Research on Communication Strategies in Interlanguage Production: A Review of Definitions, Typologies, and Empirical Results

Kinue HIRANO

ABSTRACT

Many studies have investigated learners’ communication strategies in production since Selinker (1972) first used the term ‘communication strategies.’ Various definitions and typologies have been proposed (Tarone 1977; Váradi 1980; Corder 1981; Bialystok 1983; Faerch and Kasper 1983a). This article reviews research on second or foreign language (L2) learners’ communication strategies in production. The focus of the article is on the issues of definition and classification of communication strategies, and empirical research on their use of L2 learners relating to variables (e.g. proficiency level, type of content involved) which may affect the choice of communication strategies. Some comments about future research are made.

KEY WORDS
communication strategies, definitions, typologies, variables

1. Introduction

During the seventies, interlanguage studies rapidly developed and researchers have investigated different kinds of interlanguage (IL). One of the main areas of interest that they have dealt with is IL communication. The use of strategies in IL communication by L2 learners has received considerable attention since the term ‘communication strategies’ (CS) was first used by Selinker (1972). Váradi (1973) initiated the empirical research into CS. Subsequently, some other studies of L2 learners’ CS have been done (e.g. Tarone 1977).

Research into L2 learners’ CS has analyzed how learners solve their communicative problems and convey meanings and messages in spite of their limited knowledge. The purpose of this paper is to review the research in L2 learners’ CS in production in terms of the definition and classification of CS, and the variables which may affect learners’ use of CS. The results of this research can be used for L2 teaching. Finally, various research issues relating to the use of CS are discussed and suggestions for future research are made. Receptive CS and learning strategies, however, will not be dealt with, since we have so far
been unsuccessful in finding enough empirical studies of strategies in the reception of speech and learning strategies based on clearly stated notions.

2. Definition of CS

The clarification of the notion of CS is a necessary prerequisite for systematic empirical investigations into IL studies. As in any other new area, one of the fundamental issues is the definition of CS. There is considerable disagreement as to which IL phenomena are considered CS. For instance, Tarone et al (1983: 5) define CS as "a systematic attempt by the learner to express or decode meaning in the target language, in situations when the appropriate systematic target language rules have not been formed." Bialystok (1983: 102) sees CS as "all attempts to manipulate a limited linguistic system in order to promote communication." Faerch and Kasper (1983a) regard them as a particular type of psycholinguistic plan, which will be discussed below.

These different definitions of CS reflect researchers' interests in different aspects of IL. Two recently formulated definitions of CS will briefly be compared in the following before proceeding to the discussion of the classification of CS.

2.1 Psycholinguistic and interactional definitions

Faerch and Kasper (1983a: 36) defines CS as "potentially conscious plans for solving what to an individual presents itself as a problem in reaching a particular communicative goal." The psycholinguistic definition proposed by Faerch and Kasper regards CS as a subclass of verbal plans and characterizes them as language users' experience of communicative problems and their solutions. They adopt problem-orientedness and potential consciousness as defining criteria for CS.

This suggestion that CS are problem-oriented, that is, that L2 learners are required to activate a particular strategic plan to solve a communication problem which they are confronted with, when "a relevant item or rule may not be part of the language user's linguistic knowledge, or may be difficult to retrieve" (1984: 47) is quite interesting. Faerch and Kasper suggest that learners may adopt two different ways of behavior when faced with problems in communication. They can either solve such problems by changing the communicative goal and adopting avoidance behavior (underlining reduction strategies), or by attempting to tackle the problem, resorting to achievement behavior (governing achievement strategies) and by developing an alternative plan. Figure 1 (1983: 37) shows how problems are related to types of behavior and types of strategies in IL production.

Consciousness is also considered as a defining criterion of CS. They suggest that CS are regarded as 'potentially conscious', since they may not always be consciously employed by learners.

Tarone (1980, 1981) has offered an alternative definition of CS. In her earlier study
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Figure 1  Types of behaviour and types of strategies (Færch and Kasper 1983: 37)

(1977: 194), a noninteractional definition of CS is proposed:

... conscious communication strategies are used by an individual to overcome a crisis which occurs when language structures are inadequate to convey the individual's thought.

Later in Tarone (1980: 419), however, a different — interactional — definition of CS is formulated as "a mutual attempt of two interlocutors to agree on a meaning in situations where requisite meaning structures do not seem to be shared." According to her interactional definition, CS are characterized by the following criteria (1980: 419):

1. A speaker desires to communicate a meaning X to a listener.
2. The speaker believes the linguistic or sociolinguistic structure desired to communicate meaning X is unavailable or is not shared with the listener.
3. The speaker chooses to:
   (a) avoid—not attempt to communicate meaning X or
   (b) attempt alternate means to communicate meaning X.

The speaker stops trying alternatives when it seems clear to the speaker that there is shared meaning.

The focus of this definition is on the interaction between the interlocutors and the negotiation of meaning. However, as pointed by Færch and Kasper (1984), there are
several problems associated with Tarone's interactional definition. It ignores problem-solving behavior in discourse types in which no feedback is provided or feedback is delayed, e.g. writing, lectures. Also, the existence of 'covertly' used strategies is not taken account of. The learner's communication problem is marked by a direct appeal or unmarked in performance, that is, it does not often surface in performance but results in a pause. Tarone's interactional definition, however, deals only with CS that are marked in interaction, e.g. by the learner's appeal for assistance. In general, therefore, Færch and Kasper's psycholinguistic definition seems more adequate than Tarone's definition.

As for learning strategies and CS, this controversial distinction has been pointed out by Tarone (1981), Corder (1981), Bialystok (1983) and Færch and Kasper (1983a). Their arguments will not be referred to here.

3. Typologies of CS

A variety of typologies referring to CS in IL production have been proposed by Tarone (1977), Blum and Levenston (1978), Váradi (1980), Corder (1981), Tarone et al. (1983), Færch and Kasper (1983a), and Paribakht (1985). Much of the literature in this field seems to lack generally agreed typologies of CS. The grouping and the labelling often vary with the research done on CS. However, there is considerable overlap between the types of CS.

Váradi (1980, completed in 1973) was the first to conduct empirical research on CS. He compared the written production of learners' on a story-telling task in their first and second languages. Nineteen adult Hungarian learners of English at the intermediate level participated in the study. The data of his analysis drew on four versions of a picture story: 1) original Hungarian version, 2) original English version, 3) translation of 1) into English, and 4) translation of 2) into Hungarian.

The first-language (L1), Hungarian versions were compared with the L2 (English) versions, based on the assumption that the Hungarian versions would closely represent the learner's optimal meaning, and that the English versions would reflect the adjusted messages of the target language. Váradi investigated the adjustment phenomena and identified the frequent strategies of message adjustment:

1) generalization (e.g. 'ballon' → ball, something, some toy)
2) approximation (e.g. 'ballon' → gas ball)
3) circumlocution (e.g. 'ballon' → special toys for children, they are filled by gas)
4) paraphrase (e.g. 'in the meantime' → while she was doing it)

This pilot study deals with learners' written production exclusively. Váradi stresses that learners must be put into interaction with native speakers to evaluate the communicative effect of learners more precisely.

Blum and Levenston (1978) have demonstrated that a strategy concerning lexical
simplification can be found in various discourse types. They examined the validity of the hypotheses that lexical simplification would operate according to universal principles, and that they would derive from learners' semantic competence in their first language (mother tongue). The data was analyzed from learners' interlanguage performance in speech and writing, professional translations, foreigner talk, and simplified ESL reading texts.

The categories of the taxonomy of CS of lexical simplification identified are shown in Table 1 (1983: 126).

Table 1 Communication strategies of lexical simplification

<table>
<thead>
<tr>
<th>Group A: Potentially process initiating</th>
<th>Group B: Situation bound</th>
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<tr>
<td>1 Overgeneralization realized by:</td>
<td>1 Circumlocution and paraphrase</td>
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<tr>
<td>a) the use of superordinate terms</td>
<td>2 Language switch</td>
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<tr>
<td>b) approximation</td>
<td>3 Appeal to authority</td>
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<tr>
<td>c) the use of synonymy</td>
<td>4 Change of topic</td>
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<tr>
<td>d) word coinage</td>
<td>5 Semantic avoidance</td>
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<tr>
<td>e) the use of converse terms</td>
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<td>2 Transfer</td>
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(Blum and Levenston 1983: 126)

They suggest that the only strategy that has not been reported in the literature of CS is the use of converse terms, though the other categories in the above list have been identified.

Blum and Levenston regard their findings as supplying the evidence for their hypotheses on lexical simplification. More systematic investigation, however, should further be carried out since their research on lexical simplification is of a preliminary nature.

The basic principles of the classification of CS proposed by Tarone (1977) have been followed by later studies, with more or less modification. Tarone examined the data of spontaneous speech of nine adults at the intermediate level learning English as a second language from a variety of first language backgrounds (Spanish, Turkish, and Mandarin). The subjects participated in an oral picture description task in both their first language and the second language, English. The experiment was set up in such a way that they had to communicate concepts for which the correct target language form was unknown or uncertain. The experimenter analysed the performance data supplemented by their introspective data.

The CS as a good tool for describing her data were as follows: 1) avoidance, 2) paraphrase, 3) conscious transfer, 4) appeal for assistance, and 5) mime. The subtypes of these CS are outlined below in Table 2.

For comparison, the types of CS established by Tarone, Corder, and Færch and Kasper are summarized in Table 2. It should be noted that paraphrase listed in Tarone is a broader category including approximation, circumlocution, and word coinage; while, in Færch and Kasper, it is a subclass of IL-based strategies. IL-based strategies in Færch and Kasper are referred to as L2-based strategies by Bialystok (1983).
Table 2. Typologies of communication strategies of three authors

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<tr>
<td>1. Avoidance</td>
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<td>A. Reduction strategies</td>
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<td></td>
<td>a) topic avoidance</td>
<td>a) topic avoidance</td>
<td>1. Formal reduction</td>
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<td></td>
<td>b) message abandonment</td>
<td>b) message abandonment</td>
<td>2. Functional reduction</td>
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<td>2. (Conscious) transfer</td>
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<td></td>
<td>a) language switch</td>
<td>a) borrowing</td>
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<td></td>
<td>b) literal translation</td>
<td></td>
<td>1. L1/L3-based strategies</td>
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<td>3. Paraphrase</td>
<td></td>
<td>b) paraphrase or circumlocution</td>
<td>a) code switching</td>
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<td></td>
<td>a) approximation</td>
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<td>b) foreignization</td>
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<td>b) circumlocution</td>
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<td>c) literal translation</td>
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<td>c) word coinage</td>
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<td>4. Mime</td>
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<td>2. IL-based strategies</td>
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<td></td>
<td></td>
<td>a) substitution or generalization</td>
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<td>b) paraphrase</td>
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<td>c) word coinage</td>
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<td>d) restructuring</td>
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<tr>
<td>5. Appeal for assistance</td>
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<td></td>
<td>3. Non-linguistic strategies (mime, gesture, sound imitation)</td>
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<td>(2) Cooperative strategies</td>
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<td>a) direct appeal</td>
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<td>b) indirect appeal</td>
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For convenience, some examples of CS are taken here from Tarone (1977):

*Paraphrase*
1) approximation (e.g. *pipe* for *waterpipe*)
2) word coinage (e.g. *airball* for *balloon*)
3) circumlocution (e.g. ‘She is, uh, smoking something. I don’t know what’s its name. That’s, uh, Persian, and we use in Turkey, a lot of.’

*Borrowing*
1) literal translation (e.g. *He invites him to drink, for They toast one another.*)
2) language switch (e.g. *balon* for *ballon*)

*Appeal for assistance* (e.g. ‘What is this?’)

*Mime* (e.g. clapping one’s hands to illustrate applause)
4. Empirical literature of CS

4.1 Variables and the use of CS

Many studies have centered around the identification and classification of CS in communicating lexical items. However, it is also important to investigate the factors that determine which types of CS are employed by learners. It has been suggested that the factors which may influence learners' choice of CS are their proficiency level of the target language (Tarone 1977, Corder 1981, Bialystok 1983, Hirano 1985, Sorace 1985, Paribakht 1985), personality (Tarone 1977, Corder 1981), learning situation (Piranian 1979, cited in Tarone 1981), and the learners' perception of the distance between their first language and L2 (Paribakht 1985).

(1) Proficiency level and the use of CS

A number of studies which have investigated the relationship between the choice of CS and L2 proficiency point out that the proficiency level of the learner influences strategy usage.

Tarone (1977) noted that the less able subjects preferred avoidance strategies, whereas the more able preferred L2-based strategies. Then she hypothesized that the proficiency level of the learner may influence strategy preference, which was supported by Bialystok's (1983) findings. Bialystok investigated 'who uses which strategy for which concept, and with what effect?' The focus was on the use of eight concrete lexical items in a picture reconstruction task. Two groups of Anglo-Canadian learners of French, an adult group of fourteen, and a student group of sixteen were asked to describe a picture to a native speaker of French (a non-English speaker) so that the latter could reconstruct it on a flannel board. In the task, no time limit was imposed. The reconstructor gave virtually no verbal feedback. A cloze test was given to all subjects to assess their proficiency. The taxonomy of CS that Bialystok developed, reorganizing that of Tarone (1977) was the following:

1) L1-based strategies (language switch, foreinizing, transliteration)
2) L2-based strategies (semantic contiguity, description, word coinage)

Bialystok reported the following results:
1) The advanced students used significantly fewer L1-based strategies and significantly more L2-based strategies (p. 108).
2) The average number of strategies used revealed no correlation to proficiency as indicated by the cloze test. However, for the adult group (not the student group), there was a significant negative correlation between proficiency scores and use of L1-based strategies (p. 108).
3) The adults varied their strategies with greater flexibility according to the item than the students (p. 110).
4) Appropriate selection of strategies requires a minimal level of proficiency (p. 115).

As Faerch (1984) pointed out, there is one problem with Bialystok's experimental design. The reconstructor was instructed to refrain from providing verbal feedback, although one of the objectives of her investigation was to stimulate real-life interaction. Her research procedure was not oriented toward this objective in her investigation.

Sorace (1985) carried out an experiment on the development of learners' procedural knowledge in a classroom environment, that is, an acquisition-poor environment. The expectation was that the process, in terms of procedural knowledge, would be inferred from an increase in the use of interlanguage-based strategies of communication (paraphrase, description, circumlocution) and from a concomitant decrease in the use of L1-based strategies.

An oral picture description task was given to two groups of college students of Italian (monolingual native speakers of English), nine beginning and eight intermediate students, in order to elicit the use of CS when the appropriate foreign language vocabulary was lacking. The subjects were those who were taught Italian in a traditional way, focusing on grammar. The picture description had to be given first in English and then in Italian with no time limitations. Analysis of the CS focused on six lexical items that the subjects had to employ in the description of a series of cartoons.

Predictably, non-beginners used significantly fewer L1-based strategies than beginners, and the decrease in the use of L1-based strategies tended to be accompanied by an increase in IL-based (i.e. L2-based) strategies, although it was not significant. Therefore, the results tend to be in agreement with those of Bialystok's (1983) study.

Also Paribakht (1985) reports that the use of strategies varies according to the proficiency level of the learner. Three groups of twenty adult subjects each, two of Persian ESL students (intermediate/advanced) and one of English native speakers, were asked to communicate orally twenty single lexical items (concrete, as well as abstract nouns) to native speaker interlocutors in English. A taxonomy of CS was developed and classified into four major communicative approaches:

1) linguistic approach (semantic contiguity, circumlocution, metalinguistic clues)
2) contextual approach (linguistic context, use of L2 idioms and proverbs, transliteration of L1 idioms and proverbs, idiomatic transfer)
3) conceptual approach (demonstration, exemplification, metonymy)
4) mime (replacing or accompanying verbal output)

The results of the analysis revealed that all three groups employed the same four types of CS. The findings for Hypothesis 1 relating to the types of CS used were consistent with those of Bialystok (1983) and Sorace (1985). That is, they showed that the learners tended to abandon L1-based CS, and to use more L2-based CS as they progressed in the target language. Paribakht found that the low proficiency group used two L1-based strategies (idiomatic transfer and transliteration of L1 idioms and proverbs). As for Hypothesis 2 (proportional use of CS), there were differences in the relative frequent use of the four
approaches. The native speakers and the advanced learners used the linguistic approach more and the conceptual approach less than the intermediate learners. Mime was used more frequently by the learner groups than by native speakers. The data suggests that learners' use of CS is transitional and dynamic. Thus Tarone's hypothesis concerning the preference for L2-based strategies by the more advanced learners was confirmed by the findings of Bialystok (1983), Sorace (1985), and Paribakht (1985).

Ellis (1984) provided some evidence for the differences between native speakers' and L2 learners' use of CS. He reports that ESL children employed these strategies more frequently than native-speaking English children.

Two groups of learners, six ESL learners aged 10-12 and six native speakers of the same age were asked to tell a story, depicted in a series of pictures orally to a teacher from the same school. A number of key 'information-bits' were chosen which should have been included in their oral stories. The analysis of the article focused on the use of avoidance and paraphrase (which includes approximation, word coinage, and circumlocution, i.e. L2-based strategies in this study). The results revealed that the L1 children conveyed substantially more information about the pictures than the L2 children. What is interesting is that the L1 children used less avoidance and less paraphrase.

In general, it has been found from the empirical research reviewed here that less able students prefer avoidance strategies or L1-based strategies, while the more able prefer L2-based strategies. Therefore, it seems probable that learners tend to abandon or adopt certain CS, and employ fewer strategies as they approach a higher target language level.

(2) Type of content involved

In Paribakht's (1985) report, it is also suggested that the choice of CS may depend upon the type of content for which these strategies are used. It was shown, for instance, that the difference between concrete and abstract nouns influenced the learner's choice of CS. Fakhri (1985) also reports that the application of CS is affected by narrative discourse features. Fakhri opened up a new area which has been left untouched: the interaction between the use of CS and narrative discourse features.

The data in this study consisted of twelve narratives by an adult learner of Moroccan Arabic as a second language over a four-week period during daily casual conversations in the target language. His focus was on narrative discourse since 1) it is easily recognizable in that it has a specific structure, and it cannot be interrupted, and 2) it is also a fairly discourse unit. The strategies frequently identified in the narratives were: circumlocutions, lexical borrowing, elicitation of vocabulary, use of formulaic expressions, and innovation in morphosyntax. The subject's narratives in Fakhri's study included the following elements: abstract, orientation, episodic component, evaluation, and coda.

The analysis of the data revealed that the use of CS was not random but rather constrained by narrative discourse features. The point was made that the structural elements included in the narratives determined the use of strategies. It was shown, for instance, that lexical borrowing was the main strategy employed by the subject in the
episodic component, while, in the evaluation, she relied heavily on formulaic expressions. Fakhri expresses the limitations of his study: only one subject and one discourse genre (narratives) were dealt with. The results need to be tested further with more subjects and different kinds of discourse.

4. 2 Communicative effectiveness and the use of CS

Some studies provide suggestions as to what constitutes effective CS. Bialystok (1983) also discusses the problem of communicative effectiveness of strategies. The effectiveness of those strategies the subjects used was assessed by seventeen native speakers of French, with fairly high interjudge reliability. Bialystok suggests that the most efficient strategies are L2-based strategies, and that the best strategy users are those with adequate formal proficiency in the target language who are able to modify their strategy to take into account the specific concept to be conveyed (1983: 116). In regard to the best strategy users, Sorace (1985: 251) states:

In terms of the theoretical bases of the present study, the best strategy users are those who, in addition to their adequate metalinguistic knowledge, have also developed adequate procedural knowledge.

The findings of Bialystok are confirmed by those by Haastrup and Phillipson (1983): L1-based strategies seem to be the least effective, whereas IL-based (L2-based) strategies the most effective. Haastrup and Phillipson, in their analysis of videotaped natural conversations between English native speakers and eight Danish learners of English at intermediate level, found that “L1-based strategies nearly always lead to partial or non-comprehension and IL-based strategies often lead to full comprehension” (1983: 155). They and Hirano (1985) hypothesize that paraphrase has the highest potential for leading to communicative success. Thus it is most important in the study of CS to investigate effectiveness of CS in conveying difficult concepts.

5. Suggestions for future research

There are various issues relating to the empirical studies of CS. It would be interesting to know how the choice of strategies is affected by variables other than the proficiency level and the type of content involved. Possible areas for future research are:

1) Personality factors
Tarone (1977) suggests that personality factors may determine strategy preference. Yet this has not been fully investigated.

2) Type of the learning situation
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Piranian (1979, cited in Tarone 1981) found that American university students studying Russian in a formal, foreign language classroom resorted to using avoidance more, while those in a natural environment also used paraphrase. It seems likely that learners’ choice of CS varies with the type of the learning situation: a classroom environment focusing on correctness vs. an environment with natural exposure, though little empirical research has been done on this issue.

3) Time factors

Time seems to be another factor that may make a difference in the use of CS. However, in the picture description tasks of Tarone (1977) and Sorace (1985), no time limits were imposed. It seems that Ellis (1984) also gave no time constraints to his subjects. Future empirical research should be done in the area of time and its effects on the use of CS since there is the possibility of monitoring.

4) Type of communicative situation

Empirical research on the use of CS should take into account the type of communicative situation which learners are placed in by the researcher: real-life interaction vs. controlled types of communication. Many studies obtain their results from elicited speech which is not genuine communication. These studies must be carried out also with interactional communication with less predictable discourse structures.

5) Nature of interlocutors

It would seem probable that the use of strategies is related to the type of interaction: native/non-native vs. non-native/non-native. It is not clear from Sorace’ (1985) study to whom the subjects were instructed to describe the picture story. The native speaker interlocutor may contribute heavily to the success of the interaction. It seems that ‘appeal for assistance’ is more likely when learners communicate with native speakers than with non-native speakers.

Generally speaking, in order to compare the results from different studies of CS, it is necessary that empirical studies describe precisely the taxonomy of CS using examples, as well as the research design concerning the nature of the instructions and tasks given, and the interlocutors with whom subjects communicate. In regards to the number of subjects, the statistical results obtained from the studies using only a small number of subjects have to be considered as tendencies that need further empirical verification. It should also be pointed out that performance data should ideally be supplemented by introspective techniques, which are helpful in identifying learners’ intended meanings and problem areas.

6. Conclusion

We have devoted considerable space to the question of variables in the use of strategies, since this issue lies at the core of research on learners’ CS. The research reviewed here suggests that many variables may be related to learners’ choice of CS. However, in order
to promote L2 communication, a longitudinal study is necessary which investigates a variety of variables that may affect the types of CS.

In general, in empirical investigations into the use of CS, there are considerable differences in the design, methodology, analysis and the types of learners. However, classroom teachers and L2 researchers should find that reviewing empirical research into CS and attempting to compare and synthesize their findings is valuable for the implications for language teaching, development of the curriculum and materials, and further research.

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