Communication Strategies Used by High School English Language Learners in Multilingual Classrooms

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Abstract

In this study, twenty-five high school English language learners were observed in their classrooms in a New York City public school while they worked in small groups. All observations were video recorded or done by the researcher while in the classrooms. The videos were then transcribed. Communication strategies that the participants used were then identified in the transcripts using Dornyei and Scott's (1995) taxonomy of communication strategies. It was found that of the 557 communication strategies identified by the researcher, the subcategory of interactional coping devices showed the most frequent use of communication strategies for a total of 47% of all communication strategies used by the participants; within this subcategory, the most frequently occurring were response: confirm, asking for clarification, and response: rephrase. Direct coping devices were also identified with mime, self-rephrasing, and other-repair being the most frequently observed types of communication strategies within this subcategory. Finally, indirect coping devices such as self-repetition, code-switching: L1 structure words, and other-repetition were also observed to be used by the participants. Overall, the findings show that small group work in language classrooms between students who do not share a common L1 provides students with opportunities to use communication strategies to negotiate meaning in an attempt to achieve a mutually comprehensible message.

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Introduction

Communication strategies (CSs) are used by language learners to overcome communication difficulties and breakdowns due to a lack of available linguistic resources. While those learning a second language may not be able to execute an intended message as accurately as they would in their L1, the ability to utilize strategies to communicate allows language learners the opportunity to convey necessary components of their message. As stated by Dornyei and Scott (1997), "even a brief analysis of any spontaneous piece of L2 oral discourse reveals the importance of CSs in L2 users' verbal performance: These speakers (except those at a very advanced, near 'native' level) tend to spend a great deal of time and effort struggling to make up for their L2 deficiencies" (p. 174).

Research on communication strategies has been variable since it was first studied in the early 1970s (Dornyei & Scott, 1997); this is because researchers have mostly studied communication strategies from either a psycholinguistic or interactional perspectives. The theoretical perspectives from which communication strategies are studied have prevented researchers in this field from agreeing upon a universal definition of communication strategies or taxonomy of them. In addition, this has also caused controversy as to whether or not communication strategies should be taught in classrooms where a second language is being learned by the students.

Regardless of the disputes in this field, it is generally accepted that language learners do use communication strategies during second language communication. The presence of communication strategies is even more prevalent during communication between those that are communicating in an L2 and do not share a common L1 (Yule & Tarone, 1991). In multilingual

classrooms, small group work provides students with opportunities to work with one another to use their L2 linguistic knowledge to negotiate meaning through the use of communication strategies. Because small group work allows second language learners to practice communicating in an L2, the chances for language learning opportunities are increased.

This study attempts to show the specific types of communication strategies that high school English language learners in a New York City public high school use to communicate with one another in English in multilingual classrooms. The natural classroom interactions between students during small group work were observed to determine the specific communication strategies that participants in a conversation used in an attempt to reach a mutually comprehensible message. Overall, the results show that these high school English language learners use an array of communication strategies during small group work. While the number and types of communication strategies vary from student to student, this study shows that high school English language learners do utilize communication strategies to negotiate for meaning for increased potential for successful in-class communication.

Literature Review

During communication between individuals who do not share a common first language, the participants must work together to make the conversation mutually comprehensible. For a conversation to become mutually comprehensible, participants may have to negotiate meaning through the utilization of communication strategies. In communication between individuals who do not share a common first language, negotiation of meaning and the use of communication strategies is likely even more prevalent (Yule & Tarone, 1991). In addition, during conversation with non-native speakers, special attention may be redirected to lexical choices and as a listener,

attention may directed to "para- and extralinguistic aspects of a message—gestures, kinesics, intonation, the surroundings—as these may assist in the interpretation of the message" (Kellerman & Bialystok, 1997, p. 33).

Whether a conversation is taking place between native language speakers or learners of a second language, participants in a conversation work "together [to] try to reach…*grounding criterion*" (Clark & Schaefer, 1989, p. 262). In other words, the speakers and the listeners involved in a conversation, "mutually believe that the partners have understood what the contributor meant to a criterion sufficient for current purposes" (Clark & Schaefer, p. 262-263). The contributions that a speaker gives to a conversation "are not formulated autonomously by the speaker according to some prior plan, but emerge as the contributor and partner act collectively" (Clark & Schaefer, p. 292). The overall success of the conversation and the extent to which the participants reach a mutual understanding in meaning through oral discourse "depend on the coordinated actions by [all of the participants]" (Clark and Schaefer, p. 263).

Each participant, must work together by repairing any troubles in communication they may encounter (Clark & Schaefer, 1989). As stated by Clark and Schaefer (1989) and Clark and Wilkes-Gibbs (1986), during the course of oral discourse, participants may take several turns in "refashion[ing] an initial presentation until they are satisfied with the accumulated evidence for what they mutually understand" (as cited in Wilkes-Gibbs, 1997, p. 241). In addition, the listener must indicate in some way that what the speaker has said has been understood; this must be done so that the conversation can continue under the mutual acceptance that the speaker and listener understand one another so the speaker does not need to provide additional information (Poulisse, 1997). Under this scheme, "every signal that one person directs toward another, whether verbal

or nonverbal, is presented for the other person to consider" (Clark & Schaefer, p. 266) so that mutual understanding in the conversation can be achieved.

If the participants in a conversation reach a point where they realize that they do not share mutual understanding, and need to repair problems or refashion the conversation, they may be required to "work out or negotiate some form of common ground before the interaction can continue" (Yule & Tarone, 1991, p. 162). While this situation can be typical of any conversation, it can be found even more frequently between interactants who do not share a common culture or first language (Yule & Tarone, 1991). To solve the problem of misunderstandings or lack of understanding between participants, negotiation of meaning through the use of communication strategies must be used to overcome problems in communication (Yule & Tarone, 1991).

According to Pica (1994), negotiation of meaning requires that participants in a conversation work with one another linguistically "to achieve the needed comprehensibility" (p. 494). The term negotiation refers to "modification and restructuring of interaction" (Ibid, p. 494) when participants involved in a conversation "anticipate, perceive, or experience difficulties in message comprehensibility" (Ibid). Achievement of comprehensibility through negotiation may include a variety of strategies for communication including "repeating a message verbatim, adjusting its syntax, changing its words, or modifying its form and meaning in a host of other ways" (Ibid).

Pica (1994) claims that negotiation is important for second language acquisition in that it "can make input comprehensible to learners, help them modify their output, and provide opportunities for them to access L2 forms and meaning" (p. 520). According to Krashen (1985) "second languages are acquired 'by understanding messages' or by receiving comprehensible

input" (as cited in Gass & Selinker, 2008, p. 309). In addition, "comprehension of message meaning is necessary" for language learners to "internalize L2 forms and structures that encode the message" (Pica, p. 500). When a speaker attempts to communicate with the addressee, they must assess the addressee's linguistic competence and their knowledge of the topic being discussed (Corder, 1983) and modify the input accordingly. Because conversations are a collaborative effort, "negotiated input" and therefore comprehensible input "must be not just the result of moves by one speaker, but the result of co-operative moves by both speakers" (Yule & Tarone, 1991, p. 167).

It should also be noted that modified input is not enough for language acquisition (Gass & Selinker, 2008). Language learners also need interactional opportunities to obtain "access to feedback and production of modified output" (Gass, Mackey, & Pica, 1998, p.299). According to Swain (1985), modified and comprehensible output refers to situations in which language learners are "pushed toward the delivery of a message that is not only conveyed, but that is conveyed precisely, coherently, and appropriately" (p. 249).

For language learners to receive access to comprehensible input, feedback, and modified output, "learners must be put in a position of being able to negotiate the new input, thereby ensuring that the language in which is it heard is modified to exactly the level of comprehensibility they can manage" (Long & Porter, 1985, p. 214). A "position" that would allow these opportunities for negotiation of meaning to arise, and thus opportunities for language learning, can occur during group work. According to Long and Porter, group work can provide opportunities for "increasing the quantity of language practice opportunities, for improving the quality of student talk, for individualizing instruction, for creating a positive affective climate in

the classroom, and for increasing student motivation" (p. 207-208). With this in mind, group work allows language learners opportunities to negotiate meaning so that input and output may be made comprehensible, which results in embedded feedback throughout the negotiation process leading to potential opportunities for language acquisition.

According to Yule and Tarone (1991), there are certain conditions for group work that are more beneficial for an "increased number of markers of negotiation" (p. 164). For example, as stated by Porter (1986), group work should include having learners solve a specific type of problem-oriented task together (as cited in Yule & Tarone, 1991). In addition, according to Doughty and Pica (1986), learners can negotiate more in smaller groups (as cited in Yule & Tarone, 1991). Finally, according to Varonis and Gass (1985), group work among individuals who come from different L1 backgrounds and are at different L2 proficiency levels are more likely to have increased opportunities to negotiate for meaning (as cited in Yule & Tarone, 1991).

In a study by Oliver (2002) that examined the conversations between 192 participants, students between the ages 8 to 13 years, she found that "the characteristics of the participants seem to influence the pattern for negotiation for meaning" (p. 108). In most cases the highest frequency of negotiation of meaning was found in NNS-NNS (non-native speaker) pairings as opposed to NS-NS (native speaker) or NNS-NS pairings (Oliver, 2002). Overall, however, "the findings indicate that for children, as for adults, peers are an important source of data about the target language and that the use of peers in teaching practices would appear to be justified whether it is in an adult context or in a primary school setting" (Oliver, 2002, p. 108). In addition, Gass and Varonis "argue that negotiation in non-native exchanges is a useful activity in

that it allows the learners to manipulate input. When input is negotiated, they maintain, conversation can then proceed with a minimum of confusion; additionally, the input will be more meaningful to the learners because of their involvement in the negotiation process" (as cited in Long & Porter, 1985, p. 218).

To make input comprehensible and provide opportunities for output to occur, the use of communication strategies (CSs) by language learners in small groups can allow language learners to negotiate meaning to achieve a mutually comprehensible conversation. Overall, communication strategies refer to a phenomenon that occurs "in interactions of interlanguage speakers with others…[when] language learners are able to use their restricted interlanguage in such a way as to transcend its limitations" (Tarone, 1980, p. 418). It must be noted that there is not a universally accepted definition or taxonomy of communication strategies, (Dornyei & Scott, 1997; Kasper & Kellerman, 1997). This is because communication strategies have been studied from two significant theoretical perspectives: "the psycholinguistic and the interactional" (Fernández Dobao & Palacios Martínez, 2007, p. 89). Generally speaking, Wagner and Firth (1997) discriminate between these two theoretical perspectives as follows:

> …while the psycholinguistic definition locates and identifies CS in relation to both 'overt' and 'covert' elements, and upon so doing seeks to investigate and classify the cognitive bases of the CS, the interactional definition sees CS as a publicly displayed ('overt') phenomenon, rendered visibly through participants' actions. Once so identified, the interactionally oriented analyst then seeks to explicate *how* the parties—individually or conjointly—endeavor to overcome the encoding difficulty. Here, then, the emphasis is on the social, rather than individual or cognitive, processes underpinning talk. (p. 326)

Celce-Murcia, Dornyei, and Thurrell (1995), also include the communication continuity/maintenance perspective which additionally defines communication strategies as "means of keeping the communication channel open in the face of communication difficulties, and playing for time to think and to make (alternative) speech plans" (p.26). It is because of the variety of perspectives from which communication strategies are viewed that there is no universally accepted definition.

A notable definition by Faersch and Kasper (1983) identifies communication strategies as "potentially conscious plans for solving what to an individual presents itself as a problem in reaching a particular communicative goal" (p. 36). Additionally, Tarone (1980) defines communication strategies as:

> …mutual attempts of two interlocutors to agree on a meaning in situations where the requisite meaning structures do not seem to be shared. CS are seen as tools used in a joint negotiation of meaning in situations where both interlocutors are attempting to agree as to communicative goal. (p. 420)

While Faersch and Kasper's (1983) definition is applicable to an "individual's" role in a conversation, it does not take into consideration the role of the partner. Tarone's (1980) definition, however, addresses the collaborative nature of conversation in that "language is not an object which is used but a part of communication—a living organism created by both speaker and hearer" (Tarone, 1981, p. 288). In the sense of Tarone's (1980) definition the use of communication strategies are "the tools" that are used to negotiate meaning to reach a mutual communicative goal. In other words, communication strategies and negotiation of meaning

cannot occur in isolation from one another if two interlocutors are trying to reach the grounding criteria.

Dornyei & Scott (1997) extended the view of communication strategies by integrating "several lines of previous research" (p. 179). Dornyei & Scott argued that communication strategies should "include every potentially intentional attempt to cope with any language-related problem of which the speaker is aware during the course of communication" (p. 179). The reason for this argument is that because the "primary source of L2 speakers' communication problems is insufficient processing time, *stalling strategies*…help the speakers gain time to think and keep the communication channel open are also problem-solving strategies" (p. 178). Keeping the communication channel open can lead to additional opportunities for a language learner to produce modified output and to receive comprehensible input and feedback and ultimately lead to a mutually comprehensible message.

A taxonomy of communication strategies based on Dornyei and Scott's (1997) extended view came from Dornyei and Scott's (1995) study of 44 EFL learners. The study included 44 Hungarian students, ages 15-25, ranging from intermediate-upper intermediate English proficiencies. According to Dornyei and Scott (1995), the purpose of the study was to "bring together several lines of research and provide a systematic overview of problem management in L2 communication" (p. 156). In this study, each of the participants was given three speech elicitation tasks that included cartoon description, definition formulation, and guided role-play (Dornyei & Scott, 1995). Following the speech elicitation tasks, retrospection data was gathered by the researchers by playing recordings of the oral tasks to the participants and getting feedback from the participants themselves on why they used the communication strategies that they did

(Dornyei & Scott, 1995). Dornyei and Scott (1995) then transcribed the recordings of the speech elicitation tasks and retrospections and identified circumstances when "(a) the speaker deviated from the ideal delivery, (b) a seemingly inappropriate lexical item was used , or (c) some basic information given to the participants was altered or ignored" (p. 157). Based on the transcribed data, Dornyei and Scott (1995) created a taxonomy of communication strategies or "coping devices" that the participants used to overcome language difficulties (see Appendix A). Dornyei and Scott (1995) identified four types of language problems that arose during conversation and identified them as follows:

1. Resource deficits: concern the gaps in the speakers' L2 knowledge which prevent them from verbalizing a planned message.
2. Processing Time Pressure: concerns the L2 speaker's frequent need for more time to process and plan L2 speech than would be naturally available in fluent, real-life communication.
3. Own-Performance Problems: are detected by the learner during the continuous process of monitoring his/her own speech and can involve three types: (a) the realization that one said something incorrect, (b) the realization that what one said was less than perfect, and (c) uncertainty about whether what one said was correct or conveyed the intended message.
4. Other-Performance Problems: concern problems caused by the interlocutor's speech in the speaker and can be divided into three subtypes depending on what the speaker finds problematic: (a) something perceived to be incorrect, (b) lack or uncertainty of understanding something fully, (c) a lack of some expected message/response. (p. 159)

In addition, Dornyei and Scott (1995), created three categories of problem-management based on how the communication strategies "contributed to resolving conflicts and achieving mutual understanding" (p. 160). These "problem-management" categories are as follows:

1. Direct CDs: provide an alternative, manageable means of overcoming the problem and getting the (sometimes modified) meaning across.
2. Indirect CDs: are not problem-solving devices in the strict sense as they do not provide an alternative-meaning structures themselves, but facilitate the conveyance of meaning indirectly by creating the conditions for achieving mutual understanding at times of difficulty.
3. Interactional: involve a third approach to problem management whereby the participants carry out trouble-shooting exchanges cooperatively. (p. 160)

The resulting taxonomy includes fifty-nine different communication strategies or coping devices as identified by Dornyei and Scott (1995); "40 percent of these are well-known CSs or subcategories of these…another 30 percent of them have been discussed on studies on repair, the negotiation of meaning, and hesitation phenomena; about 15 percent are CDs that have been mentioned in the CS literature but which are either arguable or not widely known, and finally we identified seven new CD types" (Dornyei & Scott, 1995, p. 158).

It is important to note that while there exists a number of definitions and taxonomies for communication strategies, "The point is not that we have a label for the phenomenon, or even that the labels we have are the most useful ones; the point is that we recognize that it is a communication strategy used by the learner that solves the problem…[through] key moves by both the leaner and the interlocutor within…[an] interaction [and] can be effectively described

within a communication strategy framework which can be applied to both sides of the transcription" (Yule & Tarone, 1991, p. 167).

According to Dornyei (1995) there exist differing opinions on whether or not communication strategies should be taught directly in the classroom because there are "strong theoretical arguments [that] reject the validity and usefulness of specific CS training, [while the] practical considerations and experience appear to support the idea" (p. 60). As stated by Yule and Tarone (1997), the extent of the value of teaching communication strategies differs between researchers according to the goal of teaching:

> If the goal of teaching is seen in terms of developing cognitive processing via L2 referential communication tasks, then little benefit is foreseen. If that goal is conceived in more socio-cultural and interactional terms, with the nature of L2 referential communication treated as a function of the addressee, communicative task and developing oral skills in the L2, the teaching communication strategies may be considered to have beneficial effects. (p. 30)

Assuming the later goal, Dornyei (1995) conducted a study to determine the "teachability of CSs" (p. 65). In this study, Dornyei (1995), "conducted a strategy training course and assessed the effects of the treatment using pre- and posttests and comparing the results with those obtained in the control groups" (p. 65). Overall, Dornyei (1995) was "interested in how strategy training affected some qualitative and quantitative aspects of strategy use as well as the rate of delivery of speech…[and] how proficiency levels affected the results and how students' affective dispositions were toward such training" (p. 65-66). The subjects for this study included 109 students from the ages of 15-18 years in a secondary school in Hungary (Ibid). Their English

proficiencies ranged from preintermediate to postintermediate and each of the subjects had studied English 1.5 to 3.5 years (Ibid). The experiment group was involved in a 6-week strategy training program (Ibid). There were two control groups: one group received no treatment at all while in the other group the subjects were given conversation training in addition to their normal EFL classes (Ibid). Overall, Dornyei (1995) found that:

> In the treatment group, the posttraining results showed improvement in measures related to both the quality and quantity of strategy use…both the quality and the quantity of the students' strategy use were positively related to their fluency in the pretest but only fillers affected speech rate in the posttest…with respect to the students' level of L2 proficiency, the effectiveness of the training was found unrelated to the learners' EFL competence. (p. 79)

In a study by Lam (2010) of a treatment class and a comparison class of secondary ESL learners in Hong Kong, found that:

> …strategy instruction seemed to be associated with the low-proficiency students: (a) reporting consistent increases in their frequency and variety of use of the whole range of target strategies, using consistently more resourcing to help them with ideas and language, and demonstrating enhanced ability to reflect on and evaluate their performance; and (b) making greater improvements, especially in the English score, in group discussion tasks than the high-proficiency students. (p. 23-24)

It is understandable that the lower proficiency students benefited more from the strategy training since:

> …high-proficiency students may choose not to use or notice the strategies as often as low-proficiency students on the assumption that strategy use may not be news to them as they already have a repertoire of preexisting strategies and/or they possess language competence that enables them to complete the tasks with relative ease…[and] low-level students naturally need more strategies to help them operate than do high-level students because the former are linguistically (and perhaps cognitively) weaker, whereas the latter may be more capable. (p. 24)

In addition, Lam (2010) suggests teaching higher proficiency students "more challenging strategies (e.g., paraphrasing, using self-correction, asking for clarification, or asking for confirmation), which require deep processing (i.e., more manipulation of the target language), or which entail higher stages of speech-processing (i.e. post-articulation monitoring) for high-proficiency students who are linguistically more ready to combine and use them alongside bedrock strategies to solve problems of resource deficits" (p. 27). Both of these studies illustrate that in these instances, students did benefit from teaching communication strategies.

O'Malley (1987) argues that "Teachers should be confident that there exist a number of strategies which can be embedded into their existing curricula, that can be taught to students with only modest extra effort, and that can improve overall performance" (as cited in Dornyei & Thurrell, 1991, p. 18). Dornyei (1995) identifies the following "six (interrelated) procedures, all relevant to strategy training":

1. Raising learner awareness about the nature of communication potential of CSs by making learners conscious of strategies already in their repertoire, sensitizing them to the

appropriate situations where these could be useful, and making them realize that these strategies could actually work.

2. Encouraging students to be willing to take risks and use CSs, that is, to manipulate available language without being afraid of making errors (Faersch & Kasper, 1986; Yule & Tarone, 1990).
3. Providing L2 models of the use of certain CSs through demonstrations, listening materials and videos, and getting learners to identify, categorize, and evaluate strategies used by native speakers or other L2 speakers.
4. Highlighting cross-cultural differences in CS use might involve various degrees of stylistic appropriateness associated with CSs (e.g., in some languages particular CSs may be seen as indications of bad style), differences in the frequency of certain CSs in the speaker's L1 and L2, as well as differences in the verbalization of particular CSs.
5. Teaching CSs directly by presenting linguistic devices to verbalize CSs which have a finite range of surface structure realizations.
6. Providing opportunities for practice in strategy use appears to be necessary because CSs can only fulfill their function as immediate first aid devices if their use has reached an automatic stage. (Dornyei, 1995, p. 63-64)

Overall, Dornyei (1995) argues that teaching communication strategies "provide the learners with a sense of security in the L2 by allowing them room to manoeuvre in times of difficulty. Rather than giving up their message, learners may decide to try and remain in the conversation and achieve their communicative goal. Providing learners help towards accomplishing this is…a worthy objective of communicative language instruction" (p. 80).

Methodology

The data for this study was collected throughout the 2011 fall semester at an international high school in New York City. This school is part of a larger network of international high schools as well as the New York City Department of Education. All of the students at this high school are English language learners who are recently arrived immigrants. The student population is very diverse and is comprised of approximately four hundred thirty students who come from over thirty countries and speak thirty-five different languages. According to the network of schools to which this international high school belongs, their mission and vision aim to "provide quality education for recently arrived immigrants and…to ensure all recent immigrant students have access to a quality high school education that prepares them for college, career and full participation in democratic society" (Internationals Network for Public Schools, 2011).

Data was collected in three high school Global History classes, over the course of seven one-hour and five-minute periods, while students worked in small groups. The researcher identified and recorded strategies that the students, who all come from different L1 backgrounds, used to communicate with one another. All data was collected through video recordings and in-class observations using a taxonomy of "coping devices" that was created by Dornyei and Scott (1995).

Participants

The student participants for this study were from three different ninth/tenth-grade Global History classrooms (from here on referred to as Class 1, Class 2, and Class 3). The participants were all recently arrived immigrants to the New York City area in the United States. Both

Classes 1 and 3 were instructed by the same teacher and Class 2 was instructed by a different teacher. At the beginning of the school year, incoming-students were given an English proficiency exam and receive an overall score on a scale from zero to four (zero being least proficient in English; four being most proficient in English) so the teachers know the students' language abilities. The details of the test were not available to the researcher. However, ten of the students' New York State English as a Second Language Test (NYSESLAT) scores were available; when the NYSESLAT scores were compared to the proficiency levels as identified by the students' classroom teacher, scores ranging from 3-4 indicate intermediate to advanced English proficiencies and scores ranging from 0-2 indicate beginning to intermediate English proficiencies.

The students in each of the three classrooms were from an array of L1 backgrounds and English proficiency levels. Class 1 included students who speak the following languages as L1s: five Bengali speakers, two bilingual Fulani/French speakers, one Fulani speaker, one bilingual Wolof/French speaker, eight Chinese speakers, three Spanish speakers, one Haitian Creole speaker, one bilingual Tibetan/Hindi speaker, and one Hindi speaker for a total of twenty-three students. Class 2 included students who speak the following languages as L1s: one bilingual Wolof/French speaker, one bilingual Tibetan/Hindi speaker, two Spanish speakers, one Arabic speaker, six Chinese speakers, one Urdu speaker, one Uzbek speaker, one Polish speaker, four bilingual Fulani/French speakers, and four Bengali speakers for a total of twenty-one students. Class 3 included students who speak the following languages as L1s: one Fulani speaker, six Spanish speakers, eight Chinese speakers, two Bengali speakers, one bilingual Mandingo/French

speaker, one Karen speaker, one Karen/Burmese speaker, one Nepali/Tibetan speaker for a total of twenty-one students.

Setting

The students at this international high school regularly participate in small group work. Throughout the course of this study, the students were placed in their regular groups as determined by the classroom teachers. When considering how the students should be placed into groups, the teachers reported that they try to form heterogeneous groups with some L1 support for lower English proficiency students. In addition, in the case of personality clashes, the teachers reported that they have to separate some students. All of the observations conducted for this study were done while the students were working in small groups, ranging from three to six students. The groups observed were always comprised of at least two students in the group whose L1 backgrounds were different from one another so that the students were required to communicate in their shared L2 language, English.

The assigned tasks that the students were required to complete were all related to the study of global history. On the first day, students in Class 3 were completing a project on ancient civilizations. They used books, videos, and websites to finish the project. The day of the observation, each group was working on one laptop per group and was preparing to present their finished products to the teacher.

On the second day, the students in Class 2 were working on a two-week project in which they were required to use the book "The Arrival" by Shaun Tan. The students were asked to complete a variety of projects related to the book such as identifying literary elements, creating timelines, acting out a scene from the book, creating a book jacket, creating a concept map,

writing a review of the book, or interviewing an immigrant and then comparing the interviewee's story with character in the arrival. To complete this assignment, all groups were given one laptop to work on.

On the third day, each group in Class 1 was given a reading about ancient Egypt and a set of questions that they were required to answer based on the reading.

On the fourth day, each group in Class 3 was given a graphic organizer related to their opinions on the topic of equality and civilization. Each student was asked to write their opinion about three statements, their reason for that opinion, what each group talked about collectively, and what the entire class talked about.

On the fifth day, students in Class 2 were given a set of review questions to answer about what they learned from "The Arrival." The students were instructed to answer the questions independently but to ask the other students at their tables for help if needed. On the sixth and seventh days, Classes 1 and 3, respectively, also worked independently on their work but could ask other students at their table for help if needed.

Procedures

Prior to video recording the students, the classroom teacher responsible for Classes 1 and 3, and the classroom teacher responsible for Class 2, generally explained why the researcher was in the classrooms and what the research was about. The researcher then asked the students if there was anyone who did not want to participate in the study and then selected the groups to include in the study accordingly. In addition, all of the students' parents had agreed that their children could be video or audio recorded by signing a consent form at the beginning of the

school year; however, two students did not want to be video recorded, and therefore they were not included in the study.

Data collection was conducted on seven different days throughout the school's 2011 fall semester. The class periods were one hour and five minutes each. Both video recordings and in-class observations were made by the researcher. The purpose of the video recordings and the in-class observations was to determine verbal and non-verbal strategies the students used while working cooperatively in English. Table 1 displays the groups of students observed and included in the data for this study:

Table 1

Group	Observation Type	Student ID	L1s Represented	Proficiencies
1	Video Only	1	Mandingo/French	4
		2	Karen	0
		3	Bengali	4
2	Observation & Video	4	Bengali	4
		5	Bengali	4
		6	Uzbek	2
3	Observation & Video	7	Spanish	3
		8	Tibetan/Hindi	2
		9	Bengali	1
4	Video Only	10	Fulani	3
		11	Bengali	1
		12	Fulani	4
5	Video Only	13	Spanish	3
		14	Wolof/French	Unknown
		15	Haitian Creole	2
		16	Fulani/French	3
6	Observation Only	17	Tibetan/Hindi	4
		18	Fulani/French	2
		19	Bengali	1
		20	Bengali	1
		21	Spanish	4
7	Observation & Video	3	Bengali	4
		1	Mandingo/French	4
		22	Spanish	2
		23	Spanish	4
		24	Chinese	3
		25	Chinese	2

It must also be noted, that there were seven additional groups that were video recorded but are not listed in the chart above because the sound quality or contents of the video were not usable for the purposes of this study. In addition, the type of data collection, video recording or observation or a combination of the two, is noted in the chart above.

On two of the days included in this study, three cameras were set up in the classrooms to record three different small groups; on three of the days, two cameras were set up in the classrooms to record two different groups; and on the last two days of observation one camera was used to record one group per day. During that time, approximately nine hours and ten minutes of video recordings were made. Each video ranges in length from two minutes to fifty-one minutes. The researcher watched each video and determined, based on the visual and sound quality, to use six of the thirteen videos. Significant interactions in the selected videos were then transcribed by the researcher.

Observation notes during classroom interaction were also taken by the researcher to gather additional data. During six of the seven observation days, the researcher selected one or two groups to observe and took notes on interactions between the students in each of their groups. The researcher either stood near the groups or sat at the tables with the groups and wrote down notable episodes that occurred during the group work. Once the videos were transcribed, communication strategies that the students used during group work were identified in the observation notes and the video transcripts.

Using Dornyei and Scott's (1995) taxonomy (see Appendix A) all communication strategies in the transcripts were identified according to the selected taxonomy. Dornyei and Scott (1995) list numerous communication strategies within their taxonomy and also provide a

definition for each strategy. Based on definitions and examples provided by Dornyei and Scott (1995), the communication strategies in each transcript were identified accordingly. The number of communication strategies that each student used was then recorded (see Appendix B).

Materials

Dornyei and Scott's (1995) taxonomy of communication strategies was used to identify episodes where they were present (see Appendix A). This taxonomy of communication strategies was selected by comparing taxonomies as identified by Tarone (1977), Faersch and Kasper (1983), Bialystok (1983), Paribakht (1985), Willems (1987), Bialystok (1990), Nijmegan Group, Poulisse (1993), and Dornyei and Scott (1995) (as cited in Dornyei & Scott, 1997, p. 196-197). Dornyei and Scott's (1995) taxonomy was selected for a number of reasons. First of all, it includes strategies used by both the speaker and addressee and not simply those used by the speaker. In addition, the taxonomy was created by including well-known CSs or their subcategories, studies on repair, the negotiation of meaning, and hesitation phenomena, as well as lesser known communication strategies, and also seven categories of CSs as identified by Dornyei and Scott (1995). Dornyei and Scott (1995) also included "interactional and trouble-shooting mechanisms…or meaning-negotiation strategies" in their taxonomy (p. 178). Additionally considered when selecting a taxonomy to use, was Dornyei and Scott's (1997) extended view of the definition of communication strategies: "CSs should concern any language-related problem that speakers encounter during the process of communication and therefore should also include stalling strategies…whose function is to gain time to think and keep the communication channel open in the face of difficulties" (p. 156). All of these factors contributed

to the researcher's choice of the identified communication strategy taxonomy as listed by Dornyei and Scott (1995) (see Appendix A).

Results

This study was designed to identify the type and number of communication strategies that English language learners naturally use while working in small groups. Dornyei and Scott's (1995) taxonomy of communication strategies (referred to as "coping devices" by Dornyei and Scott) was used to identify communication strategies. Within this taxonomy there are three subcategories of communication strategies: direct coping devices, indirect coping devices, and interactional coping devices. Under each subcategory, there exist specific types of communication strategies. Each instance of an observable communication strategy used by each participant in this study was recorded as well as their proficiencies as determined by the test administered by their classroom teacher at the beginning of the school year. Individual sums and averages as well as total sums and averages were calculated (see Appendix B). In addition, the percentage of communication strategies that each participant used relative to the number of words spoken was also calculated. This was done because the amount of oral communication between students varied between each observation; in some instances fewer words were spoken by the students, and thus transcribed, which allowed for fewer opportunities for the participants to use communication strategies.

There were a total of 557 instances of communication strategies that were identified by the researcher. Of these 557 identified communication strategies, 200 were categorized as direct coping devices; or 36% of all identifiable communication strategies. The three most frequent direct coping devices identified include mime, self-rephrasing, and other repair. Specifically,

there were 128 (23% of total) instances of mime, 21 (4% of total) instances of self-rephrasing and 14 (3% of total) instances of other-repair. Table 2 shows a breakdown of the number and percentage of each direct coping device:

Table 2

Direct Coping Devices	Number	Percentage of Total
Message Abandonment	3	1%
Message Reduction	0	0%
Message Replacement	0	0%
Circumlocution	3	1%
Approximation	11	2%
Approximation preposition	3	1%
Use of all purpose-words	0	0%
Word-coinage	0	0%
Restructuring	1	0%
Literal translation from L1	0	0%
Literal translation of prepositions	0	0%
Literal translation: false friends	0	0%
Literal translation from L3	0	0%
L1-based foreignizing	0	0%
L3-based foreignizing	0	0%
Code switching to L3	0	0%
Use of similar-sounding words	6	1%
Mumbling	0	0%
Omission	0	0%
Retrieval	3	1%
Self-rephrasing	21	4%
Question rephrasing	5	1%
Self-repair	2	0%
Other-repair	14	3%
Mime	128	23%
Total	200	36%

Because the students were working on classwork during these observations, much of the miming included pointing to words in written texts or on the computer or writing words or

illustrations. Some examples of miming occurred between students 1 and 2 while they were giving a mini-presentation to their classroom teacher:

1. Teacher: The seal. Which one of these shows (*mimes pointing to computer*) the seal?
2. Can you point to the seal?
3. Student 2: *Points to screen.*
4. Teacher: *Shakes head.* That's the terracotta, the terracotta statues.
5. Student 1: The circles (*makes a circle with hands*).
6. Teacher: That's terracotta. Let's see the seal (*shows circle with hands*)
7. Student 1: The circles ones. The circles (*makes a circle with hands*). Look at here
8. (*points to an area of the screen where the seal can be found*)
9. Student 2: *Points to the seal.*

In this instance, as indicated in lines 5, 6, and 7 Student 1 as well as the classroom teacher both used hand gestures to form a circle in representation of the shape of the seal. In addition, each of the participants, as indicated in lines 1, 3, 8, and 9, of this conversation pointed to items on the computer screen to illustrate ideas that they wanted to convey to one another. It should also be noted that Student 4 who was not a participant in this exchange, used 23% of all mimes identified by the researcher.

Student 17, whose L1 is Tibetan/Hindi, used self-rephrasing while working with his partner, Student 18, whose L1 is Fulani/French, to clarify a question that Student 18 had about their assignment:

10. Student 18: What you say about last one?
11. Student 17: Has to be son of Great Queen. First son of the Great Queen to be pharaoh.

12. Student 18: First son of Great Queen?

13. Student 17: Yes, first son of Great Queen to become pharaoh.

14. Student 18: What's this one? *Points to Student 17's paper.*

15. Student 17: You have to be the oldest child of the first wife. Has to be…has to be…to

16. be the oldest son, the first one of the Great Queen *(points to answer on own paper*

17. *and follows along with finger while reading the answer)*. First one, oldest to be

18. pharaoh, mother is Great Queen.

19. Student 18: What is it? *Points to the same question.*

20. Student 17: Oldest child, first one, of the Great Queens.

21. Student 18: What this say? *Points to Student 17's paper.*

22. Student 17: Look here (*points to paragraph in reading with the answer*). Oldest child

23. of Great Queen.

24. Student 18: *Writes his answer on his paper.*

In this instance, as indicated in lines 11, 15, 16, 17, and 18 Student 17 used self-rephrasing to clarify his response to his partner's question in an attempt to convey his intended message.

An example of other-repair occurred between Students 4 and 5 who both speak Bengali as their L1:

25. Student 4: Compare with the similaries.

26. Student 5: Similarities.

27. Student 4: Like with your father (*points to Student 5*) or your father (*points again to*

28. *Student 5*) same to this guy (*points to computer*), right?

29. Student 5: Similarities—and in the same way.

30. Student 4: Same to your father.

Another example of other-repair that occurred between Students 4 and 5 is as follows:

31. Student 4: *Typing and speaking*: Same way as my father go…

32. Student 5: Came.

33. Student 4: Okay, same way my father…what?

34. Student 5: *Points to the computer*: Came.

35. Student 4: Okay, same way my father came…

In lines 26, 32, and 34, Student 4 uses other-repair to indicate to Student 5 that components of his message were not correct.

Of the 557 identified communication strategies, 93 were categorized as Indirect Coping Devices; or 16% of all identifiable communication strategies. The three most frequent Indirect Coping Devices identified include self-repetition, code switching: L1 structure words, and other-repetition. Specifically, there were 49 (9% of total) instances of self-repetition, 17 (3% of total) instances of code-switching: L1 structure words, and 12 (2% of total) instances of other-repetition. Table 3 shows a breakdown of the number and percentage of each indirect coping device:

Table 3

Indirect Coping Devices	Number	Percentage of Total
Use of fillers	3	1%
Inappropriate transfer of fillers	0	0%
Inappropriately fossilized fillers	0	0%
Code switching: L1 structure words	17	3%
Self-repetition	49	9%
Other-repition	12	2%
Lengthened sound	0	0%
Umming and Erring	7	1%
Feigning Understanding	0	0%
Verbal Strategy Marker	1	0%
Nonverbal Strategy Marker	1	0%
Self-confirmation	3	1%
Total	93	17%

Student 4, whose L1 is Bengali, used a total of 22 instances of self-repetition while working with his group members Students 5 and 6, whose L1s are Bengali and Uzbek, respectively. This accounts for 45% of all self-repetition identified by the researcher. The following are examples of self-repetition and other-repetition used by Students 4 and 5:

Example 1:

36. Student 5: In same way…in same way how?

37. Student 4: In same way as…

38. Student 5: Same way…

39. Student 4: *Looks at Student 5*: In same way as…in same way as…my father came to

40. America?

Example 2:

41. Student 4: What does your father do different than the man (*points to the book*)? The

42. man came by train and your (*points to Student 5*) father came, your father came…

43. Student 5: Father came…

44. Student 4: Your father by ship, your father came by ship right?

Student 4 uses other-repetition by repeating what Student 5 said as is evident in lines 37 and Student 5 uses other-repetition by repeating what Student 4 said as is evident in lines 38 and 43. An example of self-repetition can be found in lines 39 and 42. Another example of self-repetition used by Student 4 when speaking to Student 6 is as follows:

45. Student 4: Whenever you want to look (*moves head around as though looking around*

46. *not paying attention*) away…just sit here okay? Just sit here. Just sit here. Your face

47. *(puts hands to both sides of face to indicate face)* moves all around the room

48. *(simultaneously demonstrates looking all around the room)*. Just sit here. You don't

49. have to do anything. It's okay, just sit here. *Every time Student 4 says "just sit here,"*

50. *he points to the table to indicate to Student 6 to remain there still.*

51. Student 6: Laughs

In lines 46, 48 and 49, Student 4 uses self-repetition when speaking to Student 6.

Students 4 and 5 also used code-switching: L1 structure words, while working with one another since they share a common L1, Bengali. An example is as follows:

52. Student 5: He encourage…

53. Student 4: Encourage?

54. Student 5: Encourage, E-N-C-O-U-R-A-G-E, Encourage

55. Student 4: Encourage?

56. Student 4 and Student 5: *Student 5 begins speaking in Bengali to Student 4*.

57. Student 6: Encourage?

58. Student 4: Yeah, yeah, yeah.

In line 56, Students 4 and 5 switch from speaking in English to their L1, Bengali.

Of the 557 identified communication strategies, 264 were categorized as Interactional Coping Devices; or 47%% of all identifiable communication strategies which is the subcategory that includes the most frequently used communication strategies. The three most frequent interactional coping devices identified include response: confirm, asking for clarification, and response: rephrase. Specifically, there were 49 (9% of total) instances of response: confirm, 48 (9% of total) instances of asking for clarification, and 37 (7% of total) instances of response: rephrase. Table 4 shows a breakdown of the number and percentage of each interactional coping device:

Table 4

Interactional Coping Devices	Number	Percentage of Total
Direct Appeal for Help	13	2%
Indirect Appeal for Help	3	1%
Asking for repetition	25	4%
Asking for clarification	48	9%
Asking for confirmation	21	4%
Guessing	3	1%
Expressing Non-understanding	2	0%
Interpretive Summary	2	0%
Asking persistence questions	11	2%
Comprehension Check	3	1%
Own-accuracy check	2	0%
Response: Repeal	21	4%
Response: Repair	1	0%
Response: Rephrase	37	7%
Response: Expand	12	2%
Response: Confirm	49	9%
Response: Reject	11	2%
Total	264	47%

Response: confirm was the most prevalent interactional coping device identified by the researcher. Student 16, whose L1 is Fulani/French, used 10 instances of response: confirm, which accounts for 20% of the total instances of this strategy observed by the researcher. An example of response: confirm used by this participant with her group member Student 15, whose L1 is Haitian Creole can be seen in the following example:

59. Student 16: Okay, so write this one.

60. Student 15: Which? This? *Points to Student 16's paper.*

61. Student 16: Yes, that one.

Line 61 shows that Student 16 used response: confirm to indicate to Student 15 that the intended message was correctly understood by Student 15.

An example of response: confirm and asking for clarification can also be seen in an exchange between Student 13, whose L1 is Spanish, and Student 16:

62. Student 13: Which one is it?

63. Student 16: Which family…?

64. Student 13: What kind of family does the leader have? That one?

65. Student 16: Mhmm. *Nods head yes.*

66. Student 13: That one?

67. Student 16: Yes, big family.

68. Student 13: Big?

69. Student 16: Yes, the second one. Big, like miss said.

Both Students 13 and 16 use asking for clarification in lines 62, 63, and 68. Student 16 uses response: confirm in lines 65, 67, and 69.

In the following example in the exchange between Students 17 and 18, Student 18 uses the strategy of asking for clarification while Student 17 uses the strategy of response: rephrase:

70. Student 18: What you say about last one?

71. Student 17: Has to be son of Great Queen. First son of the Great Queen to be pharaoh.

72. Student 18: First son of Great Queen?

73. Student 17: Yes, first son of Great Queen to become pharaoh.

74. Student 18: What's this one? *Points to Student 17's paper.*

75. Student 17: You have to be the oldest child of the first wife. Has to be…has to be…to

76. be the oldest son, the first one of the Great Queen *(points to answer on own paper*

77. *and follows along with finger while reading the answer).* First one, oldest to be

78. pharaoh, mother is Great Queen.

79. Student 18: What is it? *Points to the same question.*

80. Student 17: Oldest child, first one, of the Great Queens.

81. Student 18: What this say? *Points to Student 17's paper.*

82. Student 17: Look here (*points to paragraph in reading with the answer*). Oldest child

83. of Great Queen.

84. Student 18: *Writes his answer on his paper.*

In lines 72 and 74 Student 18 is asking for clarification from Student 17. In lines 75-78, and 80, Student 17 uses response: rephrase to modify a previously uttered message to Student 18.

An additional example of an exchange that includes response: confirm, asking for clarification, and response: rephrase occurred between Student 10, whose L1 is Fulani/French and Student 11, whose L1 is Bengali:

85. Student 11: What about here? *Points to paper.*

86. Student 10: It's the same thing that you do in this one here *(directs with pencil to*

87. *previous question and points).*

88. Student 11: What?

89. Student 10: Same as this one *(pointing to previous question).* You have to choose one

90. from over there and write over here. You say project one right? So project two

91. here…So you have to choose this three. You choose another one *(writes on Student*

92. *11's paper).*

93. Student 11: Choose?

94. Student 10: You choose one of them this three. You choose one of them here. You

95. choose another one here. You write over here.

96. Student 11: You choose this one and this one? *Pointing to paper.*

97. Student 10: *Looks at Student 11's paper.*

98. Student 11: This one and this one, right? Choose one *(holds up finger indicating*

99. *"one")*?

100. Student 10: Wait, you shouldn't choose from that part. At least I didn't choose it.

101. Because those box are over here. Choose one from here, like this one *(still pointing*

102. *to paper).*

103. Student 11: Okay, I understand.

104. Student 10: You understand?

105. Student 11: *Nods head yes and continues working.*

In line 103, Student 11 uses a response: confirm to indicate to Student 10 that the intended message has been understood. In lines 85, 88, and 93 Student 11 is asking for clarification from Student 10. In lines 89-91 and 94-95 Student 11 uses response: rephrase to adjust his original message after Student 10 asked for clarification.

Overall, the subcategory of interactional coping devices showed the most frequent use of communication strategies for a total of 47% of all communication strategies used by the participants. Of all communication strategies that fall within the subcategory of interactional coping devices, 9% were response: confirm, 9% were asking for clarification, and 7% were response: rephrase; these three types of interactional coping devices were the three most frequently used by the participants. The subcategory of direct coping devices showed the second most frequent use of communication strategies for a total of 36% of all strategies used by the participants. Of all communication strategies that fall within the subcategory of direct coping devices, 23% were mime, 4% were self-rephrasing, 3% were other-repair; these three types of direct coping devices were the three most frequently used by the participants. The subcategory with the least number of communication strategies used by the participants was indirect coping devices with a total of 16% of all communication strategies identified. Of all communication strategies that fall within the subcategory of indirect coping devices 9% were self-repetition, 3% were code-switching: L1 structure words, and 2% were other-repetition; these three types of indirect coping devices were the three most frequently used by the participants.

Conclusion

There are a few limitations to this study which should be noted. First of all, to more accurately determine the specific types of communication strategies that each participant used, it

would have been highly beneficial to use retrospection data as Dornyei and Scott (1995) did in their study. This would have helped to more accurately and thoroughly identify communication strategies. It is possible that if retrospections had been available, more communication strategies, such as literal translation from L1 or message replacement, could have been identified. The use of retrospections could have made it easier to more clearly categorize communication strategies that are somewhat similar to one another such as asking for repetition and asking for clarification.

It also would have been very helpful to amplify the sound of each student's voice while filming the students working in small groups. A substantial portion of the video footage that was taken was unusable due to poor sound quality. Additional observations would also be useful to get a more accurate understanding of the specific communication strategies used by language learners.

Despite these limitations, this study provides insight into the specific strategies that high school English language learners use to communicate with one another in English when a common L1 is not shared. As stated by Dornyei (1995), the use of communication strategies by language learners allows those who are participants in a conversation to "remain in the conversation and achieve their communicative goal" as opposed to abandoning their message (p. 80). This is important for language learning if, according to Krashen (1985), "second languages are acquired 'by understanding messages' or by receiving comprehensible input" (as cited in Gass & Selinker, 2008, p. 309) and through "access to feedback and production of modified output" (Gass, Mackey, & Pica, 1998, p.299). In consideration of the 557 communication strategies identified in this study that were collectively used to negotiate meaning by the

participants, it can be inferred that these students were attempting to make input more comprehensible for one another to achieve mutual understandings. As can be seen by several of the examples in the results section, students made attempts when working with one another to clarify messages through communication strategies such as self-rephrasing and response: confirm while they tried to make both input for their partners and output for themselves more comprehensible. In such instances, these students were exposed to potential opportunities for language learning.

In addition, it should be noted that the students had to be given the opportunity to use communication strategies so that comprehensible input became available to them. All of the classroom observations included in this study were done when students were working in small groups with one another. This type of classroom instruction allowed for multiple opportunities for the students to orally communicate with one another in English. In a more traditional lecture environment students would not have had as many, if any, opportunities to collectively work with one another to use their linguistic knowledge to practice speaking and working collaboratively in English. The observed dialogue between the students in these classrooms helps to illustrate that when teachers allow students who are learning a second language to work in small groups, students have more access to opportunities to practice speaking in the second language they are trying to acquire which, again, could lead to potential language learning opportunities through comprehensible input and output.

This study also identified the most frequently used communication strategies by a group of high school English language learners. As previously mentioned Dornyei (1995) lists "six (interrelated) procedures, all relevant to strategy training" (p. 63). Of these six procedures, one of

them is to make language "learners conscious of strategies already in their repertoire, sensitizing them to appropriate situations where these could be useful, and making them realize that these strategies could actually work" (Ibid). Bringing the identified strategies in this study, as well as those observed by classroom teachers, to the attention of language learners may be helpful for those students who use communication strategies but might not be aware of the extent of their effectiveness. Raising this awareness may help students to feel more confident to "take risks and use CSs" (Ibid). More frequent use of communication strategies by language learners can, again, allow for conversations to continue which could lead to potential language learning.

Although not analyzed in this study, it might be helpful for future research to determine whether or not there are major differences in CS use between English language learners from different cultures. It may be helpful for teachers to raise learners' awareness of appropriate communication strategies used in English and "cross-cultural differences in CS use…(e.g., in some languages particular CSs may be seen as indications of bad style)" (Dornyei, 1995, p. 164). Observable differences in the frequency of certain CS use and types of CSs that students from different L1 backgrounds use may help teachers to differentiate instruction of communication strategies to cater to the individual needs of their students to improve their competency in communication. In a multilingual classroom, such as the ones observed in this study, research could determine trends that might be present for individual language groups regarding the use of communication strategies.

Additionally, the specific strategies that language learners naturally use in conversation can help teachers to incorporate the use of those strategies that are frequently used by their students when speaking to ELLs. It is possible that if language learners are more familiar with a

particular type of communication strategy, they may be more effective for the learners. While this would need to be substantiated by further research, it is worth noting.

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Appendix A

The following taxonomy was used to identify communication strategies for this study and was taken from Dornyei and Scott (1995):

Coping Device	Description
Direct Coping Device	
Message abandonment	Leaving a message unfinished because of some language difficulty.
Message reduction	Reducing the message by avoiding certain language structures or topics considered problematic language wise or by leaving out some intended elements for a lack of linguistic resources.
Message replacement	Substituting the original message with a new one because of not feeling capable of executing it.
Circumlocution	Exemplifying, illustrating, or describing the properties of the target object or action. Several illustrative approaches may be combined.
Approximation	Using a single lexical item, such as a superordinate or a related term, which shares semantic features with the target word or structure.
Approximation preposition	A subclass of approximation when a preposition is substituted by an alternative one. The reason for treating this CD separately from approximation is that it shows different features, the most obvious of which is that it usually results in ungrammatical utterances, whereas the approximation of content words typically results in grammatical solutions.
Use of all-purpose words	Extending a general, "empty" lexical item to contexts where specific words are lacking.
Word-coinage	Creating a nonexisting L2 word by applying a supposed L2 rule to an existing L2 word.
Restructuring	Abandoning the execution of a verbal plan because of language difficulties, leaving the utterance unfinished and communicating the intended message according to an alternative plan.

Literal translation from L1	Translating literally a lexical item, an idiom, a compound word of structure from L1 to L2. In some cases a literal translation can result in a good English structure like in the case of 'snowman' for some subjects.
Literal translation of prepositions	Similarly to 'approximation: prepositions' the transfer of prepositions was considered to be a subclass of literal translation.
Literal translation: false friends	Expressing the meaning of a L1 word by using a L2 word very similar in form, but in fact, meaning something else.
Literal translation from L3	The source of the interlingual transfer is a L3 which the speaker is currently learning or is competent in.
L1-based foreignizing	Using a L1 word by adjusting it to L2 phonology (i.e., with a L2 pronunciation) and/or morphology.
L3-based foreignizing	The source of foreignizing is a L3 word.
Code switching to L1	Including L1 words with L1 pronunciation in L2 speech. This may involve stretches of discourse ranging from single words to whole chunks and even complete turns.
Code switching to L3	The source of the interlingual borrowing is a L3.
Use of similar-sounding words	Compensating for a lexical item whose form the speaker is unsure of with a word (wither existing or nonexisting) which sounds more or less like the target item.
Mumbling	Swallowing or muttering inaudibly a word (or part of a word) whose correct form the speaker is uncertain about.
Omission	Leaving a gap when not knowing a word and carrying on as if it had been said.
Retrieval	In an attempt to retrieve a lexical item saying a series of incomplete or wrong forms or structures before

	reaching the optimal form.
Self-rephrasing	One type of repetition appears to be somewhere between self-repetition and self-repair. The speaker repeats the term, but not quite as it is, but by adding something or using paraphrase, in spite of the first version being already appropriate and therefore not necessitating a repair.
Question rephrasing	Reformulating a question within the same turn.
Self-repair	Making self-initiated corrections in one's own speech typically after the wrong form has been uttered; however, advanced L2 speakers can occasionally monitor their intended output at the planning stage and can make corrections before actually uttering the incorrect form.
Other-repair	Correcting something in the interlocutor's speech. For politeness' sake, other-repairs are often phrased as confirmation requests in which the trigger is changed, using *oh you mean...*
Mime	Describing whole concepts nonverbally or accompanying a verbal CD with a visual illustration.
Indirect Coping Devices	
Use of fillers	Using gambits to fill pauses, to stall, and to gain time in order to keep the communication channel open and maintain discourse at times of difficulty.
Inappropriate transfer of fillers	The use of inappropriate fillers not as a result of transfer from the L1 and was inappropriate in the L2.
Inappropriately fossilized fillers	The use of inappropriate fillers not as result of L1 interference.
Code switching: L1 structure of words	Using highly automatized L1 structure words in L2 unconsciously.
Self-repetition	Repeating a word or a string or words immediately after they were said.

Other-repetition	Repeating something the interlocutor said to gain time. It can also occur with a question intonation when it is clear that the speaker is not expecting an answer; that is, the repetition is not a clarification question.
Lengthened sound	Lengthening a sound in hesitation.
Umming and erring	Using nonlexicalized filled pauses ('er', 'uh', 'mhm').
Feigning understanding	Making an attempt to carry on the conversation in spite of not understanding something by feigning understanding.
Verbal strategy markers	Using verbal phrases before or after a CD to signal that the word or structure does not carry the intended meaning perfectly in the L2 code.
Non-verbal strategy markers	A nonverbal signal having a similar function to verbal markers.
Self-confirmation	Self-confirmation occurs after a repair or retrieval sequence, and serves as a signal that the final form the person used does carry the intended meaning adequately.
Interactional Coping Devices	
Direct appeal for help	Turning to the interlocutor for assistance by asking an explicit question concerning a gap in one's L2 knowledge. When the speaker shares the L1 with the interlocutor (e.g. multi-lingual classes), the appeal might be in the L1.
Indirect appeal for help	Trying to elicit help indirectly by expressing lack of a needed L2 item either verbally or nonverbally. Similarly to direct appeals, this may sometimes happen in the L1.
Asking for repetition	Requesting repetition when not hearing or understanding something properly.
Asking for clarification	Requesting explanation of an unfamiliar meaning structure.
Asking for confirmation	Requesting confirmation that one heard or understood

	something correctly.
Guessing	Guessing is similar to a confirmation request but the latter implies a greater degree of certainty regarding the key word, whereas guess involves real indecision.
Expressing non-understanding	Expressing that one did not understand something properly either verbally or nonverbally.
Interpretive summary	Extended paraphrase of the interlocutor's message to check the speaker has understood correctly.
Asking persistence questions	Asking the same question (or an alternative version) after some requested information/clarification has failed to be provided either because the interlocutor was not forthcoming for some reason or because he/she has misunderstood the question.
Comprehension check	Asking questions to check that the interlocutor can follow you.
Own-accuracy check	Checking that what you said was correct by asking a concrete question or repeating a word with a question intonation. Confirmation is typically signaled nonverbally by the interlocutor (e.g., with a nod), without generating a verbal exchange.
Response: repeal	Repeating the original trigger or the suggested corrected form (after an other-repair).
Response: repair	Providing other-initiated self-repair.
Response: rephrase	Rephrasing the trigger.
Response: expand	Putting the problem word/issue into a larger context.
Response: confirm	Confirming what the interlocutor has said or suggested.
Response: reject	Rejecting what the interlocutor has said or suggested without offering an alternative solution.

Appendix B

Student ID	L1	Proficiency	Total Words	Total Strategies/ Total Words	Percentage	Most Frequent Strategies (#)
1	Mandingo/French	4	92	16/92	17%	Mime (5)
3	Bengali	4	74	17/74	23%	Response: Rephrase (4)
4	Bengali	4	540	125/540	23%	Response: Confirm (11), Self-Repetition (22), & Mime (30)
5	Bengali	4	244	67/244	27%	Self-Repetition (8), Other-repair (8), Code-switching: L1 structure words (9), & Mime (10)
6	Uzbek	2/3	91	31/91	34%	Asking for Clarification (4), Mime (4), & Response: Reject (9)
7	Spanish	3	60	15/60	25%	Asking for Confirmation (2), Direct Appeal for Help (2), Code-switching: L1 Structure Words (2), Mime (2)
8	Tibetan/Hindi	2	55	26/55	47%	Mime (9)
10	Fulani	3	362	46/362	13%	Asking for Confirmation (5), Response: Rephrase (8) & Mime (12)
11	Bengali	1	60	17/60	28%	Response: Confirm (3), Asking for Clarification (4), Mime (5)
13	Spanish	3	117	37/117	32%	Response: Confirm (4), Self-Repetition (6), Asking for Clarification (9)
16	Fulani/French	3	194	65/194	34%	Asking for Confirmation (5), Response: Confirm (10), & Mime (21)
17	Tibetan/Hindi	4	206	29/206	14%	Self-Rephrasing (6), Response: Rephrase (6), & Mime (9)
18	Fulani/French	2	57	19/57	33%	Asking for Clarification (3), Asking Persistence Questions (3), & Mime (7)

*Appendix B includes data only for those students who were observed to speak 50 or more words.