The Role of the First Language for Second Language Learning

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1 Introduction

The following empirical investigations (Anton & DiCamilla, 1998; Brooks & Donato, 1994; Storch & Wigglesworth, 2003; Swain & Lapkin, 2000; Villamil & Guerrero, 1996) used a sociocultural framework to examine the first language (L1) verbal interactions of learners who collaborated to complete cognitively demanding second language (L2) activities. This research placed an emphasis on determining the ways a shared L1 functioned as a psychological tool that mediates human mental activity. Table 1 presents a summary of this research.

2 Summary of relevant L1–L2 studies

Brooks and Donato (1994) reanalyzed Brook's (1992) study of the verbal interactions produced by eight pairs of third-year high-school Spanish learners who participated in a two-way information-gap activity. The task required them to "work with one another in Spanish to find out and draw in what the other had on his or her part of the diagram that was both similar to and different from the other's diagram" (Brooks & Donato, 1994, p. 265). However, even though they were instructed to speak only in Spanish, the participants used English on numerous occasions during the data collection period.

Brooks and Donato supported Bickhard's (1992) contention that learners' verbal interactions consist of more than the mere encoding and decoding of messages, as investigations of this type revealed "only the most ordinary and instrumental aspects of language use" (Brooks & Donato, 1994, p.

263). They proposed that researchers consider "how [learners'] utterances interact with social realities, evoking transformations of the social situation as well as constituting them" (p. 263). Reflecting their position, Brooks and Donato used the theoretical framework of Vygotskyan psycholinguistics to understand the critical mediating functions of L1 in L2 learning. According to this theoretical framework, speaking is understood in terms of how it creates shared social realities and how it is used to plan and carry out task-related actions that have purpose and meaning. In this regard, Brooks and Donato focused their analysis on three critical semiotic mediating functions of speaking, identified by Ahmed (1988) as (1) speaking as *object regulation*, (2) speaking as *shared orientation*, and (3) speaking as *goal formation*.

Table 1   Research on the role of L1 verbal interaction in L2 learning

	Study	Participants	Task design	Peer 8 configu-ration	Results: social and cognitive functions served by the L1
L2	Anton & DiCamilla (1998)	10 low proficiency adult Spanish-as-a-foreign language (SFL) students. L1 was English.	Three writing composi-tions.	5 dyads	1) L1 served to provide scaffolded assistance. 2) L1 enabled learners to established *intersubjectivity*. 3) L1 use in private speech, or *intrasubjectivity*.
	Brooks & Donato (1994)	16 third-year high school learners of SFL. L1 was English.	Jigsaw two-way infor-mation-gap task.	8 dyads	1) Metatalk: learners used their L1 to comment on their L2. 2) L1 served to establish joint understanding of the task. 3) L1 helped learners formulate their goals.

Storch & Wigglesworth (2003)	12 intermediate level ESL students with L1s of Indonesian and Mandarin Chinese.	All dyads completed a joint composition task and a text reconstruction task.	3 dyads spoke Indonesian as their L1. 3 dyads spoke Mandarin Chinese as their L1.	1) Joint composition: two of the dyads used the L1 mainly for task management and task clarification. 2) Text reconstruction: the same two dyads used the L1 mainly to clarify issues of meaning and vocabulary.
Swain & Lapkin (2000)	2 eighth grade French immersion classes. L1 was English.	One class completed a dicto-gloss task while the other class completed a jigsaw task.	12 dyads in the dicto-gloss task. 10 dyads in the jigsaw task.	1) L1 helped move the task along by establishing a joint understanding of the text or picture, and aiding task management. 2) L1 allowed learners to focus on vocabulary and grammar. 3) L1 enhanced interpersonal interaction.
Villamil & Guerrero (1996)	54 intermediate ESL college students. L1 was Spanish.	Peer revision of narrative and persuasive essays.	17 dyads from narrative mode. 23 dyads from persuasive mode.	L1 provided social and cognitive space.

The researchers described the mediating function of speaking as *object regulation* as "speaking [that] enables learners to think about, make sense of, and control the task itself (object) as it is presented to them" (Brooks &

Donato, 1994, p. 266). Speaking as object regulation, the researchers argued, consisted of talk that is about the task itself. They referred to this as *metatalk*, and defined it as "talk by the participants about the task at hand and the discourse that constitutes the task" (p. 266). The researchers observed that metatalk enabled the eight dyads to take control of their discourse during the two-way information-gap task for two reasons. First, they used it to comment explicitly on the linguistic tools that they were using in the construction of the task itself. Second, it acted to promote and sustain their L2 verbal interaction as they commented on their own and their interlocutor's language.

Brooks and Donato (1994) referred to the mediating function of speaking as *shared orientation* as discourse that participants use to focus their attention on the problem to be solved and how they will carry it out. They noted that this kind of talk is unique to the interactions of each participant pair because it is neither externally defined nor subject to task requirements. As such, speaking as shared orientation is a metacognitive activity that culminates in learners' intersubjectivity (Rommetveit, 1985). Brooks and Donato noted the early collaborations of one dyad who used the shared L1 to establish a numbering strategy that they could use successfully to reference specific boxes in their diagrams. They stated, "that much of the initial interactive work between S1 and S2 is focussed on knowing how to do the task rather than on displaying what they know about the contents of the pictures they are describing" (Brooks & Donato, p. 269).

Brooks and Donato (1994) described the mediating function of speaking as *goal formation* as the externalized speech of the goal, often as a reformulation, to eliminate confusion that may still exist regarding the task-goals. The researchers noted that the eight dyads in Brooks (1992) study were externally exposed to the task-goal in writing, "describe the picture by communicating with each other" (p. 271), and received verbal instructions from the researcher. However, one particular pair of participants reformulated the task goal externally in their L1 because of their confusion over the purpose of the activity. Once intersubjectivity had been achieved through the reformulated externalization of their own goals, they were able to resume the co-construct of the activity in Spanish.

Anton and DiCamilla (1998) studied 10 adult low proficiency learners of Spanish who shared the same L1 (English). These participants worked collaboratively in five dyads to write three informative essays. Anton and DiCamilla analyzed the participants' use of L1 in collaborative speech and discerned the following cognitive, social, and intrapsychological functions for its use: 1) the creation of *scaffolded* help, 2) the establishment of *intersubjectivity*, and 3) the use of private speech, or *intrasubjectivity*. Anton and DiCamilla referred to the establishment of intersubjectivity (Rommetveit, 1995) as learners gaining a shared perspective of the task; and intrasubjectivity (Vygotsky, 1987) as that which emerges internally within individuals in the form of private speech.

Anton and DiCamilla observed that the shared L1 in each participant pairing functioned to provide scaffolded help in the ZPD. For example, they noted how the participants reflected on the content and the form of their text by searching for and finding translations of words and expressions. The researchers suggested that these L1 utterances mediated their cognitive processes, engaging them in a joint semantic analysis and lexical search for the L2 forms that they were familiar with and could use to accomplish the task. Anton and DiCamilla also noted instances of scaffolded help in which the shared L1 served to sustain their interest in the task, improve on their strategies to manage the task, and determine what they needed to do in order to solve specific problems.

The shared L1 served a critical social mediating function in Anton and DiCamilla's (1998) study. The researchers argued that its usage helped the learners establish intersubjectivity. This function was of importance since many of the learners had little, and in some cases, no previous experience with Spanish. L1 usage was instrumental in helping the learners complete the task as it served to develop a social space where they could achieve a shared perspective on it. In one example, the researchers showed how L1 utterances between two participants mediated their problem solving by functioning simultaneously on a cognitive level with ideas and on a social level with polite forms. This benefit resulted in an effective solution that led the participants to find not only the correct verb form, but also to maintain their

workplace, that is, "the cognitive and social space created by their common motives and goals" (p. 334).

The researchers noted instances of the participants' private speech emerging during collaborative interactions. Anton and DiCamilla explained that this emergence usually occurred when they were faced with cognitively difficult tasks because it enabled them to focus and direct their own thinking in response to the challenge. In one instance, a participant "presented herself with two options and, by vocalizing the question, was able to provide the correct response" (p. 335). Anton and DiCamilla interpreted this example as reflective of a cognitive process in which the participants' private speech was regulating her thinking at the intrapsychological plane.

Storch and Wigglesworth (2003) reported on a short joint composition task and a text reconstruction task given to 12 ESL students working in dyads. Three of the dyads spoke the same L1 of Mandarin Chinese and three spoke the same L1 of Indonesian. Before beginning their work, these participants were informed "that if they felt their L1 would be helpful to them in completing the tasks, they should feel free to use it" (p. 762). Storch and Wigglesworth conceptualized their research within a sociocultural framework to inquire if the dyads would utilize their shared L1s to gain additional cognitive support. Results from the study showed that two of the six dyads made extensive use of their shared L1 (Chinese Mandarin), while the other four dyads "used the L1 only for odd words and occasional phrases" (p. 763). The two dyads who used their shared L1 extensively, used it as a mediating tool that consisted of four distinct cognitive functions: 1) task management; 2) task clarification; 3) vocabulary and meaning; and 4) grammar. These functions varied according to which of the two tasks the two dyads were working on. For the short joint composition task, the two dyads spoke in their shared L1 primarily for the purposes of task management and task clarification. For the text reconstruction task, the two dyads spoke in their shared L1 primarily to clarify issues of meaning and vocabulary, and grammar.

When asked how sharing their L1 helped them, the four participants reported that it gave them opportunities to exchange definitions of difficult

vocabulary and explanations of grammar, and allowed them to argue their points more clearly and quickly. In Vygotskyan terms, Storch and Wigglesworth (2003) suggested that these participants "may have been extending their zone of proximal development" (p, 768). They postulated that "[o]nly when learners gain a shared understanding of what they need to do can they proceed with the task" (p. 768). The researchers noted that L2 students who use their L1 might stand a better chance of knowing how they should proceed with their work, and learn the definitions of unknown words more directly and more successfully than students who do not use their L1 during collaborations.

Swain and Lapkin (2000) focused on the L1 use of two eighth-grade classes of French immersion students. One class of students worked together in pairs to complete a dictogloss task and students in the other class worked in pairs on a jigsaw task. The two tasks used the same story, but the jigsaw task was represented in the form of a visual stimulus whereas the dictogloss task was represented in the form of an oral text stimulus. Afterwards, dyads from both classes co-wrote a story based on the stimulus they had received. The students' verbal interactions were also recorded as they wrote their stories. Swain and Lapkin observed three major mediating functions served by the L1. First, it functioned to move the task along by contributing to a shared understanding of the picture or text, more so in the dictogloss task, and by helping them to effectively manage the task. Second, it permitted the learners' to effectively focus attention on vocabulary and form. The use of the L1 for vocabulary was particularly true of the jigsaw students, who were working without essential vocabulary, and who used their L1 in the process of searching for the appropriate vocabulary. Finally, L1 usage functioned to serve off-task interpersonal interactions. The researchers concluded that "[a] socio-cultural theory of mind suggests that the L1 serves as a tool that helps students as follows: to understand and make sense of the requirements and content of the task; to focus attention on language form, vocabulary use, and overall organization; and to establish the tone and nature of their collaboration" (p. 268).

Villamil & Guerrero (1996) studied the verbal interaction patterns of

54 intermediate ESL students who shared a Spanish L1. The students participated in a peer revision activity of their first drafts of narrative and persuasive essays. In each dyad, there was a *writer*, whose essay would be revised, and a *reader*, whose role was to help the writer revise her/his essay. One of the questions the researchers asked during the analysis was "[what] strategies do students employ in order to facilitate the peer revision process?" (p. 54). Villamil and Guerrero's approach was based on Vygotskyan psycholinguistics, that goal-oriented social interaction is "semiotically 'mediated', that is, aided by psychological tools involving signs and language" (p. 60). The researchers found that L1 was an important mediating strategy that the students employed to take *control* of the task. For the students, taking control of the task meant "the L1 was an essential tool for making meaning of text, retrieving language from memory, exploring and expanding content, guiding their action through the task, and maintaining dialogue" (p. 60).

3　Conclusion

This summary of empirical research related to the effects of L1 verbal usage on L2 learning demonstrates the potential of L1 speaking to help L2 learners create shared social realities and to facilitate their processes of planning and carrying out task-related actions that have purpose and meaning.

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