



Speaking an L2: Second versus Foreign Language Acquisition

Ulf Schuetze

Department of Germanic Studies, University of British Columbia

This paper reports on a study carried out on referential communication strategies. It used the theoretical framework of Levelt's (1989) model of L1 speech production in its application to L2 (DeBot, 1992). The study investigated the underlying processes of utterances of adult speakers who had to solve a referential communication task in L1 and L2. Two groups of participants were formed; the first group acquired the L2 in a second language environment (SLA) and the second group learned the L2 in a foreign language classroom (FLA). Although the distinction between SLA and FLA is significant in any type of L2 acquisition (Ellis, 1994; Rösler, 1995; Edmondson, 1999; Lightbown, 2000), it has not yet been considered in the theoretical framework mentioned. Results show that the process of generating a comprehensible message in referential communication by L2 adult speakers is influenced by the L2 environment.

1 Introduction

A speaker of any language is faced with the difficult task of generating, encoding and articulating a message that is comprehensible. In his model of speech production in L1, Levelt (1989) places the lexicon at the centre of this process. A lexical item has two levels of representation: the lemma, that contains semantic and syntactic information; and the form, that contains morphological and phonological information. In generating a message, the speaker conceptualises the content of the message and puts it into a preverbal speech plan. In the next step, the message is encoded by exchanging information between lemmas and forms. Finally, the message is articulated and checked for comprehension.

In the adaption of Levelt's model for L2, the lemma and the form of an L1 item is potentially linked to the lemma and the form of an L2 item through the conceptual representation, thus forming a link between L1 and L2 (De Bot, 1992; De Bot & Schreuder, 1993; De Bot, Cox, Ralston, Schaufeli & Weltens, 1995). A speaker can access lexical items in L1 and L2 at the same time. Speaking an L2, he or she can access a concept via the L1 or directly through the L2.

This has to be explained in more detail. De Bot (1992) was the first to apply Levelt's model for speech production in L2. He used studies by Paradis and Green for this purpose. In 1987, Paradis formulated the subset hypothesis. The subset hypothesis sees links among elements from one language as well as links between elements from one language to the other. De Bot applies this to the lemma level as well as to the word form. He then uses Green's (1986) suggestion that there can be three levels of activation in language spoken by bilinguals: it can be selected (the language that is articulated), active (the language that is processed but not articulated) or dormant (the language stored in the memory but not processed). Applying this to Levelt's model, De Bot argues that each lexical item has a number of characteristics (on the lemma as well as the form level) and the item whose characteristics are stimulated most is activated. Some of these characteristics are shared by a lexical item in L1 and its counterpart in L2, some are not. Several relations between lemma and form are possible and all together they form a network of subsets.

Four points can be taken from Levelt and De Bot. One, the components in Levelt's model interact with each other in a dynamic process. Two, more than one language can be processed at the same time. Three, lexical items in different languages can be accessed simultaneously. Four, there are overlaps in the conceptual representation of lexical items in the lemma-form structure.

One avenue of researching L2 speech is through the study of communication strategies. Over the past twenty years, two schools have developed and labelled the interactional and the psycholinguistic approach. Both schools focus on the moment of speech production when the speaker of an L2 is faced with the task of processing a message although the speaker does not have access to all the lexical items in L2, their pragmatic application and the rules of encoding. The speaker must, nevertheless, communicate and use a strategy to transmit a message successfully (Cohen, 1998).

The interactional approach focuses on the product, the end result, of the speech classifying different products such as different ways of paraphrasing or different kinds of transfers. The psycholinguistic approach focuses on the process that occurs to come to an end result analyzing the underlying psychological process of paraphrases or transfers (Ansarin & Pushpinder, 2000).

This paper reports on a study carried out on communication strategies in L2 following a psycholinguistic approach distinguishing between second and foreign language acquisition.

2 The Study

The study was carried out in the city of Vancouver, Canada and the cities of Kiel and Hamburg, Germany between January and August 2001. The study had two participant groups. One group of thirty English (L1) learners of German (L2) was tested at the University of British Columbia (UBC) in Vancouver (Group C, foreign language acquisition); one group of thirty English (L1) learners of German (L2) was tested in the cities of Kiel and Hamburg (Group G, second language acquisition). The participants at UBC spoke Canadian English. The participants in the cities of Kiel and Hamburg spoke either Canadian, US American or British English. Both participant groups carried out the same task using the same methodology.

One difference between the two groups was in the amount of contact, participants had with German culture and language. Differences between foreign language acquisition (FLA) and second language acquisition (SLA) have been well documented (Ellis, 1994; Rösler, 1995; Edmondson, 1999; Lightbown, 2000). Ellis (1994) summarizes these distinctions as follows: in FLA the language plays no major role in the community and is principally learned in the classroom whereas in SLA the language does play an institutional or social role in the community. In SLA speakers have more contact with the target language than in FLA. However, the distinction is not always easily made, for example when English functions as a 'lingua franca' in a country like India. As Ellis (1994) points out it is helpful to adopt a more lenient view. FLA and SLA should not be seen as fixed categories but rather as entities that are interwoven on the language learning scale.

Participants in both groups had to be sufficiently distinctive. A questionnaire that was filed by e-mail asked them about their contact to German culture and language outside classroom instruction. Participants of Group C and Group G were divided into three subgroups each according to their level of proficiency. For both groups the level of proficiency was determined by the number of hours of formal instruction in German and their performance on a cloze-test. In the cloze-test, twenty items that had been deleted from four different text passages had to be filled in. It was pre-tested with a control group of native German speakers. In Group G an additional criteria for the level of proficiency was the time participants had lived in Germany.

In Group C, participants at the lowest level of proficiency had completed two years of German courses (approximately 208 hours of formal instruction) and had a cloze-test score of 14 or lower

(subgroup Ca); participants at the intermediate level of proficiency had completed three years of German courses (approximately 364 to 442 hours of formal instruction) and had a cloze-test score between 14 and 17 (subgroup Cb); participants at the highest level of proficiency had completed four years of German courses (approximately 520 hours or more of formal instruction) and had a cloze-test score of 17 or higher (subgroup Cc). All participants were adult learners, aged between 18 and 24. There were ten participants in each subgroup.

In Group G, participants at all levels of proficiency had not more than one year of formal instruction in their home country (approximately 104 hours) before they came to live in Germany. At the lowest level of proficiency, they had lived in Germany for about one year and had a cloze-test score of 14 or below (subgroup Ga); participants at the intermediate level of proficiency had lived in Germany for about two years and had a cloze-test score between 14 and 17 (subgroup Gb); participants at the highest level of proficiency had lived in Germany for about three to four years and had a cloze-test score of 17 or higher (subgroup Gc). All participants were adult learners, aged between 22 and 34. There were ten participants in each subgroup.



Figure 1 One of six abstract shapes that the participants described in their English and German.

The methodology was based on the Nijmegen project (1987-1990) that is known as the largest study carried out in the field of communication strategies using a psycholinguistic approach. The abstract nature of the shapes forced the speaker to do two things in both languages. First, he or she had to conceptualize the shape by making a reference. Second, he or she had to construct a message by employing a communication strategy that expressed the reference in a comprehensible manner. These strategies, that require the speaker to solve a referential problem, are also referred to as referential communication strategies. There was a two-week interval between the two descriptions. The task was counter-balanced, half of the participants started with English, half with German. In addition, the second time the task was solved, the shapes were arranged in a different order.

The analysis used a taxonomy developed by the Nijmegen project. This taxonomy has been accepted as a valid and reliable method to test referential communication strategies (Ellis, 1994).

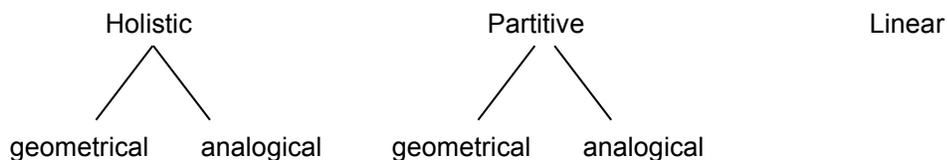


Figure 2 The taxonomy of the Nijmegen project distinguishing five strategies.

In this study, the analysis was based on these five strategies. Participants described the abstract shape in Figure 1 in a variety of ways: ‘eine schematische Repräsentation der Krone’ (‘a schematic

representation of a crown'; participant C-B2-G) fits the holistic analogical strategy; 'ein verlängertes Kreis ohne die beiden Enden' ('an extended circle without the two ends'; participant G-C4-E) the holistic geometrical strategy; 'in der Mitte sieht es wie Pfosten aus' ('in the middle it looks like a post/posts'; participant G-B5-E) the partitive analogical strategy; 'Beide Seite hat gekrümmt Linie und Punkte' ('both sides have bend lines and points'; participant C-A4-G) the partitive geometrical strategy; 'zwischen diesen Spitzen geht eine Linie' ('between those points is a line'; participant G-B1-E) the linear strategy.

The overall question of the study was if the amount of contact, a speaker has with the target language and culture in a second language acquisition situation compared to a foreign language acquisition situation, influences processing a comprehensible message solving referential problems.

3 Results

Results are summarised in tables 1 to 6. Tables 1, 3 and 5 display the number of strategies used by each subgroup referring to the holistic analogical strategy (Ha), the holistic geometrical strategy (Hg), the partitive analogical strategy (Pa), the partitive geometrical strategy (Pg), the linear strategy (L). In addition, the total number of all strategies used is given (T) and the number of shapes that were described in a comprehensible manner (N; the numbers are out of 60). Tables 2, 4 and 6 display how often strategies were changed when describing the shapes in English (E1: one strategy change made when describing the same shape in English but not when it was described in German; E2: two or more strategy changes), in German (G1: one strategy change made when describing the same shape in German but not when it was described in English; G2: two or more strategy changes); or in both languages (E/G1: one strategy change when the same shape was described in English and when it was described in German; E/G2: two or more strategy changes when the same shape was described in English and when it was described in German).

3.1 Group C

In Group C, there are significant differences in the performance of the three subgroups (Table 1). The total number of strategies used in the English descriptions is higher than the total number of strategies used in the German descriptions at each level of proficiency. There are no significant differences in the English descriptions comparing the three subgroups. Of all strategies used describing the shapes, participants of all three levels of proficiency used the holistic analogical strategy most in English and German. Again, there are no significant differences in the English descriptions comparing the three subgroups.

Table 1 Number of Strategies used by participants in Group C in English (left of slash) and German (right of slash). Strategies were: holistic analogical (Ha), holistic geometrical (Hg), partitive analogical (Pa), partitive geometrical(Pg), linear(L). Total number of strategies (T), number of strategies identified (N).

	Ha	Hg	Pa	Pg	L	T	N
Subgroup Ca	62/48	14/7	32/5	22/14	20/4	150/78	51/42
Subgroup Cb	66/55	16/9	22/20	29/11	11/5	144/100	57/48
Subgroup Cc	62/62	16/12	38/41	34/31	22/5	172/151	57/54

In subgroup Ca, the differences between the English and the German descriptions are significant. The total number of strategies used in German is 47.8% less compared to English. The holistic analogical strategy is used as follows. In absolute numbers, the holistic analogical strategy is used 22.6% less in German compared to English. However, in relation to the total number of strategies used, in English, the holistic analogical strategy is used 41.3%, followed by the partitive analogical strategy at 21.3%. In German, the holistic analogical strategy is used 61.5%, followed by the partitive geometrical strategy at 17.9%. In the German descriptions, the holistic analogical strategy is significantly more dominant than in the English descriptions. Of the 60 shapes to be described, only 42 were described in German in a comprehensible manner compared to 51 in English.

In subgroup Cb, the are differences between the English and German descriptions relevant for the interpretation of the data. The total number of strategies used in German is 30.6% less compared to English. The holistic analogical strategy is used as follows. In absolute numbers, the holistic analogical strategy is used 16.7% less in German compared to English. However, in relation to the total number of strategies used, in English, the holistic analogical strategy is used 45.8, followed by the partitive geometrical strategy at 20.1%. In German, the holistic analogical strategy is used 55%, followed by the partitive analogical strategy at 20%. In the German descriptions, the holistic analogical strategy is more dominant than in the English descriptions. However, differences in the use of the second most used strategy in English and German are minimal. Of the 60 shapes to be described, 48 were described in German in a comprehensible manner compared to 57 in English.

In subgroup Cc, the differences between the English and German descriptions are insignificant. The total number of strategies used in German is 12.2% less compared to English. The holistic analogical strategy is used as follows. In absolute numbers, the holistic analogical strategy is used identically in German compared to English. In relation to the total number of strategies used, in English, the holistic analogical strategy is used 36%, followed by the partitive analogical strategy at 22.1%. In German, the holistic analogical strategy is used 41.1%, followed by the partitive analogical strategy at 27.2%. Neither the holistic analogical nor the partitive analogical strategy is used more dominantly in one language than the other. Of the 60 shapes to be described, 54 were described in German in a comprehensible manner compared to 57 in English.

Table 2 shows that in subgroup Ca and Cb most strategy changes occurred in the categories E 1, E 2, E/G 1 and E/G 2. In the category G 1, only two strategy changes were made by participants of subgroup Ca and three by participants of subgroup Cb. In the category G 2, no strategy changes were made. Describing the shapes in German, participants of subgroups Ca and Cb did not rethink the message they processed unless they did so in English. In subgroup Cc, strategy changes occurred in all categories.

Table 2 Number of Strategy changes used by participants of Group C E 1 refers to one strategy change made in English, E 2 to two or more strategy changes made in English, G 1 to one strategy change made in German, G 2 to two or more strategy changes made in German, E/G 1 to one strategy change made in both languages when describing the same shape, E/G 2 to two or more strategy changes made when describing the same shape.

	E 1	E 2	G 1	G 2	E/G 1	E/G 2
Subgroup Ca	8	14	2	0	15	1
Subgroup Cb	9	11	3	0	16	9
Subgroup Cc	5	5	7	1	18	8

In summary, the higher the proficiency level was, the less dominant the holistic analogical strategy was used in German. In the English descriptions, the use of this strategy was at 36% (subgroup Cc), 45.8% (subgroup Cb), and 41.3% (subgroup Ca); in German it was at 41.1% (subgroup Cc), 55% (subgroup Cb), and 61.5% (subgroup Ca). At the same time, the higher the proficiency level was, the second most used strategy was used more often in German. In the English descriptions, it was at 22.1% (subgroup Cc), 20.1% (subgroup Cb), and 21.3% (subgroup Ca); in German it was at 27.2% (subgroup Cc), 20% (subgroup Cb), and 17.9% (subgroup Ca). Finally, the higher the proficiency level was, the more shapes were described accurately in German. In the English descriptions the numbers were 57 (subgroup Cc), 57 (subgroup Cb), and 51 (subgroup Ca); in German they were 54 (subgroup Cc), 48 (subgroup Cb), and 42 (subgroup Ca).

All of these numbers indicate that participants of the highest proficiency level used communicative strategies in German in a variety of ways to describe the shapes accurately. At the lowest level of proficiency, participants clung to the holistic analogical strategy, not being able to rethink strategies in German in order to create a comprehensible message. At the intermediate level of proficiency, participants were sometimes facing the same problems as participants of the lowest level of proficiency; sometimes they used the strategies in a variety of ways as participants of the highest level of proficiency.

3.2 Group G

In Group G, there are significant differences in the performance of the three subgroups (Table 3). In the English descriptions, participants of subgroups Ga and Gb used 77 and 76 strategies respectively compared to 135 strategies used by participants of subgroup Gc. Of these, the holistic analogical strategy, which is used most by participants of all three levels of proficiency, stands at 55 (subgroup Ga), 50 (subgroup Gb) and 62 (subgroup Gc). Comparing the total number of strategies and the number of holistic analogical strategies used in the English descriptions with the total number of strategies and the number of holistic analogical strategies used in the German descriptions, there are differences at the lowest level of proficiency but not at the intermediate and high level of proficiency.

Table 3 Number of Strategies used by participants in Group G in English (left of slash) and German (right of slash). Strategies were: holistic analogical (Ha), holistic geometrical (Hg), partitive analogical (Pa), partitive geometrical(Pg), linear(L). Total number of strategies (T), number of strategies identified (N).

	Ha	Hg	Pa	Pg	L	T	N
Subgroup Ga	55/48	9/7	3/4	6/2	4/2	77/63	50/46
Subgroup Gb	50/52	16/16	4/5	0/7	6/3	76/83	58/53
Subgroup Gc	62/61	16/16	25/21	17/29	15/16	135/143	59/58

In subgroup Ga, there are differences between the English and the German descriptions relevant for the interpretation of the data. The total number of strategies used in German is 18.2% less compared to English. The holistic analogical strategy is used as follows. In absolute numbers, the holistic analogical strategy is used 12.7% less in German compared to English. In relation to the total number of strategies used, in English, the holistic analogical strategy is used 71.4%, followed by the holistic

geometrical strategy at 11.7%. In German, the holistic analogical strategy is used 76.2%, followed by the holistic geometrical strategy at 11.1%. The dominant use of the holistic analogical strategy in both languages is significant. Of the 60 shapes to be described, 46 were described in German in a comprehensible manner compared to 50 in English.

In subgroup Gb, there are no significant differences between the English and German descriptions. The total number of strategies used in German is 8.5% more compared to English. The holistic analogical strategy is used as follows. In absolute numbers, the holistic analogical strategy is used 3.8% more in German compared to English. In relation to the total number of strategies used, in English, the holistic analogical strategy is used 65.8%, followed by the holistic geometrical strategy at 21.1%. In German, the holistic analogical strategy is used 62.7%, followed by the holistic geometrical strategy at 19.3%. The dominant use of the holistic analogical strategy in both languages is significant. Of the 60 shapes to be described, 53 were described in German in a comprehensible manner compared to 58 in English.

In subgroup Gc, there are no significant differences between the English and German descriptions. The total number of strategies used in German is 5.6% more compared to English. The holistic analogical strategy is used as follows. In absolute numbers, the holistic analogical strategy is used 1.6% less in German compared to English. In relation to the total number of strategies used, in English, the holistic analogical strategy is used 45.9%, followed by the partitive analogical strategy at 18.5%. In German, the holistic analogical strategy is used 47.2%, followed by the partitive geometrical strategy at 20.3%. Neither the holistic analogical nor any other strategy, with the exception of the partitive geometrical strategy, is used more dominantly in one language than the other. Of the 60 shapes to be described, 58 were described in German in a comprehensible manner compared to 59 in English.

Table 4 shows that in subgroup Ga only a few strategy changes occurred, of those they did occur in categories E 2 and E/G 1. In categories G 1 and G 2, only one strategy change was made. Participants describing the shapes in German did not rethink the message they processed unless they did so in English. In subgroup Gb, more strategy changes occurred compared to subgroup Ga. These changes were made in the categories E 1, G 1, and E/G 1. Similar, in subgroup Gc, strategy changes also occurred in categories E 1, G 1, E/G 1, and in addition in the category E/G 2. The number of strategy changes made by subgroup Gc is higher than in the other subgroups. Participants of subgroups Gb and Gc processed their messages in English, in German and in both languages.

Table 4 Number of Strategy changes used by participants of Group G E 1 refers to one strategy change made in English, E 2 to two or more strategy changes made in English, G 1 to one strategy change made in German, G 2 to two or more strategy changes made in German, E/G 1 to one strategy change made in both languages when describing the same shape, E/G 2 to two or more strategy changes made when describing the same shape.

	E 1	E 2	G 1	G 2	E/G 1	E/G 2
Subgroup Ga	2	4	1	0	6	0
Subgroup Gb	4	1	9	1	9	0
Subgroup Gc	8	1	5	1	18	14

In summary, at the low and intermediate levels of proficiency, participants described the shapes holistically in both languages. In subgroup Ga, the holistic analogical and geometrical strategies used

combine to 83.1% in English and 87.3% in German, in subgroup Gb to 86.9% in English and 82% in German. At the same time, participants of subgroup Gb were more successful in describing the shapes in a comprehensible manner (58 out of 60 shapes were described accurately in English, 53 out of 60 in German) than participants of subgroup Ga (50 out of 60 shapes were described accurately in English, 46 out of 60 in German). It indicates that participants of subgroup Gb attempted to rethink a message when the initial description was not accurate whereas participants of subgroup Ga did not. At the highest level of proficiency, the holistic analogical strategy was used 45.9% in English and 42.7% in German. In addition, all other strategies were used in both languages to describe 59 out of 60 shapes accurately in English and 58 out of 60 in German.

3.3 Group C and Group G compared

Comparing the German descriptions of Group C and G, there are differences in the performances of the six subgroups (Table 5). At each level of proficiency, the total number of strategies used by each subgroup of Group C is higher than the total number of strategies used by each subgroup of Group G. The holistic analogical strategy is used the most of all strategies used to describe the shapes by participants of all three levels of proficiency in both groups.

At the lowest level of proficiency, there are differences between the two subgroups in their German descriptions that are relevant for the interpretation of the data. The total number of strategies used by subgroup Ga is 19.2% less compared to subgroup Ca. The holistic analogical strategy is used as follows. In absolute numbers, the holistic analogical strategy is used identical in subgroup Ga compared to subgroup Ca. In relation to the total number of strategies used, in subgroup Ga, the holistic analogical strategy is used 76.2%, followed by the holistic geometrical strategy at 11.1%. In subgroup Ca, the holistic analogical strategy is used 61.5%, followed by the partitive geometrical strategy at 17.9%. In both subgroups, the use of the holistic analogical strategy is significantly dominant. Of the 60 shapes to be described, 46 were described by subgroup Ga in a comprehensible manner compared to 42 by subgroup Ca.

Table 5 Number of Strategies used in German by participants of both groups (Group C/Group G) Ha refers to the holistic analogical strategy, Hg to the holistic geometrical strategy, Pa to the partitive analogical strategy, Pg to the partitive geometrical strategy, L to the linear strategy, T to the total number of strategies and N to the number of strategies identified. The numbers on the left give the data of Group C and the numbers on the right of Group G.

	Ha	Hg	Pa	Pg	L	T	N
Subgroups a	48/48	7/7	5/4	14/2	4/2	78/63	42/46
Subgroups b	55/52	9/16	20/5	11/7	5/3	100/83	48/53
Subgroups c	62/61	12/16	41/21	31/29	5/16	151/143	54/58

At the intermediate level of proficiency, there are differences between the two subgroups in their German descriptions. The total number of strategies used by subgroup Gb is 17% less compared to subgroup Cb. The holistic analogical strategy is used as follows. In absolute numbers, the holistic analogical strategy is used 1.6% less by subgroup Gb compared to subgroup Cb. In relation to the total number of strategies used, in subgroup Gb, the holistic analogical strategy is used 62.7%, followed by

the holistic geometrical strategy at 19.3%. In subgroup Cb, the holistic analogical strategy is used 55%, followed by the partitive analogical strategy at 20%. In both subgroups, the use of the holistic analogical strategy is significantly dominant. Of the 60 shapes to be described, 53 were described by subgroup Gb in a comprehensible manner compared to 48 by subgroup Cb.

At the highest level of proficiency, there are no significant differences between the two subgroups in their German descriptions. The total number of strategies used by subgroup Gc is 5.3% less compared to subgroup Cc. The holistic analogical strategy is used as follows. In absolute numbers, the holistic analogical strategy is used 1.6% less by subgroup Gc compared to subgroup Cc. In relation to the total number of strategies used, in subgroup Gc, the holistic analogical strategy is used 42.7%, followed by the partitive geometrical strategy at 20.3%. In subgroup Cc, the holistic analogical strategy is used 41.1%, followed by the partitive analogical strategy at 27.2%. In both subgroups, the use of the holistic analogical strategy is dominant. However, the partitive strategies are used in significant numbers as well. Of the 60 shapes to be described, 58 were described by subgroup Gc in a comprehensible manner compared to 54 by subgroup Cc.

Table 6 shows that at the lowest level of proficiency only a few strategy changes occurred in the G 1 and G 2 category, at the intermediate level of proficiency, the number of strategy changes made by participants of subgroup Cb is three to nine compared to subgroup Gb, and at the highest level of proficiency, the number of strategy changes made is seven to five. The participants of subgroup Gb rethought strategies in their German descriptions similar to participants of subgroups Cc and Gc, whereas participants of subgroup Cb did not.

Table 6 Number of Strategy changes in German used by participants of both groups (Group C/Group G) G 1 refers to one strategy change made in German, G 2 to two or more strategy changes made in German.

	G 1	G 2
Subgroups a	2/1	0/0
Subgroups b	3/9	0/1
Subgroups c	7/5	1/1

In summary, at the lowest and the intermediate level of proficiency, participants of both subgroups used the holistic analogical strategy to describe the shapes. Participants of subgroups Ga and Gb used less strategies in total numbers but described more shapes accurately compared to participants of subgroup Ca and Cb respectively. At the lowest level of proficiency, both subgroups did not use many strategy changes. In both subgroups, participants did not rethink a shape in the German descriptions when necessary. However, the initial descriptions of participants of subgroup Ga were more comprehensible than those of subgroup Ca.

At the intermediate level of proficiency, participants of subgroup Gb made significantly more strategy changes than participants of subgroup Cb. Interestingly, the second most used strategy was also holistic and the remaining three strategies were not used much. The initial descriptions of participants of subgroup Gb were comprehensible as well as the process of rethinking a shape was carried out successfully. Participants of subgroup Cb used the partitive analogical strategy the second most, followed by the geometrical strategies. Despite these efforts of using different strategies, the attempts to rethink a shape when necessary were not successful.

At the highest level of proficiency, participants of both subgroups used the partitive strategies in addition to the holistic analogical strategy to describe the shapes. Participants of subgroup Gc used fewer strategies in total numbers but described more shapes accurately than participants of subgroup Cc. Participants of subgroup Gc used the holistic geometrical and linear strategy more often than participants of subgroup Cc. However, the initial descriptions of both subgroups were comprehensible and in addition their attempts to rethink a shape when necessary were successful.

4 Conclusion

The study researched communication strategies that are employed by a speaker when trying to solve a referential problem. Two participant groups were formed, the difference being in the amount of contact, speakers had to the target language and culture. In Group C, speakers had English as L1 and learned German as L2 in a second language acquisition situation at the University of British Columbia in Vancouver; in Group G, speakers had English as L1 and learned German as L2 in a foreign language acquisition situation in the cities of Kiel and Hamburg in Germany.

Results indicate that the success of processing a comprehensible message is influenced by the amount of contact, a speaker has with the target language and culture, depending on the level of proficiency. In a foreign language acquisition situation, speakers at the low and intermediate level of proficiency are not always successful in constructing a comprehensible message. At the low level of proficiency, speakers cling to the holistic approach; at the intermediate level of proficiency, they attempt to use other strategies besides the holistic analogical strategy. At the high level of proficiency, speakers use a variety of strategies successfully. Speakers in a second language acquisition situation construct comprehensible messages at all levels of proficiency. At the low and intermediate level of proficiency, messages are limited in their scope by using a holistic approach most times. Speakers of an intermediate proficiency also successfully attempt to use other strategies when necessary. At the high level of proficiency, speakers make use of all strategies to create a comprehensible message.

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