmation question that points that the meaning that A has offered is that of linking verb.

Upon A's acknowledgement, B makes a suggestion to move to the next part of the task,

[3] The presented fragments reflect exact text from the participants, which includes typos, grammatical errors, emoticons etc.

but immediately makes another suggestion to "clear up" what they talked about (line 16). As shown in the latter turns, B holds powerful speakership and determines their next move in the activity. Therefore, it is to be said that the reference to "dictionary" is functional and effective to building B's position as a more knowledgeable and more powerful participant in the collaboration.

Another frequently employed word of authority includes "google." As they are on line at the moment of the interaction, they can turn to other web sources, and the reference to one of the sources is functional to creating a more capable and knowledgeable participant in this dyadic conversational event. The following fragment exemplifies this SCMC-specific cultural tool of authority. The participants are working on the task in which they are to identify the correct pronoun in the sentence as in the following:

Dentists try to make (a. us b. we) patients relax before they examine us.

Fragment (2) T2G3

1. M: number 3
2. M: i think it's -d-
3. M: ….
4. H: i still think 'us'
5. M: i think …this sentence goes like .. make patients relax… and i choose b. we
6. as .. appositive pronoun of patients.. so
7. H: really?
8. M: … oh~ -_-… .. i consider that as appositive pronoun.
9. H: i thought 'make' needs an object, so i put 'us'
10. M: actually, i'm not sure
11. → H: i'll google it, wait.
12. M: okok
13. H: there are many 'make us' sentences like what makes us different?"
14. H: but 'make we' doesn't have examples…
15. H: 'we make' instead
16. → H: on the google
17. M: ah ok..i'll follow you
18. H: okay, next problem then

We can see the clear disparity in the solution between the two participants. M presents her choice, "d," i.e., "we," unlike H's choice, "a," i.e., "us," in the given sentence (line 2). Here, M misrepresents "b" with "d," which, however, does not cause any

misunderstanding to her interactant, H. After a pause, H reiterates her choice, “i still think ‘us’” (line 4). M then offers an explanation and refers to “appositive pronoun” regarding her choice, “we” (lines 5-6). As it become clear that the two participants have different solutions to the problem, H says, “i’ll google it, wait” (line 11). H, then, presents her findings along with the sentences with “make us” versus those with “make we.” Examples of “make we” (line 14) are scarce in the search results. H refers to “google” again and highlights the source of the information that she offered to M (line 16). M produces her agreement at this point, i.e., “ah ok..i’ll follow you” (line 17). The talk for the task ends as H suggests moving to the next problem (line 18).

As shown in the above two excerpts, the words of authority defines the participant’s identity as a more or less knowledgeable person in collaboration. Once the framework is defined, the cultural tools appear to further affect the talk in two major ways. On the one hand, they function to ensure the validity of the suggested solution. By alluding to the examples on the Google search results, H claims that her solution should be correct. On the other hand, the cultural tools of authority affect the organization of the talk as H ends the talk on the problem under discussion given the marked sign of acknowledgement from M. Since the resource referred to by H is of authority, H can mark his solution as something that is grounded on a powerful source while ending the talk. The collaboration is thus terminated at this point.

2. On-line Coordination of Cultural Tools of Authority

Another important point has been found in the ways how the cultural tools of authority are coordinated in the on-going talk. The effect of the authoritative word will not be substantial until the word is coordinated in the turns in a responsive manner. The following example highlights the import of the interactive and responsive management of cultural tools of authority. The word of authority employed by the participants in this example is “professor.” The participants are discussing the type of an English sentence in terms of simple, compound, and complex sentence. The sentence under discussion is:

Would anyone be impressed much by Gyeongbok Palace or the 63-story Daehan Life Insurance building in Seoul after seeing the Forbidden City in Beijing and skyscrapers in Shanghai?

Fragment (3) T1G3

1. J: Then, what type of sentence do you think this sentence is?
2. Y: ummm, simple sentence?
3. J: Do you think so? Actually, at first, I thought it was a complex sentence!

4. Y: complex because of the "after ~"?
5. J: and I thought "after" is not a prepositiosn but a conjunction with S+ V(they
6. are) omitted.
7. J: That's why I thought it was a complex sentence
8. → J: But I changed my mind…Because of an example Prof. Yoon gave us.
9. J: Nelson Mandela and Vaclav Havel were political prisoners and later became
10. elected leaders of their countries.
11. Y: in your e.g. , "and later became" became is a verb. But in our sentence, "after
12. seeing" seeing is a noun
13. J: Yeah but it's a simple sentence!
14. J: 'cause there is not subject in the second sentence and it can't stand alone as a
15. perfect sentence without a subject
16. Y: "the second sentence" is your e.g.? or
17. Y: our sentence's second part?
18. → J: that's what our Prof. gave us in the class
19. → Y: In the class, Prof. said that there s no "they" between "and" and "later", that
20. sentence is a simple sentence. If there is "they", the sentence will be a
21. compound sentence.
22. Y: so "S+V1and V2" is simple stc. and "S+ V and S+ V" is compound etc.
23. → J: As she said, the second sentence we are talking about has no subject and verb
24. and that follows "after"
25. J: So it's just a prepositional phrase and in the end, there's just only one subject
26. and verb. Therefore it's a simple sentence
27. Y: Sorry I had a call
28. J: That's OK :)
29. Y: in our long long stc, you think "seeing" is "they are seeing"? I think "seeing"
30. is just "seeing" T.T
31. J: As I said, at first I thought it was a complex sentence … but I changed my
32. → mind after seeing the example she gave us. I found out that it was just a
33. prepositional phrase, not a conjunction with S+ V missing.
34. J: that is to say it's not a complex sentence, but a simple sentence.
35. Y: Oh really? I thought it is simple sentence but I was not sure. If you think that,
36. I can trust kkkk
37. J: But without subject and verb it is not a clause~ So I think your opinion is
38. right! :)
39. J: Then No.4 is completed!

Earlier in the talk, J explains misunderstanding that he had on the problem (lines1-7).

Then, he says, “but I changed my mind,” referring to a source that their professor gave to the students (line 8). His turn includes two cultural tools of authority, i.e., “professor Yoon” and “the example” from her. He continues and quotes the example from the professor, “Nelson Mandela and Vaclav Havel were political prisoners and later became elected leaders of their countries” (lines 9-10). Y hardly acknowledges J’s use of the example showing the difference between the sentence that Y brings to the discussion and the sentence to be solved. J then presents his understanding of why the sentence from the professor is a simple sentence; there is no separate subject before the verb “became,” and, thus, the part cannot stand as an independent clause. During the explanation, he misuses a “sentence” as “clause.” While Y shows confusion in J’s use of the word “sentence,” J reclaims the validity of the source and says, “that’s what our Prof. gave us in the class” (line 18). It is interesting to note that Y uses “our” this time referring to the professor, which highlights that the source and the authority inherent in the source are to be shared by both of them.

In the next turn, Y uses the word “professor” and reinterprets the sentence that she gave the participants in order to present her understanding. In fact, Y’s understanding is not different from J’s. However, Y reorganizes the interpretation of the analysis of the sentence type and presents it in a more grammatically correct manner (lines 19-21). When she says, “so “S+V1and V2” is simple stc. and “S+ V and S+ V” is compound stc.” (line 21), she concretely marks that the sentence that J uses is for the distinction between a simple versus a compound sentence. Without responding to Y’s turn, J shifts the analysis to the sentence on the task and reiterates that it should be a simple sentence because of the lack of the subject in “after seeing” (lines 23-23). It is to be noted that J initiates his talk with “as she said,” referring to the professor here (line 22). The participants appear to be in competition to obtain the power inherent in the word of authority.

As they resume the talk and discussion, Y discloses her frustration with the discussion by asking how J understands “after seeing” (lines 29-30). J then responds to the question, and says how he first understood the type of the sentence and then changed the type because of the resource that he referred to, i.e., “the example that she gave” them. As J says that it is a simple sentence (line 33), Y expresses her surprise, saying “oh really?” (line 34). Since J’s presentation of the solution matches Y’s, the long stretch of the talk ends at this point.

What we have to note in the fragment of the chat transcript is that the use of the cultural tools of authority does not automatically take the effect on collaborative framework. J’s presentation of his idea along with the words of authority is not responsive to the talk from his counterpart, Y. Earlier in the turns of the above fragment, J takes longer (more) turns to simply present his ideas and attempts to validate them by means of the words of authority (lines 5-10). While doing so, he does not specifically address Y’s question, “complex

because of the "after ~"?" Thus, his presentation does not occur in an interactive, responsive manner. Throughout the course of the interaction, then, J's ideas are not exchanged enough. Consequently, the authoritative word, "professor," fails to take the effect that the words of authority could have if in the proper interactional exchanges.

Here, the lack of responsiveness and interactivity is related to some of the constraints implicit within the context of interaction discussed by many researchers (e.g., Pellettieri, 2000; Simpson, 2005). First, since the interaction occurs as a text, on-line chat users often times receive their partner's text before they are ready to yield their turn. That's why they often appear to ignore the text that is proximate to the turn that they produce. Second, in the context of SCMC, the participants can self-select or interrupt each other's message more freely than in other face-to-face interactional context. As shown in the above excerpt, these constraints cause the interaction dysfunctional. While collaboration is not properly configured, the participants' continuous uses of cultural tools of authority are not communicated in a responsive and interactive manner. This is where the L2 learners' context-specific, i.e., on-line, communicative competence becomes significant. They need to be aware of the constraints and to be able to coordinate the mediational means appropriately given the constraints.

The import of using the cultural tools of authority in a well-designed manner in the on-line interaction is clear when we look at an example in which each participant uses his/her own cultural tools of authority. As they present different ideas or solutions to the task, there is tension between the participants. The tension between them surfaces on the talk in the form of different or competing words of authority. In this instance, again, it is not a matter of what type of word of authority they are using that affects the degree of power that the word exercises on the collaborative framework. Rather it is a matter of how they deal with the word. In the following example, two participants use different cultural tools, i.e., "dictionary" and "teacher" as they work together to choose a correct answer in the following problem:

Although Elena is older than (a. I b. me), she is not as tall.

Fragment (4) T2G1

1. S: no.4 is 'I' right?
2. M: I thnk so..but I don't know why the answer is correctly.
3. M: is this object of a preposition?
4. S: um..I think 'than' is conjunction, that means 'Elena is older than I am older'
5. understand?
6. M: ah… I got it!
7. M: number 5 is their

8. → S: but.. in naver dictionary, 'than' is both preposition and conjunction
9. → M: um… I a little remember that teacher's saying in class.. about using than…
10. → M: She said than can use two of these..(I and me) didn't she??
11. → S: yes, in dictionary, use of preposition is in spoken language.
12. S: both I and me is not ungrammatical
13. M: umm… I'm a little confused…
14. M: but in this question I think your opinion is correct.
15. S: yes, let's do not think this more,

The interaction revolves around the talk regarding the grammatical function of "than" in the sentence, "although Elena is older than (a. I b. me), she is not as tall." Against M's understanding of the function as a preposition, S presents his choice "I" and explains that its function is conjunction (lines 4-5). Although M expresses his understanding saying "I got it!" (line 6), S draws attention to the multiple functions of "than" in reference to the "dictionary" (line 8). He says, "but.. in naver dictionary, 'than' is both preposition and conjunction." As he refers back to M's idea of prepositional function, he proposes that the function is also valid in the "dictionary." By saying this, S presents him as a person with comprehensive understanding of the functions of "than." Thus, the word "dictionary" functions to solidify this powerful position in the collaborative framework.

Interestingly, M brings the word "teacher" against S's turn, and says, "um… I a little remember that teacher's saying in class.. about using than… (line 9). This action represents M's challenge towards S's more powerful position that is being established through the other word of authority, i.e., "dictionary." The two competing words of authority reflect the tension between the two participants during the process of construction of the collaborative framework. Thus, M creates possibility of a new participatory framework in which M can re-identify himself as a more knowledgeable and capable person. However along with the word of authority, he produces a hesitation marker "um" and pauses "…" He also modifies "remember" with "a little" which reduces the force inherent in the word. Then he presents his understanding of the function and says, "she said than can use two of these… (I and me) didn't she??" (line 10). It is to be noted here that even when he quotes what the teacher said, he does not present it as a competitive resource as it is. Instead, he seeks confirmation from S. In this manner, the authority inherent in the word "teacher" becomes aborted, and collaboration is reconfigured back to the prior definition, i.e., S as a more knowledgeable person against M. S confirms the information and elaborates more on the information from the "dictionary" saying "yes, in dictionary, use of preposition is in spoken language" (lines 11-12). By referring to "dictionary" again, S reclaims the authority of the word and indexes himself as the interactant in possession of the authority. M shows confusion with this information, but agrees with S's opinion. The talk ends at this point as S suggests moving

to the next problem.

In sum, the above fragments present how significant participants' uses of means of authority will be in defining who the more capable person is becomes explicitly displayed in collaboration in the. As the mediation assumes the cultural and historical sharing between the participants, the uses of "google," "dictionary," "teacher/professor," and "handout" create the on-line problem-solving specific context for the interaction. These words acquire authority because of the participants' shared understating of the context of SCMC. The participants coordinate the interaction with the words as a trigger to the search of a solution to the problem at hand (fragment (1)), or as an index to the end of the talk (fragment (2)). The collaboration is precisely configured and participant roles are defined in accordance with the authority of the word being defined. Another significant finding concerns how the cultural tools of authority are situated in the talk. The effectiveness of the words of authority depends on how the participants coordinate them in the talk-in-interaction. As shown in fragment (3), the presentation of the word is not effective to the solution of the problem unless it is properly communicated and understood as such by the interactants. In other words, the word had to be situated in the talk in a responsive manner, thus interactionally designed by both of the participants. Also, the way the participants present in the talk is important. Authority appears to be generated when it accompanies the ownership of the participant producing the words of authority (fragment (4)). When two words of authority are in competition between the participants, presentation of the word as something which the participant is possessed of affects the functionality of the word of authority in the on-line collaboration.

IV. CONCLUSION

This study aimed to investigate how collaboration is framed through dyadic interactions of L2 learners working on L2 grammar tasks. The findings of the study can be briefed as in the following in accordance with the two research questions.

1. The participants in the present study, while working on the tasks regarding English grammar, attempted to obtain a more powerful or capable position in the turn organization by means of references to an authoritative resource, such as a dictionary, an internet resource website, handouts, and the professor.

2. These cultural tools of authority, embedded in the participants' on-line interaction, affected collaboration and task accomplishment. The collaboration was framed such that a participant was defined as a more or less capable interactant. In the defined framework, the solution associated with the word of authority resulted in task accomplishment. Those words of authority were found to take the effect only when they were coordinated

interactively and responsively in the talk especially when multiple cultural tools of authority were produced by both participants.

Mondada and Doehler (2004) point that being recognized as a good student presupposes putting to work not only one's linguistic competence, which focuses on academic content, but also on one's socio-institutional competence. Therefore, being recognized as such involves the proper way of formulating content and at the same time the proper ways of participating in a specific instructional setting. In relation to this knowledge of how to properly participate in a learning context, the current study carries critical implication for English learners working on-line for task accomplishment. In order to become a good, successful language learner, L2 learners need to properly understand some constraints within the context, i.e., challenges of interactive and responsive management of communication. Given the constraint that the turn-taking displayed in the on-line text is often times different from that of face-to-face communication, the learners should pay more attention to coordinating the mediational means appropriately.

The other significant implication of the current study is that the interaction-focused aspect of competence is as crucial as the language-focused competence in the on-line task-based activities. In our consideration of learner-centered group or team activities, we need to have better understanding of the contributions of the L2 activities themselves to organizing a learning context or a collaborative framework. As shown in the present study, the effects of different cultural tools of authority on framing the collaboration and participant alignment were jointly, not individually, constructed. This finding corroborates that competence needs to be conceived of as capacities that are embedded in the interactional activities. In other words, what L2 learners participating in SCMC need to be cognizant of is that they can properly handle L2 tasks on-line by properly and jointly configuring collaboration and participant alignment, which is precisely dependent upon their use of the context-specific, cultural tools of authority. The L2 interactional competence carries the same significance in on-line task-based communication as linguistic competence and, thus, needs to be incorporated into electronic communicative competence.

Proposed further studies include a quantitative comparison of effects of different types of cultural tools of authority on task accomplishment. As we understand better the context of on-line communication as a learning setting, we need to provide systematics in the roles and effects of different cultural tools which in turn affects task accomplishment. Also proposed is the study that addresses various English content areas other than English grammar. As the English language is encouraged as a medium of communication in a college setting, English educators are expected to reveal other crucial features in the notion of L2 communicative competence needed for teaching and learning different content areas. These two issues need to be examined in the further studies.

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Appendix

Example Chapter Exercise (from Task 1)

Choose the correct pronoun

1. Laurel Ann said that (a. us b. we) students were writing better poems this semester
2. A kind neighbor brought my dog and (a. I b. me) cookies
3. Our principal, Mrs. Strudel, is not respected by (a. us b. we) teachers
4. Hyo Min resolved computer glitches much more quickly than (a. I b. me).
5. Rosa, Olga, Lorena, and (a. I b. me) enjoyed a large lunch last Monday.

Examples in: English
Applicable Languages: English
Applicable Level: College

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