

LEARNING AND RECEPTION STRATEGIES USED BY L₂
LEARNERS IN COMPLETING A MODIFIED CLOZE
PROCEDURE: SIX CASE STUDIES

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A MODIFIED CLOZE PROCEDURE:
SIX CASE STUDIES**

by

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ABSTRACT

The present study is an investigation of the cognitive learning and reception strategies used by first year university students of French while completing a modified cloze procedure. Three successful and three less successful learners were asked to 'think aloud' as they carried out the task, and retrospective reports were sought in order to ensure completeness of information. A list of strategies identified as being used by learners when working on the cloze text was established and, on the basis of these categories, the strategies were analyzed in terms of the effect of (i) frequency, (ii) quality and (iii) clustering of strategy use on performance. The results indicate that, while frequency may provide some indication of a particular strategy's usefulness on this task, it is quality and clustering of strategy use that more clearly differentiate successful from less successful learners. The results of this study are also discussed in terms of recommendations for individualized strategy instruction, since the 'think aloud' protocols provide a very detailed diagnosis of each learner's strengths and weaknesses.

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CHAPTER 1.

INTRODUCTION: RATIONALE FOR INTEREST IN LEARNER STRATEGIES.

1.1 Research Background

Since the 1970's, when the focus in the second language (L₂) classroom changed from being teacher-centred to student-centred, research in L₂ learning has investigated the possible influence of learner characteristics on this process. Rubin (1975), Stern (1975), and Naiman et al. (1978) established lists of student characteristics and behaviors that for them marked out features of successful L₂ learning. It should be pointed out that these early taxonomies of good L₂ learners did not differentiate background variables such as personality, age, sex, affective factors, or social style, from specific behaviors or thought processes associated with success in L₂ learning. In this shift of emphasis to the learner, there developed a growing interest in attempting to define the specific cognitive processes involved in L₂ acquisition, from the student's perspective on the task. Not only what learners do, but also what they perceive themselves to be doing in order to manage a learning or communication task became an area of interest (Rubin 1975, Stern 1975, Bialystok 1979). As a corollary to these investigations, it was assumed that, since good L₂ learners were found to use more and better strategies in the process of L₂ learning than do poor L₂ learners (Bialystok 1979, Reiss 1983, Rubin 1975), then it might be possible to use such a list of successful behaviors and thought processes as the basis for instructing or influencing the behavior of poor learners (Hosenfeld 1979). There is thus an assumption that such "strategy training" (Oxford 1989) has the potential to lead to higher proficiency (Bialystok 1984, Faerch and Kasper 1983), and that "learning

strategies are readily *teachable* "(emphasis original) (Oxford and Nyikos 1989:291). A further by-product of students being shown how to take a more active role in their own learning via strategy training is assumed to be increased learner autonomy (Wenden 1987, Holec 1981) where learners take charge of and control the learning process both inside and outside the classroom.

1.2 Key assumptions that underlie research into learner strategies.

Rubin (1987) lists some of the theoretical underpinnings of this research, amongst which are three key assumptions:

- (i) As with other kinds of learning, L₂ learning requires problem-solving, where learners need to be active participants in the learning process in order to be able to internalize information in a personally meaningful way. The assumption is that certain behaviors and thought processes help learners to negotiate, reorganize and assimilate new information into their own personal understanding, or schemata, of the L₂ system. (Oxford and Nyikos 1989)
- (ii) Both explicit and implicit knowledge have an important role to play in L₂ learning. Such an assumption - that consciously attending to the process of L₂ learning can complement and strengthen information that has been acquired more subconsciously (Bialystok 1978) - conflicts with Krashen's (1981) suggestion that L₂ acquisition happens at a subconscious level where language rules are internalized in an unconscious manner and that what learners do consciously with incoming information does not have a significant role to play in successfully learning a language.

(iii) Not attending to and taking active charge of the process of one's learning could impede one's progress in L₂ learning. The corollary to this assumption is therefore that making explicit the behaviors and thought processes involved in learning and in regulating learning can facilitate the L₂ learning process for poorer and better students, allowing learners to refine and adapt their use to increase efficiency and effectiveness.

1.3 Purpose of this Study

If one accepts the above assumptions as reasonable projected benefits to learners in the development of L₂ proficiency, then one sees the value in studying learners who are actively involved in their learning. Such learners may take different approaches to solving learning problems by applying specific types of behavior or thought processes to a particular task or situation rather than other possible courses of action. Research in this field has the potential for shedding light not only on the processes and behaviors through which learning occurs, but on emerging patterns of use. One might ask whether they are specific to the task, or to the type of learner; whether they are sensitive to external factors, and if so, to which ones; and finally whether such behaviors or clusters of behaviors can be universally taught, or whether they are specific to certain types of individuals, and not directly transferable.

Guided by these assumptions of projected benefits to L₂ learners in studying language learning behaviors, the present study examined the strategies employed by first year university students of French while completing a specific kind of language task. The type of activity involved is a modified cloze procedure which forms part of the teaching and testing syllabus at the researcher's institution. (See Appendix A for the cloze passage used in this study.) This particular task appears to involve highly complex thought processes and behaviors which the researcher has sought to identify

and analyze, with a view to eventually being able, in subsequent research, to design and test a programme of strategy training that might improve performance on this task.

Specifically, the study investigated the strategies used by three successful and three less successful L₂ learners in dealing with this problem-solving task. The types of strategies used were coded according to the general schemes developed by Rubin (1981, 1987) and by Abraham and Vann (1987), with modifications that reflect the exigencies of this particular task. (See Appendix B for the "General Scheme of Cognitive Learning / Reception Strategies".) Secondly, we observed whether consistent patterns of use emerged: in particular (a) whether there appeared to be strategies that gained effectiveness when used in clusters, and (b) whether there was evidence to suggest that even within the two groups (successful / less successful) there were different sorts of approach, different complexes of strategies, that suited different types of learners.

The potential benefits of this research are in the area of strategy training. Successful combinations or clusters of behaviors might be taught to weaker students who attempt this task. Such strategy training, if successful, could provide students with valuable new insights into reading L₂ texts, coping with unknown vocabulary, monitoring and assessing the appropriateness of their problem-solving, and ultimately into developing a higher degree of metalinguistic awareness. In addition, we may have gained useful information about the individual differences between types of L₂ learners. This might allow us, in subsequent research, to better match the type of training envisaged with the type of learning approach adopted by the learner.

It is to be hoped that should the present study produce interesting and potentially testable findings, then a follow-up study could be set up to assess the

effectiveness of a programme of strategy training, designed to help learners perform the specific language task concerned.

1.4 Research Questions

Specifically, this study sought to answer the following questions:

- (i) What behaviors do successful and less successful L2 learners engage in when completing this task?
- (ii) Can successful learners be differentiated from less successful learners on the basis of the **frequency of occurrence** of certain behaviors they exhibit?
- (iii) Can successful learners be differentiated from less successful learners on the basis of the **quality** of certain behaviors they exhibit?
- (iv) Are there **groups of behaviors** that appear to improve performance on this task?

1.5 Definition of Terms

The terms listed below, which describe procedures used in this study, are understood to mean the following:

1. "think-aloud" = "self-revelation", "stream of consciousness disclosure" (Cohen 1987); "Level 1" (Ericsson and Simon 1980)

2. "probing / clarifying questions" = probes to elicit additional information if the researcher felt that concurrent verbal reporting was incomplete.
3. "immediate retrospection" = "self-observation" (Cohen 1987); "Level 3" (Ericsson and Simon 1980). In this study, this will consist of a verbal summary by the subject on the thinking processes and strategic behaviors that they felt had been most successful for them in completing the cloze procedure.

CHAPTER 2

REVIEW OF THE LITERATURE

2.1 What are Learner Strategies?

Wenden (1987) sees **learner strategies** as referring to three basic components of L₂ learning:

- (i) the behaviors learners exhibit when learning and controlling their learning;
- (ii) the conscious knowledge learners possess about the behaviors and thought processes they engage in during the learning process;
- (iii) learners' general insights and preconceived notions about learning a language which are thought to form the basis for selecting and activating one strategy over another.

Wenden goes on to point out that there is little consensus in existing research on a precise definition of the term "strategy". The term is used in a variety of ways in the literature, at times denoting general learner characteristics, unconscious behaviors, innate cognitive processes, and at other times being defined as specific task-oriented actions under the conscious control of the learner. In order to clarify the issue somewhat, Wenden proposes six criteria for the identification of learner strategies. **Learner strategies** are:

- (i) specific actions or techniques - operations learners choose to use in carrying out learning tasks;
- (ii) sometimes observable, sometimes not observable;
- (iii) problem oriented - aiding in the acquisition, storage, retrieval and use of information (Rigney 1978);
- (iv) direct and also indirect contributors to learning;
- (v) sometimes consciously deployed, sometimes automatic;
- (vi) amenable to change.

This general characterisation of learner strategies seems a useful and concise framework on which to base our definition, and one that appears to encompass researchers' differing perspectives on this issue, ranging from Oxford's (1989:235) vague definition of language learning strategies as "behaviors or actions which learners use to make language learning more successful, self-directed, and enjoyable" to Faerch and Kasper's (1983:36) more precise identification of strategies as "potentially conscious plans for solving what to an individual presents itself as a problem in reaching a particular ... goal."

2.2 Types of Learner Strategies.

Rubin (1981, 1987) suggests that there are three kinds of strategies that contribute directly or indirectly to L2 learning: learning strategies, communication strategies and social strategies. The focus of the present study is on **learning strategies**, along with a fourth type of strategy, suggested by Faerch and Kasper (1983:xx) and by Manghubai (1987) – **reception strategies**. These are types of strategic behaviors that are brought into play in completing a cloze exercise.

2.2.1 Learning strategies.

Learning strategies, like communication strategies, are behaviors or thought processes that directly affect and contribute to the rate of attainment in the L₂. These two types of strategies are, however, different in that learning strategies are a means of expanding a learner's competence, whereas communication strategies are a means of exploiting it (Paribakht 1985). Learning strategies may be (O'Malley et al. 1985a, Rubin 1987, Oxford and Nyikos 1989)

- (i) cognitive strategies - procedures used in learning tasks that involve analysing, associating, transforming and synthesising new information with existing information in order to construct internal mental schemata of the L₂, or
- (ii) metacognitive strategies - which imply both knowledge about cognitive operations, and a procedure for regulating cognition and consciously controlling the learning or problem-solving process via direct planning, focusing, monitoring and evaluating.

The almost inseparable value of these two types of learning strategies, when used together, has been emphasized by cognitive learning researchers, and has resulted in concrete recommendations in planning strategy training: "...an ideal training package would consist of both practice in the use of task-appropriate strategies, instruction concerning the significance of those activities, and instruction concerning the monitoring and control of strategy use." (Brown and Palincsar 1982:7) Finally, O'Malley et al. (1985a) suggest that if L₂ learners proceed without metacognitive strategies, then they will lack the direction and purpose necessary in order to be able to take charge of their learning, to plan, monitor and evaluate their progress, and to set themselves new learning goals for the future.

2.2.2 Reception strategies.

These are strategies used by learners in order to solve problems they encounter in receiving a message. Reception strategies are implemented by learners in an attempt to decode input, and render it into comprehensible intake (Manghubai 1987), that is, derive meaning from the message. Research on this type of strategy has concentrated largely on strategies in reading. However, there is still relatively little known about how learners cope with problems in the reception of language, one of the reasons for this being the methodological difficulties in collecting data that enable one to determine the strategies in use.

2.3 **Learning Strategy Research**

When one reviews the early lists of learner strategies, which did not discriminate between communicative, learning, social and receptive strategies, one finds certain key **learning strategies** being mentioned repeatedly, all of which presuppose an active task approach:

- (i) **inferencing / guessing / inductive reasoning** (Rubin 1975, 1981; Bialystok and Frohlich 1977; Bialystok 1979, 1983);
- (ii) **monitoring** (Rubin 1975, 1981; Stern 1975; Naiman et al 1978) in the broad sense of the term, in contrast with Krashen;
- (iii) **practising** (Rubin 1975, 1981; Stern 1975);

- (iv) **looking for patterns in the language / deductive reasoning** (Rubin 1975, 1981; Stern 1975; Naiman et al 1978)

Having established these taxonomies as an initial frame of reference, researchers proceeded to seek answers to various questions regarding the effect and potential of learning strategies. Broadly speaking, subsequent studies investigated the following areas:

- the effect of learning strategies on achievement;
- the relation between learning strategy use and the development of L₂ competence;
- the extent and nature of learning strategy use with specific language tasks;
- the extent to which learners can be trained in the use of learning strategies;
- the relation between student beliefs about language learning and the strategies they use.

2.3.1 The effect of learning strategies on achievement

Bialystok (1979) reports on a study that investigated the effects of four specific strategies: (a) inferencing, (b) monitoring, in the narrow Krashen sense, where the focus is on form, (c) formal practising of language as a code, and (d) functional practising of language as a communicative tool. A student self-report questionnaire was used to determine the frequency of use for each of the four strategies, and this was then correlated with a series of achievement tests. Findings indicated that while the use of all four strategies had positive effects on achievement in certain kinds of tasks, only functional practising had a significant positive relation to performance for all tasks. Bialystok also concludes that quantifying the extent or frequency of strategy use is insufficient to account for achievement, and that specific strategies have specialized

effects for particular types of tasks: "the language task involved determines which of the strategies would be most beneficial." (Bialystok 1979:390)

Politzer (1983) examined the relationship between students' self-reported learning and communicative behaviors and achievement using a questionnaire to establish the frequency of use of a list of strategies based on the taxonomies of Naiman et al. (1978) and Rubin (1981). Results indicated a significant correlation between the strategy of monitoring and students' grades. Other findings included the following points:

- (i) some learning behaviors vary significantly according to the level of proficiency of the learners, with the implication that (a) the level of learner proficiency may define the repertoire of strategies available to the learner, and (b) increasing levels of proficiency will change the distribution and quality of strategies used.
- (ii) some learning behaviors vary significantly according to the teaching methodology used: the relation of behavior to success may depend heavily on the pedagogical approach taken in the classroom in that it determines and affects the types of strategies in use. (cf. Oxford and Nyikos (1989) who found that students who were instructed via rule-based L₂ teaching methods tended to use similarly analytical, formal types of learning strategies.)

Finally, Politzer comments on the potential unreliability of self-report for measuring frequency of use of strategies and correlating it with achievement, since other factors such as learners' intelligence and motivation influence the data. This means that findings such as Politzer's (1983) and Bialystok's (1979) must be interpreted with caution. (cf. Rubin 1981, Politzer and McGroarty 1985)

Manghubai (1987), in a project involving five case studies, examined the frequency of occurrence of some of the learning strategies already discussed - inferencing, practising, and vocabulary learning via association - and attempted to relate these frequencies to L₂ achievement. Data was collected using a concurrent 'think-aloud' technique, where five beginning L₂ learners were asked to verbalize their thoughts while working through a series of language tasks. In addition, some immediate retrospective reporting was elicited by the interviewer, when it was felt that verbalization was incomplete. Results indicated that the learners engaged in a variety of behaviors in processing the input involved in the language tasks:

- (i) reception strategies that seek to extract meaning;
- (ii) strategies that analyze the form of the language; and
- (iii) the strategy of repetition to facilitate later retrieval of a word or expression;

In addition, there were marked differences between the learners, not only in terms of the quantity but also the quality of behaviors exhibited. (cf. Bialystok 1979) It was also found that not only was a focus on form not detrimental to rate of progress in L₂ (contrasting with Krashen's (1981) view that overmonitoring form can delay L₂ acquisition), but that there were qualitatively different ways of focusing on form - differing qualities of analysis - that were determiners of a learner's eventual achievement. Manghubai elaborates on this idea by suggesting that merely taking note of the structural features of the language is not necessarily a desirable learning strategy; rather, learners focusing on form should attempt to understand the structure of the L₂, to integrate it into a developing L₂ schema, in order that the developing interlanguage be constantly undergoing a process of refinement and renegotiation as subsequent input is processed.

Thus, while the frequency of occurrence of particular learning strategies may indicate their potential usefulness in L₂ learning, it is the quality of their use that is fundamental. Like Wesche (1979) and Oxford (1986), Manghubai concludes that the achievement levels of L₂ learners cannot be predicted by frequency counts of perhaps oversimplified strategy items, and that the eventual attainment of learners may better be explained as the result of a complex of behaviors, where each behavior occurs with a certain frequency relative to others in the group. Like Politzer and McGroarty (1985), Manghubai argues against thinking of strategies as universally good or bad, suggesting that the mix or balance of strategies available for use, as well as the ways in which they may be used, should be demonstrated to learners in order to enhance their progress in the L₂.

2.3.2 The relation between learning strategy use and the development of L₂ competence.

Politzer and McGroarty (1985), in a study again using a self-report questionnaire to establish a description of L₂ learning behaviors, related these behaviors to L₂ learning gains, specifically in terms of linguistic and communicative proficiency. Their findings suggested a number of interesting points:

- (i) "Good behaviors may be differentially appropriate for various types of skills related to the purpose of second language study" (p. 118) This relates back to Politzer's (1983) and Oxford and Nyikos' (1989) linking of methodological approach with strategy use, and implies that one's pedagogical goals in L₂ learning will profoundly influence the strategies in use: "the learning strategies required for and contributing to the acquisition of communicative competence

may indeed be different from those involved in developing linguistic competence." (p. 118)

- (ii) Strategies should not be considered absolutely valid or useful. It would be wrong to recommend a particular strategy as universally helpful, since it would depend on other factors, such as learner proficiency, frequency and quality of use, as to whether a specific behavior had beneficial effects. (cf. Manghubai 1987)

Rubin (1987), in her review of Politzer and McGroarty's (1985) study, makes the following recommendation for future research arising from their findings: "We need to determine the conditions under which complexes of strategies are helpful for particular levels and particular skills and for particular learners." (p. 22) The idea of observed learning behaviors occurring in groups, also referred to in Manghubai (1987), was originally suggested by Wesche (1979:419) where she hypothesized that "it may be complexes of them (i.e., behaviors) rather than specific ones which characterize different kinds of learners." Similarly, Oxford (1986) suggests that future research should investigate strategies in complexes rather than individually.

2.3.3 The extent and nature of learning strategy use with specific language tasks.

Cohen and Apeh (1981) report on two studies involved in examining cognitive learning strategies used specifically with vocabulary tasks. They identified eleven different strategies involving association of the target word in a particular way. Two of the more productive procedures were:

- (i) the use of cognates: associating L₂ words with similar looking / sounding words from the first language (L₁);
- (ii) the recall of the context in which a word was first encountered.

Their second study, involving vocabulary acquisition, gathered data via classroom observation and immediate retrospective accounts from learners as to how they dealt with vocabulary problems. As a result of this second phase, Cohen and Apek suggest that some of the reported vocabulary acquisition strategies are **productive** (e.g., inferencing; using rules of lexical formation and structuring to create words), others are **less productive** (e.g., focusing on single words rather than using the surrounding text as a source of meaning; grouping L₂ words by sound alone), and finally some could be considered **neutral** (e.g., direct transfer of words from L₁; guesswork, which involves making up an original L₂ form).

O'Malley et al. (1985a, 1985b) describe a study which sought to determine the range of learning strategies used by beginning and intermediate high school ESL students for **specific language activities**. Data were gathered via student and teacher interviews, along with classroom observation. Results indicated that beginning level students tended to use particular strategies for certain language activities, while intermediate students found different strategies useful for other language tasks. This echoes Rubin (1987), cited in 2.3.2, who suggests closer examination of the different learning strategies used by different types of learner for different language tasks.

In addition, O'Malley et al. concur with Politzer's (1983) findings that along with greater proficiency in L₂ comes an increasing repertoire of strategies available - in particular the types of strategy that involve metacognitive control. The frequency of metacognitive strategy use reported by intermediate students in this study suggested a

high level of **metalinguistic awareness**, a feature defined by Gass (1983:277) as the ability "to think and talk *about* language" (emphasis original), thus encouraging direct L₁ / L₂ comparisons, and perhaps more self-monitoring and self-correction.

2.3.4 The extent to which learners can be trained in the use of learning strategies.

Since the focus of the present study is not on strategy training, passing reference only is made to reports on research done and on-going in this area: Bialystok (1983), O'Malley et al. (1985b), O'Malley (1987), Chamot (1987) and Oxford (1989). The last three references include conclusions regarding the implications of previous learning strategy research for strategy training, and the need for further research into the effects of strategy training on integrative language tasks such as speaking and listening, the refining of strategy training approaches, the importance of metalinguistic awareness, and the effects associated with specific strategies for particular tasks. Above all, as Rubin (1987) suggests, there is a need for studies that seek to validate the extent to which and the conditions under which strategies can enhance the performance of less experienced or less efficient learners. Abraham and Vann (1987) and Oxford (1989) point out that in planning strategy training, it is important to bear in mind the learner's background factors, since a programme that is effective with one type of learner might be totally inappropriate and counter-productive with another.

2.3.5 The relation between students' beliefs about language learning and the strategies they use.

As suggested earlier in 2.3.3, many researchers (O'Malley et al. 1985a, Rubin 1987, Oxford and Nyikos 1989) stress the importance of metacognitive alongside cognitive learning strategies to ensure learners' ability to plan, review, revise and

assess their learning, and thereby chart a course for future directions. Wenden's (1986a, 1986b, 1987) research in particular has focussed on what learners know about their L2 learning (their metaknowledge) and how they go about planning and regulating it. In her 1986a study twenty five adult advanced ESL learners at a university were interviewed using a semi-structured format. Statements about learners' metaknowledge were categorized under five headings: (i) **designating** (statement made about the language itself), (ii) **diagnosing** (learners' positive or negative assessment of their proficiency), (iii) **evaluating** (learners' assessments of the effectiveness of their strategy use), (iv) **self-analyzing** (learners' comments on both the context in which the learning is taking place, and their perceptions, positive and negative, of themselves as L2 learners), (v) **theorizing** (learners' beliefs about L2 learning). Important recommendations are made regarding the potential of learning strategy training:

- (i) that learner training not be limited to the teaching of a repertoire of useful strategies;
- (ii) that L2 learners be encouraged to explore their beliefs about their learning and the possible implications for their own learning approach;
- (iii) that L2 learners become more critically aware of and informed about language in general in order to be more adept and creative in their use of newly acquired learning strategies.

The implications of this study, therefore, are that in increasing learners' awareness of the nature of the language task at hand, learners may gain greater control over their own learning and thus become more autonomous. (cf. Wenden 1986b, 1987, Holec 1987)

2.4 Reception Strategy Research

Before any learning strategies may be applied to a language learning task, the learner has to have comprehended the input. Studies in reception strategies have focussed mainly on strategies involved in reading, with some research concentrating more specifically on lexical problems. (Faerch, Haastруп and Phillipson 1984; Glahn 1980)

More commonly mentioned reception strategies used by learners to access meaning are:

- (i) inferencing (Rubin 1975, 1981; Stern 1975; Bialystok and Frohlich 1977; Bialystok 1978, 1983; O'Malley et al. 1985a),
- (ii) monitoring (Rubin 1975, 1981; O'Malley et al. 1985a), and
- (iii) using surrounding language context or general world knowledge (Bialystok and Frohlich 1977; Bialystok 1978, 1983; Rubin 1981; O'Malley et al. 1985a)

Research into reception strategies for reading has in the past taken one of two forms:

- studies that seek to describe the reception strategies in play during the reading task;
- studies characterized by some type of intervention where the researcher is attempting to discover whether the use of a particular reception strategy improves comprehension.

2.4.1 Descriptive studies of reception strategies.

Hosenfeld (1977, 1984) reports on the reading strategies of both successful and unsuccessful ninth grade L₂ learners, obtaining data via a think-aloud type of introspection (cf. Manghubai 1987). Her findings echo the earlier list of commonly mentioned reception strategies - inferencing, monitoring, contextual / world knowledge. Results indicated that successful readers:

- (i) tended to read keeping the meaning of the passage in mind; that is, they built up a mental representation of the text in an increasingly greater detail and complexity;
- (ii) would skip words considered less important, or not essential for comprehension;
- (iii) would use contextual guessing to infer the meanings of unknown words, including using the title to initiate a "schema";
- (iv) tended to identify the grammatical function of words, be attentive to word order, recognise cognates;
- (v) would evaluate their thinking by assessing the appropriateness of their guesses: a metacognitive strategy.

On the other hand, unsuccessful readers did not build up such a "schema" of the text (cf. Carrell 1983, 1984), and for this reason, tended to lose track of the meaning of the whole passage. Their focus was on decoding short phrases or even translating word-by-word, giving each word equal weighting, so that the meaning of complete sentences tended to become lost. In addition, instead of using contextual clues to determine the meaning of new lexical items, poorer readers relied mainly on glossaries and dictionaries.

Block's (1986) study sought to provide a detailed description of the comprehension strategies used by nine students designated non-proficient readers in English - six of whom were ESL students, with the remaining three being native English speakers. The subjects were asked to "think aloud" while reading two passages. Amongst the reception strategy types listed, Block (1986: 472-3) mentions in her coding system:

- (i) "anticipate context" by predicting the story-line or schema of the passage
- (ii) "integrate information: the reader connects new information with previously stated content" (cf. Hosenfeld 1977, 1984);
- (iii) "interpret the text" by inferring, hypothesizing, concluding about the content;
- (iv) "use general knowledge and associations";
- (v) "monitor comprehension" where readers assess the level of their understanding of the text, and "correct behavior" if / where necessary.

Findings in this study indicated considerable individual variation between poor readers in their approach to the task, and that non-native speakers were not distinguishable from native speakers by the pattern of their strategy use. What was clear was the existence of two consistent and distinctive patterns of strategy use, differentiated by the extent to which a reader integrated new information with previous information, was attentive to the text's structure, and used personal associations and experiences. The more able group, labelled 'integrators', is reminiscent of Hosenfeld's (1977, 1984) successful readers who tended to build up an increasingly complex picture of a text as they read.

Faerch, Hastrup and Phillipson (1984) set up a study with intermediate L2 learners who were required in groups to make "qualified guesses" about the meaning of

underlined unknown lexical items. Their conclusion was that lexical inferencing depends on three types of cues: (a) contextual, world knowledge, extralingual cues, (b) interlingual cues, where learners draw on their knowledge of L₁ and other languages, and (c) intralingual cues which are supplied by the L₂ itself.

2.4.2 Experimental studies of reception strategies.

This second area of reception strategy research is characterized by some type of intervention whereby the efficacy of a particular comprehension strategy may be evaluated.

Bialystok and Frohlich (1977), using Grade X students of core French, studied the role of inferencing for reading. Using four different cue conditions, they sought to determine whether learners were more able to infer meaning with the addition of supplementary information in the form of one of the four cues. Their results indicated that adding certain types of extra information to a French reading passage - in this case, a picture cue, or an explanatory sentence in English - improved comprehension of the text.

Bialystok (1983) attempted to establish the **effect** of providing certain types of information and skills on the comprehension of reading materials. Again, four different cue conditions were set up. The two cue conditions which improved comprehension were (a) the provision of additional information, and (b) a lesson on how to infer. This latter finding suggests the potential benefits of strategy training (cf. Section 2.3.4).

Glahn (1980) set up a study to determine communication strategies used when students encountered experimentally induced lexical problems. Some of his results dealing with the retrieval of information are equally pertinent to the investigation of reception strategies. Subjects made retrospective reports about the lexical items they could not retrieve in the L₂, and among the strategies reported were:

- (i) a retrieval strategy of just waiting for the meaning of the text to come to mind "out of the blue", without any conscious mental searching;
- (ii) a strategy involving some type of sensory association whereby a lexical item was retrieved by means of either visualising it and / or imagining it in the context of associated sensations.

2.5 Studies that Examine Strategies Involved in Cloze Testing Through Intro / Retrospection.

The cloze test has frequently been used by L₂ researchers to examine the reading behaviors and abilities of L₂ learners. The exercise involves the interplay of both reception and learning strategies in that the task of filling in the blanks involves a situation where the subject, confronted by a problem-solving situation, must choose a strategic plan of action in order to find a word that fits the context. Comprehension strategies alone may not be enough to successfully solve each item: learning strategies are needed as a second line of action in completing the task.

Two types of cloze procedures are possible: (i) the classical random cloze, and (ii) the rational cloze, where target words are selectively deleted. The second form of cloze allows for greater precision in fixing the types of items to be tested and for focusing on the different levels of text information processing that are involved.

Cohen (1984) reports on findings obtained from an unpublished study by Hashkes and Koffman (1982) in which 22 Grade XII ESL students and 4 native speakers answered questions immediately after doing a regular cloze test. Hashkes and Koffman's findings indicated that:

- (i) the majority of students (64%) most often sought a clue to the answer **within the sentence** containing the blank;
- (ii) the strategy of translating correlated with poorer scores;
- (iii) poor students were reluctant to guess; better students were prepared to guess, but most of these guesses (82%) were based on the immediate microcontext;
- (iv) a successful completion of the cloze test did not necessarily mean that students had understood the passage as a whole. Cohen (1984:75) suggests that this last finding substantiates recent opinion that cloze testing is "more of a measure of word and sentence-level reading ability than of discourse-level reading."

Finally, in comparing non-native and native strategy use, Hashkes and Koffman found that natives used the **context** extensively - notably by rereading sentences several times - much more so than most non-natives.

Cohen's conclusion regarding the value of cloze testing is that students need to be taught how to do it, in particular to give special attention to the use of preceding and following sentences, in order to build up a more complete picture of the passage. (cf. Hosenfeld 1977, 1984; Block 1986). He also recommends teaching the technique of contextual guessing – inferring – a strategy already much stressed in earlier sections. (cf. Bialystok 1983)

Abraham and Vann (1987) examined the strategies of two ESL students, one successful, one unsuccessful, in a study involving observation, think-aloud during task performance, and verbal report of L₂ metacognitive behaviors. While the focus of the study is on the background factors that influence strategy use and potential for success in L₂ learning (cf. Oxford 1989; Oxford and Nyikos 1989), nonetheless the analysis of the think-aloud cloze task strategies is of interest. Bearing in mind the limited validity of research based on two case-studies, results indicate clear differences between successful and unsuccessful subjects' strategy use. The better performer was characterized in the cloze test as:

- (i) using more and a greater variety of strategies;
- (ii) spending more time on task;
- (iii) using more monitoring strategies, such as rechecking;
- (iv) using more inductive strategies, based on clues in the preceding context;
- (v) using more deductive strategies in which syntactic structure analysis is involved.

Differences of **approach** are also highlighted, the more able student being seen as concerned to achieve **grammatical correctness**, and also being more flexible in using strategies, in particular in being able to match the choice of strategy with the demands of the task.

MacLean and d'Anglejan (1986) describe a study that investigates how readers make sense of text within and across languages. Using a combination of rational cloze and retrospective verbal reporting, they examine not only how well readers create and shape meaning in L₁ and L₂, but also what strategies they use in accomplishing this, and what effect text difficulty has on L₂ reading strategies. Twenty one advanced ESL

native francophones were asked to write immediate retrospections for some specific deletions in four different cloze passages (easy L₁, hard L₁ , easy L₂, hard L₂). Deletions in the rational cloze were selected on the basis of the **functions** of the targeted lexical items, and also with regard to whether a reader would need to stay **within the sentence** or move **beyond the sentence** to gain information necessary to fill the blank.

Results indicated that learners were less able to make effective use of both within sentence and beyond sentence information when reading in L₂ texts than when reading in L₁. This L₂ learner difficulty in using contextual clues beyond the sentence level corroborates Hashkes and Koffman's (1982) findings. MacLean and d'Anglejan suggest that subjects' difficulty in using within-sentence information on the L₂ texts would vary according to the level of their L₂ proficiency, a notion that echoes Politzer (1983) and O'Malley et al. (1985a, 1985b)

Other pertinent findings relate to unsuccessful strategies adopted by subjects, which compare very closely with Abraham and Vann's (1987) characterization of their poorer learner:

- (i) ignoring explicit test information in favour of personal opinion or experience to fill a blank;
- (ii) a major reliance on the word / phrase immediately before or after the blank as a clue to completing the task.

Finally, while cautioning that cloze-test texts must be chosen with great care, MacLean and d'Anglejan conclude that besides surface level text difficulty, the factor of subjects' prior knowledge - both L₂ proficiency and experience as well as their general

knowledge of the world around them - will considerably influence their ability to perform this type of reading task.

Feldmann and Stemmer (1987) report on the introductory phase of a study that seeks to investigate what a C-test really measures. While the C-test differs from the modified cloze procedure in that the initial letter or letters of a deletion are supplied, thus providing information that is absent in the cloze, nonetheless the study has relevance in that it attempts to identify the types of strategies used on this very similar task.

An analysis of the transcribed 'think-aloud'/retrospective protocols of 20 L₂ learners revealed that an incomplete item was recovered in one of two ways: (i) by automatic retrieval, where a response came without apparent thought from the subject; and (ii) by non-automatic retrieval, where subjects used recall strategies in attempting to retrieve an item, and subsequently, sometimes, evaluation strategies that assessed the appropriateness of their response. Feldmann and Stemmer then provide a list of specific problem-solving behaviors so far identified from their protocols as being used by subjects on this task. While some of the types of recall strategies listed are not relevant to the modified cloze procedure, nonetheless they do mention others that seem likely to be important for cloze: structural analysis; repetition of preceding / following word(s); translation to L₁; looking for the L₁ equivalent of the missing item; looking for the general meaning of the text. In addition, they provide a list of evaluation strategies that include checking the meaning of an item via L₁, checking on the form of an item via structural analysis, and checking on the sound of a possible response. Information on the frequency with which the strategies occurred and the quality of the strategies used is not provided, however, since this phase of the study was still in progress at the time of writing.

Vann and Abraham (1990) report on a study which undertook a detailed analysis of the strategies used by two unsuccessful L₂ learners as they completed four activities, including a cloze passage. An analysis of the 'think-aloud' protocols obtained revealed counterevidence for the claim made by Wenden (1985:7) that "ineffective learners are inactive learners." The two unsuccessful learners in Vann and Abraham's study emerged as active strategy users, although their strategies were often not used appropriately. Further evidence was offered, in support of an earlier finding (Abraham and Vann, 1977), that different approaches are used by different learners, even within the less successful subcategory. Finally, the researchers emphasized the importance of the case study approach in verifying earlier assumptions made about L₂ learning, since it provides such a detailed "microanalysis of learner behavior on varied tasks". (Vann and Abraham 1990:192)

2.6 Implications for this Study.

The preceding review of research into learning and reception strategies has allowed us to identify some key assumptions that have a bearing on the present study.

- (i) It may be **groups of strategies** rather than single, specific strategies that guide us toward being able to make recommendations for improvements in strategy training for a particular task. (Wesche 1979; Rubin 1987; Manghubai 1987; Oxford 1989)
- (ii) It may be the **quality of strategy use** rather than the quantity of strategies employed, or even the particular strategies chosen that determine the success of the problem-solving. (Manghubai 1987; Vann and Abraham 1990)

- (iii) Strategies may be **task / goal specific** (Bialystok 1979; Politzer and McGroarty 1985). This notion is fundamental to the present study, since the specific task of completing a cloze-test is being investigated. The studies into reading and cloze-testing examined in this brief research history reveal a distinct pattern of characteristic successful strategies associated with this task:
- (a) inferencing / contextual guessing / inducing
 - (b) monitoring / deducing / assessing / correcting
 - (c) building up meaning using the surrounding language context as well as general world knowledge to develop an increasingly complex and complete mental representation of the passage.
- (iv) Strategies may be **methodologically specific** (Politzer 1983; Politzer and McGroarty 1985). The type of pedagogical approach taken in selecting tasks or testing methods (e.g., which competence is targeted, communicative or linguistic?) will determine and affect the types of strategies in play. Thus, in the present study where the task targets comprehension and linguistic competence, one may assume that strategies required for and contributing to communicative competence may not be in evidence.
- (v) Strategies may be **learner specific** (Politzer and McGroarty 1985; Abraham and Vann 1987; Vann and Abraham 1990). The implication here is that one must beware of considering strategies as necessarily universally valid or useful to all learners, and of believing that strategies used by successful learners will be absolutely helpful to the less able ones. There may be different complexes of strategies, different sorts of approach, that suit different types of learners, as Abraham and Vann (1987:98) suggest.

The question of how information about strategy use is best gathered receives much attention in these studies also. Possible data gathering procedures for the present study were considered in detail and are discussed in the light of previous research in the following chapter.

CHAPTER 3

METHODOLOGY OF THE STUDY

Using a case-study approach, the researcher attempted to identify and analyse the learning and reception strategies used by three successful and three less successful first year university French learners as they completed a modified cloze exercise. (See Appendix A.) The specific passage was devised to test grammar points and vocabulary items covered in French 1050 - 1051. Some potentially unknown words were also included in order to investigate how subjects would cope with this additional problem. The study then involved a diagnostic analysis of strategies used and attempted to relate strategy use to attainment in L₂.

3.1 Subjects

The study involved six university students enrolled in first year French (1050 - 1051) at Memorial University of Newfoundland. A minimum final result of 75% in high school French is required for entry into this programme. Subjects were selected into the 'successful' or the 'less successful' group on the basis of the marks received in a similar modified cloze test in the 1050 examination. Scores in the successful group ranged from 75% - 70%, with a mean score of 71.66%. In the less successful group, scores ranged from 45% - 30%, with a mean score of 40%. In addition, final marks for the 1050 course were consulted: all three successful subjects received an A grade (80%+) while all three less successful subjects received a C grade, with a score of 55%. All subjects were female, enrolled in French 1051 at the time of the study, and had similar previous experience in French at high school (the core French programme, rather than immersion or extended programmes).

The investigator informed prospective subjects of their freedom to decline to participate in, or withdraw from the study at any time. At the outset, subjects were informed about all aspects of the research, and were assured that all data gathered during the study would remain confidential. (These documents are contained in Appendix C.) Names of the subjects were removed from the data-collection instruments and replaced by code-names.

3.2 Data Collection Procedures

(i) Discussion of possible methods

Information on learners' strategies in L₂ learning has been gathered, in the past, in three different ways:

- (a) **Classroom Observation.** This procedure has been found by previous researchers to be inadequate for identifying learner-generated mental strategies. (Naiman et al., 1978; Rubin 1981; Chamot 1987)
- (b) **Written Self-Report.** As referred to earlier in the review of the literature, Rubin (1981), Politzer (1983) and Politzer and McGroarty (1985) express reservations about the reliability of using self-report data alone in studies investigating the relationship between student strategy use and achievement.
- (c) **Verbal Report Data.** In order to gain information on the conscious mental processes engaged in by L₂ learners, researchers since the mid 1970's have used three basic types of verbal report data. Cohen (1987) refers to these categories as "self-report", "self-observation", and "self-revelation".

Self-Report refers to learners' accounts of what they do and how they believe they learn: in particular what learning strategies they employ in dealing with problem-solving situations, (e.g., "I usually look up all the words I don't know first, using a dictionary.") It also refers to learners' generalizations about themselves as L₂ learners. (e.g., "I'm not very gifted for languages.") Such statements are often not based on the recollection of a particular event or situation, and as such would not provide reliable data on strategies actually **used** unless corroborated by data from another source. (cf. Politzer 1983; Seliger 1983; Politzer and McGroarty 1985)

Self-Observation refers to reports that learners make about specific **language** behaviors they have engaged in while completing a task. The self-observation is described as **introspective** if the information is reported while still in short-term memory, and **retrospective** if the learner has to retrieve the information from long-term memory. (Cohen (1987) suggests that this would be any time after 20 seconds has elapsed.) In evaluating this type of verbal report category, there seems to be a consensus among some researchers (Cohen and Robbins 1976; Cohen and Aphek 1981; Cohen and Hosenfeld 1981; Cohen 1987) that **retrospection** is more effective if done **immediately** after a class, rather than perhaps a day later, and that basically the accuracy and quality of self-observational data depends on the time-lapse involved. In addition, Ericsson and Simon (1980) have suggested possible weaknesses in the process of **introspective** reporting: data may be incomplete, and subjects may be reporting what they think they might or should have done. As with **self-report**, data from another source would increase the completeness and reliability of the data gathered by this procedure.

Self-Revelation refers to a " 'think-aloud' stream-of-consciousness disclosure of thought processes while the information is being attended to", where the data are "unedited and unanalyzed" (Cohen 1987:33). One might assume that this method has potential as a reliable window on (a) the thought-processes of the L₂ learner, (b) the information being attended to by the subject, and (c) what the latter subsequently does with it. However, as in the case of **self-report** and **self-observation**, the reliability of **self-revelation** is enhanced if used in combination with either or both of the other types of verbal report.

(ii) Procedures for this study

The subjects were asked to **think aloud** in English while completing a modified cloze exercise. During this time, the researcher intervened with **probing / clarifying questions** only where necessary, to ensure reports that were as complete as possible. Immediately after the think-aloud session, subjects were asked to do an **immediate retrospection** on the strategies or thought processes that seemed to them to have been most useful and effective in dealing with this particular problem-solving task. The complete session was audiotaped. Copies of these tapes are included as Appendix D.

(iii) Special care considerations in collecting verbal report data

Grotjahn (1987) points out that a major problem associated with the use of the types of introspective methods discussed earlier lies in the fact that the data thus gathered are entirely **verbal**. Such verbal data have then to be described and interpreted by the researcher, both in terms of the actual content therein - what it

represents - and also in terms of its possible meaning. The procedure is thus highly subjective and susceptible to validity problems. While Grotjahn (1987) recommends that researchers attempt to ensure a **valid** representation of what the verbal reporting consists of, and also a **valid** interpretation of its intended meaning, he concludes that:

"The attempt to ensure the validity of introspective data is very often extremely time consuming and results in immense amounts of data that can hardly be evaluated in any detail within a small research project." (p. 71)

The present study has attempted to ensure validity through the adoption of a two-prong approach to data-gathering (concurrent think-aloud followed by immediate retrospection). However, the project is still highly reliant on the particular interpretation of the researcher.

Cohen (1987) makes specific recommendations to researchers for the elicitation of good verbal report data. Referring to the work of Ericsson and Simon (1980), he advocates care in the use of probing questions, since it is possible thereby to lead a subject to a desired or expected response. (cf. Cohen and Hosenfeld 1981) In addition, in being asked to report verbally on information not as yet attended to, a subject might **infer** missing information or make **generalizations** based on incomplete memories. On the other hand, Cohen (1987) and Ericsson and Simon (1980) emphasize that failing to uncover **all** immediate and short-term memory information can equally result in faulty or incomplete data.

It would also appear desirable to ensure that subjects understand **how** they are supposed to report (Cohen 1987). Hosenfeld (in Cohen and Hosenfeld 1981:293) found that subjects who were supposed to think aloud "tended to describe how they had performed similar tasks, i.e., to retrospectively self-observe. Only with prodding

did they think aloud." However, this prodding would have to take place without planting the researcher's ideas regarding **what** they will report in the subjects' minds. There would therefore seem to be a fine line between providing enough pretraining and specific instructions regarding mentalistic reporting in order to ensure reliable data, and providing so much that subjects feel overwhelmed and inhibited.

The present study attempted to implement Cohen's (1987) recommendations:

- (a) Subjects were informed about how they were supposed to report: they were instructed to say everything they thought or felt while filling in the blanks. Then, they were given practice sessions in verbalizing thoughts as they flowed, in order to familiarize them with the task and to make sure they had understood everything correctly.
 - (b) Subjects were encouraged to think aloud immediately, rather than think, and then report retrospectively on the thinking that had happened.
 - (c) Subjects were asked to think aloud whenever there was a long silence.
 - (d) Subjects were asked carefully worded probing questions whenever the investigator felt that there had been incomplete verbalization.
 - (e) Subjects were encouraged after the think-aloud session to draw conclusions about their own strategic approach.
- (iv) Other data collection factors

The data were collected by the researcher, in her office, during an audiotaped session with each individual subject. Having conducted a short series of trial tapings, and bearing in mind Manghubai's (1987) finding that subjects reported some strain if

think-aloud sessions exceeded thirty-five minutes, sittings lasted between thirty and forty minutes. However, if necessary, more time was allowed.

3.3 Data Analysis

The recorded verbal report data were transcribed literally so that a written transcription of about 15 pages for each subject was obtained. These transcripts were then analyzed for learning / reception strategy use by means of the general scheme of cognitive learning / reception strategies found in Appendix B. This coding procedure is based on schemes proposed by Rubin (1981, 1987) and by Abraham and Vann (1987). It also incorporates aspects of Manghubai's (1987) coding procedure. The learning/reception strategies identified as being used by learners, when working on the modified cloze procedure (See Appendix A) were then compiled within this framework.

A profile of each subject's strategy use was subsequently drawn up, giving a detailed description which includes the total number of strategies used, the frequency of use of each strategy, and the distribution of use among the various categories of strategies. Strategy use between the two groups was then examined in order to determine whether successful learners can be differentiated from less successful learners on the basis of the frequency of occurrence and the quality of exhibited behaviors while completing the cloze test. Finally, strategy use among successful learners was analyzed in order to search for any consistent patterns or groups of strategic behaviors that appeared to enhance performance on this task.

CHAPTER 4

ANALYSIS OF THE DATA

The results obtained in the study are presented and organized as responses to the four research questions set out in chapter 1 (Section 1.4).

4.1 **What Behaviors do Successful and Less Successful Learners Engage in when Completing the Modified Cloze Procedure?**

Firstly, it was clear that all learners, whether successful or less successful, used all five of the categories of learning / reception strategies listed in Appendix B. Each subject at least occasionally clarified or verified their understanding (A), monitored form or comprehension (B), inferred meaning (C), made deductions via grammatical / morphological rules (D), and repeated words or phrases to assist in the retrieval of an item (E). This finding, which echoes the results of Vann and Abraham (1990), supports their contention that it may be erroneous to consider that all less successful subjects are "inactive learners" and that their lack of success is due to the absence of "an appropriate repertoire of learning strategies". (Wenden 1985:7)

In addition, it was found that there were basically two ways for a blank to be filled: (i) automatically, or (ii) by the use of problem-solving strategies.

4.1.1 Automatic responses:

When a blank was completed instinctively, the missing word appeared to jump into the blank without any apparent reflection on the learner's part. For example,

subject Paula read continuously through Blank 4, ('mais chaque ____ qu'il fallait...'), supplying the required word *fois* with no hesitation and immediately going on to the next section. In addition, when asked by the researcher to explain their behavior, characteristic responses were: 'It just came... that's what should be there', and 'That's just kinda an instinct.' These findings corroborate Feldmann and Stemmer's (1987) analysis of the retrieval process involved in C-test taking, where they distinguish between 'automatic' and 'non-automatic' retrieval of an incomplete item. Thus, while instinctive responses do constitute behaviors engaged in by learners when completing this task, they do not provide information on strategy use, since no problematic situation appears to be encountered in these cases.

A second type of automatic response was also assessed to be present in the behaviors engaged in by subjects. Once again, there was no discernable strategy use in the retrieval of these items. The responses, while coming 'out of the blue' as with the earlier type of response, seemed more akin to wild guesses of a hit or miss nature rather than responses that were the product of a deeper intuition. Examples include:

'Et puis... et puis qui?' [Blank 16: moi*]

'the professor, he put . avec rire?' [Blank 20: à]

[* = CORRECT RESPONSE(S)]

In most cases these items were then evaluated and accepted or rejected by the subject. In the case of rejection, subjects sometimes followed up with second attempts at filling the blank in much the same manner. This 'shot in the dark' type of approach, while not showing signs of reflection in the production of an item, nonetheless did seem to be used subsequently in a process akin to trial and error, a 'process of elimination', as one subject put it.

Finally, in the analysis of automatic responses, it was found that while clear examples of intuitive/instinctive responses as opposed to 'hit or miss' responses existed in the data, nonetheless it was not always easy to distinguish categorically between the two types, as the following example shows:

'Mais alors..l'imparfait, l'imparfait, comment est-ce qu'on va exprimer la durée, l'action qui continue? OK.' [Blank 15: sans]

The subject may be deemed to be reacting intuitively here, or to be trying out a possible response, or to be doing both things at the same time. All that can be said with certainty is that the response is automatic, that the subject gives no indication of conscious reflection prior to the production of the item. It might therefore be most useful to think of automatic responses on a continuum, ranging from purely intuitive to 'shots in the dark', with considerable variation of interpretation possible in between.

4.1.2 Non-automatic responses

When subjects were unable to fill in blanks automatically, they found themselves in a problematic situation, necessitating the use of problem-solving behaviors. Like Wendon (1987:3), we feel that strategic behavior is triggered when there exists "a gap between ... need and linguistic repertoire", and that strategies are "potentially conscious plans for solving what to an individual presents itself as a problem in reaching a particular ... goal." (Faerch and Kasper 1983:36)

The following list of behaviors which details the strategies so far identified, should be considered open-ended and subject to modification. It represents those

strategies found to be used by six subjects while working on one example of the cloze task.

The general strategy coding system adopted for this study is based on schemes developed by Rubin (1981, 1987) and by Abraham and Vann (1987), with the inclusion of an additional strategy category – repetition for retrieval – as suggested by Manghubai (1987). The sub-categories within the five main strategy types (A,B,C,D and E) were, however, largely developed during the course of this study, to reflect and describe more specifically the behaviors engaged in by the subjects. The fully elaborated coding scheme is provided in Appendix B.

Strategy Inventory

A. Clarification / Verification of meaning / understanding

A1. Translates into L₁ words directly preceding and/or following the blank.

e.g. 'but then something the imperfect, how is it that they're going to express, yeah, an action that continues?' [Blank 15: sans]

A2. Seeks overall schema (by scanning / skimming through a number of blanks).

e.g. 'Il a expliqué que l'Académie française, Académie française venait..venait ____ décider ____ éliminer soit le passé composé soit l'imparfait afin de simplifier l'apprentissage ____ français comme langue seconde. OK.' [Blanks 11, 12, 13: de, d', du]

A3. Reads through the single blank, in L₂, to establish context.

e.g. 'Il était une fois un groupe, un groupe ____ étudiants qui essay...' [Blank 1: d']

B. Monitoring / Evaluating: focus on form and comprehension (cognitive and metacognitive strategy use).

B1. Vocabulary

e.g. 'So I think I would leave in...cha..OK fois, each time, I'm thinking 'temps' isn't time.' [Blank 4: fois]

B2. Grammar / Morphology

e.g. 'I don't know which pronoun you put in there to take in le passé composé and l'imparfait.... I'd probably put l'apostrophe here, or maybe I should put l.e.s. there, 'cos it's talking about two of them.' [Blank 5: les]

B3. Sound: tests a possible answer, or a number of options, for sound.

e.g. 'Ils commençaient ... it's either 'commencer à' or 'commencer de' I think. Um. I'll try 'commencer à' ... Ils commençaient à douter.' [Blank 7:à]

[Interviewer: 'What made you go for one over the other?']

'I dunno, it just sounds better, I think.'

- B4.** Specific meaning (i.e., checks the appropriateness of the possible answer often by translation to L₁).

e.g. 'I believe ...croire... I believe, je croyais que, that the role, que, the role of the Academy.' [Blank 18:que]

- B5.** General meaning (i.e., checks overall comprehension of the text / parts of the text.)

e.g. 'Now I'm confused because I don't understand... what ... without the imperfect, how is one going to express action that continues. I thought they were eliminating the passé composé. Maybe they're doing both. Now I'm trying... so like I'm going to go back and try and figure out what it's all about.'

C. Inductive inferencing.

- C1.** Infers L₁ meaning equivalent of missing word and translates (or tries to translate) it into L₂ .

e.g. 'They understood well the difference between ... entre le passé composé and the imperfect.' [Blank 3: entre]

- C2.** Infers meaning of unknown word from cognate in L₁ or L₂ .

e.g. L₁ 'apparement. All I can get from that is apparently.'
[Unknown word: apparement.]

e.g. L2 '..embrouillait ... wait now ... I don't know ... um ..
brouiller(?) ... I think is something like 'fog', so ... to like fog
your mind or whatever, so maybe it's something to do with that,
in their heads, or they're confused or something.' [Unknown
word: s'embrouillait.]

- C3. Infers meaning of unknown word from context and other clues (e.g.,
situation, text structure, personal relationships, topic, world
knowledge.)

e.g. 'Um .. to simplify .. I think .. I'm not sure, but it seems like it'd
be something like ..the use? of French maybe, as a second
language, or the learning of French as a second language?... It's
somewhere around the general idea, something like that, I think.
That's what it seems like, seems to be from what everything else
in the sentence is talking about.' [Unknown word:
apprentissage.]

- C4. Infers answer on the basis of its sound.

This strategy is different from strategy B3 (monitoring and evaluating
the sound of a possible answer) in that C4 is a primary, problem-
solving retrieval strategy based on the sound of the proposed response;
on the other hand, B3 is a back-up strategy in which the response is
evaluated on the basis of the appropriateness of the sound of the
possible answer.

e.g. 'Il était une fois un groupe .. um .. un groupe d'étudiants.

Sounds, sounds OK, that one.' [Blank 1: d']

C5. Failed attempt to infer meaning.

e.g. (from cognate) 'The imperfect, OK to simplify ..OK maybe, the language of French, or something .. to simplify .. first I'll try to see if I can compare it to anything English ..mm .. presentation maybe, or .. I don't know, prestige?' [Unknown word: apprentissage.]

e.g. (from context) 'I believe that the role of this .. I get protéger .. to change the French language I think probably.' [Unknown word: protéger.]

D. Deductive inferencing

D1. Uses syntactic / morphological knowledge.

e.g. '...n'arrivait vraiment .. résoudre cette difficulté ..well obviously there's a subject that belongs in there, and I think it might be on because it's ... it's .. a.i.t., so .. I know the first part you've got 'ils commençaient' in the plural, but down here, a.i.t. is third person singular .. so perhaps it's on.' [Blank 8: personne / rien]

D2. Classifies.

e.g. 'the reaction was .. the reaction didn't make .. didn't make .. I don't understand that. It must be some kind of expression.'
[Unknown expression: ne s'est pas fait attendre.]

E. Repetition for retrieval.

E1. Repeats word(s) in L₂ while searching for its / their meaning.

e.g. 'Le professeur s'est mis .. that means something. I can't remember what it is ..s'est mis?' [Near blank 20.]

E2. Repeats L₁ translation of text immediately preceding and/or following the blank.

e.g. 'He announced the news, the new .. what's new? What's this new supposed to be qualifying? .. oh, what new .. new thing?, new something, apparently had made the headlines this morning.' [Blank 10: qui]

E3. Repeats in L₂ the known word(s) immediately preceding and/or following the blank.

e.g. 'il a annoncé la nouvelle .. la nouvelle .. something .. um .. il a annoncé la nouvelle _____ apparemment avait fait les manchettes.' [Blank 10: qui]

As mentioned earlier, this list of strategies identified in the protocols of the subjects while working on the modified cloze exercise is an open-ended one. It represents what the researcher has been able to isolate and classify as separate types of learning / reception strategies used by subjects on this particular task.

4.2 Can Successful Learners be Differentiated from Less Successful Learners on the basis of the Frequency of Occurrence of certain Behaviors they Exhibit?

In this section, we will examine the **frequency** with which learners used certain behaviors while completing the task, in order to investigate whether successful learners can be differentiated from less successful learners on this basis.

4.2.1 Automatic responses

Performance and frequency of automatic responses amongst the six subjects are summarized in Table 4.1. No attempt was made to differentiate between truly intuitive responses and 'shots in the dark', since, as mentioned earlier, (4.1(i)), it is difficult to distinguish accurately between the two in many cases.

The data in Table 4.1 provide no indication that frequency of use of automatic response by a subject is necessarily a predictor of eventual success at this task. In fact, Jane, a successful subject, reacted automatically only four times while completing the exercise, which represents a mere 2.42% of her overall identified behaviors.

Table 4.1: Performance and Frequency of Automatic Responses

	Successful			Less Successful		
	Louise	Paula	Jane	Denise	Vera	Carol
Overall Score /20	17	17	16	10	7	8
Total of Automatic Responses (T.A.R.)	8	15	4	8	9	5
Total Responses (T.R.)	161	138	165	159	154	134
T.A.R. as % of T.R.	4.97	10.90	2.42	5.03	5.84	3.73

4.2.2 Non-automatic responses

Performance and strategies used by the six subjects while completing the task are summarized in Table 4.2.

In looking at the learning / reception strategies used by successful and less successful learners on this task, it was found that the overall totals of strategies identified did not allow for a differentiation between the two groups. This finding is consistent with the results of Vann and Abraham (1990) who found that some unsuccessful learners, in this case, subjects Mona and Shida, used a relatively large number of strategies, many of which were the same as those used by successful learners.

Table 4.2: Performance and Learning / Reception Strategies used on Task

	Successful			Less Successful		
	Louise	Paula	Jane	Denise	Vera	Carol
Learning/Reception Strategies						
A. Clarification/Verification						
A1	19	7	20	16	19	18
A2	5	0	1	6	4	0
A3	9	18	0	8	6	5
Total	33	25	21	30	29	23
B. Monitoring/Evaluating						
B1	1	0	0	0	5	0
B2	9	9	11	5	8	11
B3	34	26	28	13	8	3
B4	21	30	32	28	28	26
B5	4	1	2	3	9	1
Total	69	66	73	49	58	41
C. Inductive Inferencing						
C1	12	1	25	19	8	21
C2	1	0	0	0	3	1
C3	6	4	6	2	3	3
C4	5	1	2	2	0	0
C5	1	0	3	4	6	4
Total	25	6	36	27	20	29
D. Deductive Inferencing						
D1	10	11	17	17	21	18
D2	1	2	0	0	0	0
Total	11	13	17	17	21	18
E. Repetition for Retrieval						
E1	3	0	2	4	1	0
E2	2	0	9	17	9	13
E3	10	13	3	7	7	4
Total	15	13	14	28	17	17
Total of Learning/Reception Strategies	153	123	161	151	145	128

Comparison of strategy use by category is, however, more illuminating in differentiating between the two groups. While the totals for categories A (Clarification / Verification), C (Inductive Inferencing) and D (Deductive Inferencing), as well as the subtotals within the sub-categories, provide no clear distinction between the successful and the less successful group, data from the remaining categories do indicate to a certain degree some differences between the two groups, as well as some similarities.

All subjects used more monitoring / evaluating strategies than any other type. (Table 4.3 indicates in percentage terms the frequency of use of each of the five strategy categories.) This finding underlines the importance of assessing and checking answers with this task. Comparisons within category B (i.e., monitoring / evaluating), however, disclose important differences too. Firstly, the overall totals of B-type strategies for successful subjects are consistently greater than those for less successful subjects. This suggests that the frequency of use of monitoring / evaluating strategies contributes to some degree to success on this task, a finding that substantiates Politzer's (1983) conclusions. However, it is interesting to note that less successful subject Vera, who was identified to use monitoring strategies 58 times, went on to achieve a score of 7/20, while successful subject Paula used B-type strategies 66 times and went on to achieve a score of 17/20. It would appear therefore that frequency of overall B strategy use alone is not a stable predictor of success or failure. Nonetheless, among the different types of monitoring strategies identified, there does seem to be one sub-category – B3 (monitoring the sound of a possible answer) – where frequency of strategy use differed markedly from one group to the other. Subjects who were more prepared to evaluate answers on the basis of their sound were more successful overall at this task. This finding suggests that learner proficiency levels – in this case, the development of an ear for what 'sounds right' in the L₂ – may suggest the strategies

available and beneficial to the learner, as Politzer (1983) concluded, and that the development of this auditory competence is a particularly rewarding one.

Table 4.3: Frequency of Use of Strategy Categories in Terms of Percentage

	Successful			Less Successful		
	Louise	Paula	Jane	Denise	Vera	Carol
Total Strategies Used (=100%)	153	123	161	151	145	128
A (%)	21.57 ²	20.32 ²	13.04 ³	19.87 ²	20.00 ²	17.97 ³
B (%)	45.10 ¹	53.66 ¹	45.34 ¹	32.45 ¹	40.00 ¹	32.03 ¹
C (%)	16.34 ³	4.88 ⁵	22.36 ²	17.88 ⁴	13.79 ⁴	22.66 ²
D (%)	7.19 ⁵	10.57 ³	10.56 ⁴	11.26 ⁵	14.48 ³	14.06 ⁴
E (%)	9.80 ⁴	10.57 ³	8.70 ⁵	18.54 ³	11.72 ⁵	13.28 ⁵

[NOTE: THE SMALL SUPERSCRIT NUMBER IN THE BOXES REPRESENT THE RELATIVE ORDER OF FREQUENCY OF USE BY EACH SUBJECT, WITH 1 INDICATING THE MOST FREQUENT AND 5 INDICATING THE LEAST FREQUENT.]

In the final category, E (Repetition for Retrieval), it was found that less successful subjects used repetition strategies more than the successful group. Frequency of E-type strategy use seems, however, less an indicator of eventual achievement on this task than a measure of the degree of problem encountered by the subject in understanding parts of the text. All three less successful subjects had more comprehension difficulties while completing the task, and this is reflected in their higher tallies of E strategy use.

While the data on subjects' frequency of strategy use yields some information on the differences between successful and less successful learners and some indication of a particular strategy's usefulness on this task, nonetheless the frequency counts

contained in Table 4.2 fail to provide conclusive evidence of the value of this type of analysis **alone** in predicting a subject's success or failure. This finding supports the conclusions of Bialystok (1979), Manghubai (1987) and Vann and Abraham (1990) who suggest that simple strategy counts fail to explain the cause of a subject's success or failure. However, the patterns of strategy use demonstrated in the think-aloud sessions, and recorded in Table 4.2, do provide some clues that differentiate **types of learners** within and between the two groups.

It was noticed that successful subject Paula used translation to L₁ very little indeed as a problem-solving strategy (A1 and C1), preferring to use it as an evaluating strategy when monitoring and subsequently checking her answers (B4). It was therefore decided to do a supplementary analysis of all subjects' L₁ use on task to see if significant patterns predicting success or failure would result from such a procedure. The findings are recorded in Table 4.4.

Table 4.4: L ₁ -based strategy ¹ use						
	Successful			Less Successful		
	Louise	Paula	Jane	Denise	Vera	Carol
Total L ₁ -based strategies	54	38	86	80	64	78
Expressed as % of overall strategies used	35.29	30.89	53.42	52.98	44.14	60.94

(¹ L₁-based strategies = A1, B4, C1, E2)

In contrast with Hashkes and Koffman's (1982) finding that the strategy of translating correlated with poorer scores, Table 4.4 suggests that problem-solving and evaluation strategies based on L₁ can lead to a good score on this task (see Jane's L₁

strategy tally). The data here are consistent with the notion put forward by Politzer and McGroarty (1985) and by Abraham and Vann (1987), that different sorts of approach suit different types of learners – with four out of six learners relying heavily on L₁ – but that the use or non-use of L₁-based strategies does not predispose a learner to being successful or non-successful. As we shall discuss in the following section, this suggests strongly that it is the **quality** of L₁ strategy use that is the key.

The second interesting pattern that becomes clear from Table 4.4 is that the two subjects, Louise and Paula, who rely considerably less on L₁-based strategies than all the other subjects, are successful at this task. Analysis of their protocols suggests that these two learners use L₁ considerably less than the other learners because they are able to function and solve problems in L₂ with relative ease. It was therefore thought useful to do a second supplementary analysis, this time investigating the frequency of use of L₂-based strategies. Table 4.5 records these findings.

Table 4.5: L₂-based strategy¹ use						
	Successful			Less Successful		
	Louise	Paula	Jane	Denise	Vera	Carol
Total L ₂ –based strategies	58	58	33	30	21	12
Expressed as % of overall strategies used	37.91	47.15	20.50	19.87	14.48	9.38

(¹ L₂-based strategies = A3, B3, C4, E3)

In Table 4.5, as previously in Table 4.4, a clear differentiation between two 'types of learner' is apparent on the basis of L₂ as well as L₁ strategy use. Subjects Louise and Paula, who rely significantly less on L₁-based strategies than other

subjects (Table 4.4), rely significantly **more** on L2-based strategies than the other four learners (Table 4.5). As suggested earlier, different approaches suit different types of learner: subjects who are perhaps more proficient in or at ease with reading and hearing L2 are able, then, to use L2 to solve more problems.

Finally, the data contained in Table 4.5 lead one to consider whether a high frequency of L2-based strategy use might be a predictor of success. Once again, due to the small number of cases investigated in this study, it is not possible to generalize with accuracy. The present data do suggest that reliance on L2-based strategies is useful on this task, since the two subjects, Louise and Paula, who use L2 strategies most, are ultimately successful on the cloze exercise. However, Abraham and Vann's unsuccessful subject Pedro, whose performance on a cloze test is characterized as being largely reliant on sound, contextual inferencing and the repetition of key words in L2 (1987:93) is an example of a less successful subject who relies heavily on L2-based strategies. It may, therefore, be that, once again, it is the **quality** of strategy use – in this case, the **quality** of L2-based strategy use – that discriminates between the successful and the less successful learner.

4.3 Can Successful Learners be Differentiated from Less Successful Learners on the basis of the Quality of certain Behaviors they Exhibit?

In this section we will examine the **quality** of the behaviors used by learners while completing the task, in order to determine whether successful learners can be differentiated from less successful learners on this basis. By 'quality', we mean, not whether the strategy leads to a correct response, although it may sometimes do so, but the coherence of the thought processes engaged in by a subject while attempting to deal

with a problem-solving situation. Factors affecting this quality might include a learner's overall L2 proficiency, the organization, focus and control of her strategy, and the clarity and coherence of her thinking.

4.3.1 Automatic responses

Since automatic responses, by earlier definition, occur without any apparent reflection on the part of the learner, then the quality of this behavior cannot be assessed by an analysis of 'thought processes engaged in. In order to investigate the quality of subjects' automatic responses, Table 4.6 was, therefore, devised to examine subjects' success rate when exhibiting this behavior.

Table 4.6: Performance, Frequency and Success-rate of Automatic Responses						
	Successful			Less Successful		
	Louise	Paula	Jane	Denise	Vera	Carol
Overall Score /20	17	17	16	10	7	8
Correct Automatic Responses	6	14	3	7	3	2
Incorrect Automatic Responses	2	1	1	1	6	3
Total Automatic Responses	8	15	4	8	9	5
% Success-rate	75	93.3	75	87.5	33.3	40

While it is clear from Table 4.6 that the three successful learners are consistently correct 75% or more of the time, it is also apparent that less successful subject Denise ranks with the successful trio in her performance on automatic responses. It would

appear, therefore, that with this type of non-strategic behavior, it is possible for correct automatic responses to come from less successful and from successful subjects. This is perhaps explained by the fact that most of these responses are intuitive / instinctive; they 'pop into' a blank automatically perhaps by accessing a level of language that has been acquired, as Krashen (1981) suggests, at the subconscious level. On further analysis of subjects' protocols, it was found that on the continuum, suggested in Section 4.1.1, between purely intuitive automatic responses and 'shots in the dark', quality of response (i.e., correctness in this case) decreased when subjects resorted to behaviors more akin to 'shots in the dark'. Subjects Vera and Carol, who had poor success rates on automatic responses (see Table 4.6), engaged more often in this 'hit or miss' type of behavior. Thus **quality** of automatic response – in this case, an ability to react **intuitively** – is clearly a crucial factor in this task. However, it is perhaps doubtful that such intuitive behavior can be taught to less successful subjects; it may be, as Politzer (1983) suggests, that such a competence only comes when a certain level of subconscious proficiency in the L₂ has been attained.

4.3.2 Non-automatic responses

In discussing the quality of subjects' strategic behaviors, we have chosen to cite examples of quality differences and their outcomes in order to investigate this question. We will consider examples from all five categories of learning / reception strategies, and attempt to discover whether quality of use does in fact affect performance on this task. The strategy types chosen for inclusion in this section are those that are used by all subjects at least once during the completion of the task.

A. Clarification / Verification

The main clarification / verification strategy used by subjects, except for Paula who preferred to solve problems in L₂, was A1 (translation into L₁ of words directly preceding and/or following the blank). During the course of the interviews, all subjects mentioned the primary importance to them of understanding the text in order to complete the task successfully, and for five out of the six subjects, this involved using translation quite extensively to get a start on problem-solving.

The quality of the translations arrived at, however, was extremely variable. Successful subjects, Louise and Jane, were more accurate in their A1 strategy use, frequently going back over their interpretations and refining their translations in order to gain a progressively clearer picture of the text's message.

e.g¹. "and something which had passed all .. which spent all the end of the week .. or all the weekend" [Blank 16: moi]

e.g². "to fix the date of the exam which was going to carry, ah yeah, going to be on the agreements, or the .. of the passé. Yeah, I never ever said agreements before, until then, of the passé .. or something, the tenses or something of the passé." [after Blank 20]

Less successful subjects Denise, Vera and Carol, while acknowledging the crucial importance of understanding the passage ("I've really got to understand what's there."), nonetheless tended to produce more incoherent, fractured L₁ versions of the text, which often failed to connect up and convey the overall meaning of the section

being worked on. Denise, for example, tended to rush her translation, paying inadequate attention to detail. This resulted in fractured and inaccurate L₁ translations which then failed to help the subject build up a detailed mental representation of the text.

e.g. "The reaction .. was made waiting for the professor, OK, was listening to .. the following, commentary following." [between Blanks 13 and 14]

Similarly, Vera approached A1 strategy use in a very fractured way, decoding word by word into L₁, and thus often failed to grasp the meaning of the complete sentence.

e.g. "In constantly the effect produced by something he came to announce began ..." [Blank 19: ce qu']

The procedure adopted by all three less successful subjects in translating to L₁ is well described by Carol in a short 'self-report' offered during a sequence of A1 strategy use:

"OK, arrived .. truly I know .. like, what I do, I break down, each word I translate it to English, and then I put it together as a sentence .. so right now I'm like, arriver is to arrive, and then vraiment is truly, à résoudre I don't know, this difficulty." [after Blank 8]

Despite their best efforts, however, what is often missing from each of the less successful subjects' repertoire is this ability to 'put it together as a sentence' and thus build up an increasingly detailed and complex picture of the text. This finding substantiates Hosenfeld's (1977, 1984) finding that unsuccessful readers' focus was

on decoding short phrases or even translating word-by-word, giving each word equal weighting, so that the meaning of complete sentences tended to become lost.

Thus, as one might expect, the quality of the translation to L₁ produced by a subject was major factor in its efficacy as a clarification strategy. Successful subjects Louise and Jane, and to a lesser extent Paula, who preferred to work in L₂, were able to use A1 strategies to build up a mental representation of the text in an increasingly greater detail and complexity.

B. Monitoring / Evaluating

As mentioned earlier, B-type strategies were used by subjects more often than any other category, with all three successful subjects using more of them than the less successful group. However, analysis of the protocols suggests that it is more the quality of monitoring / evaluating that predisposes a subject to success or failure rather than just frequency of use.

The strategy of monitoring and evaluating the grammar / morphology of an item (B2) was used by all six subjects while performing the task. As one might expect, however, the benefit of using this strategy depended largely on the way grammatical form, function and word-order were dealt with: it being a question of not merely identifying significant grammatical or morphological clues while evaluating a possible answer, but also of knowing how to use this information to lead to a correct conclusion. This finding corroborates Manghubai's (1987) contention that L₂ learners focusing on form should be developing their own understanding of the structure of the L₂ in order to be able to refine and renegotiate responses in the light of this heightened awareness. Analysis of the protocols suggests that successful subjects had a clear idea

of what they were looking for and what they were going to do with it, in their B2 evaluating.

e.g.¹. "...afin de simplifier l'apprentissage du français comme langue seconde.
I think it's le français, so I'll leave du." [Blank 13: du]

e.g.² "and he announced the news, I guess it's he? .. or ..le* .. yeah, il."
[Blank 9: leur / il]
* checks gender of 'professeur'

On the other hand, less successful subjects showed varying degrees of control of this monitoring process. For example, Carol's use of B2 strategies was often of extremely dubious quality in that it was difficult to see a coherent line of reasoning that linked the attempted evaluation of grammatical appropriateness with the resulting overall meaning.

e.g. "he put .. I'd almost go, he put .. put .. um .. to put up .. le rire? I don't know, he put it up, like laughing – yeah! – like he, the prof, put ... like to put, I'm assuming that mettre is to put up, like to put up, and then I'm saying ... that I'm going back to 'l'effet produit' .. it's like .. I know that it's some type of noun, so .. I'd put le there." [Blank 20: à]

Vera's B2 performance, while not as incoherent as Carol's, pointed up the obvious need for a sound grammatical competence in order to use this strategy successfully. This was sometimes lacking in Vera's case:

- e.g. "he announced to the class .. a annoncé to them .. leur probably. I can't think of .. leur or les a annoncé .. I'm not sure if it's leur or les." [Blank 9: leur / il]
- [Rechecking later] "et d'un air soulagé, les a annoncé? .. he spoke to them .. I'll put 'les' there .. cos 'leur' is 'their', I think."

Finally, Denise, who appeared to have a better grip on grammar when checking her answers than the other two less successful subjects, nonetheless was not consistently able to follow through in her checking, so as to arrive at the correct answer.

- e.g. "in this phrase it's 'ils commençaient', so it's the same kind of phrase, so I'd, like I know it's a subject, so, well I think it is, so 'ils' is the same sentence, so .. wait now .. the ending .. and here it's a.i.e.n.t. .. the tense has changed. They were beginning to doubt their perception, and .. OK, well, it's i.l .. They were beginning to doubt their perception and he? .. this difficulty ?.. I'd just put 'il' there I think." [Blank 8: personne / rien]

In this case, her B2 strategy use has led her to realise the need for a singular subject in blank 8 instead of her originally planned 'ils'. However, she fails to heed the message provided by her back-up strategy (B4) of checking the overall meaning of the sentence, despite the fact that she is clearly not totally satisfied with her response, and overlooks an obvious syntactic clue (____ n'arrivait) which might have caused her to re-evaluate the grammatical implications for the missing word.

As mentioned earlier (Section 4.2.2), the strategy of monitoring the sound of a possible answer (B3) was used more by all three successful subjects than the less successful group. In addition, the 'think-aloud' data suggest that subjects lacking this auditory competence – not having an ear for what 'sounds right' in L₂ – were then at a considerable disadvantage in trying to assess the appropriateness of the sound of a possible answer. The following example illustrates this deficiency:

'Se décider .. um .. I'd almost, go with à .. décider à? se décider à .. for some reason, it's like that à is popping in there, like .. and it's just .. I tried .. d'éliminer but it almost sounds funny, décider d'éliminer, it's like décider à éliminer, I don't know.' [Blank 12: d']

Successful subjects were, in general, more confident in their use of this checking strategy, having more conviction in their voices in assessing on the basis of sound.

'The effect produced by what he'd just announced. So I'll leave ce qu', ce qu'il .. yeah, that sounds OK there.' [Blank 19: ce qu']

This type of strategy, therefore, is less affected by quality of usage, than by the level of proficiency attained by a learner in discriminating between appropriate and inappropriate sounds in L₂.

The strategy of evaluating overall comprehension of a section of text (B5) was used by all subjects, although not as often as other monitoring strategies being discussed here. It was used by subjects to evaluate and comment on their current understanding of the message of the text, and thus largely depended for its efficacy on

the accuracy and detail of the schema already built up by the subject. The following examples suggest this distinction.:

'Um who spent .. trying to .. um .. OK, I'm thinking now it's the students that are reacting (B5), so I've gotta like try to think what they'd be saying. OK .. et .. um and .. like I know what the sentence is? but I can't .. who have spent all .. and something who have spent all the r.. it's going to finish the rest of the semester trying to understand the difference between the two. Um I don't know. I'd have to leave it.' [Blank 16: moi]

In this example, despite the fact that she recognizes that the problem sentence must be some type of reaction on the part of the students, Carol is unable to decipher the language accurately enough in order to initiate any other strategic behavior.

Paula, on the other hand, is able to move on from her assessment of the overall situation, and uses this information to narrow down the possibilities of what might be appropriate in blank 14, as she checks her possible answer:

'Ah non! Maintenant que j'ai fait tous mes efforts pour apprendre les participes irréguliers. OK, so well, obviously, he's got comments from his students, so .. maybe, from his students, well comments anyway (B5) .. um OK. Maintenant que j'ai fait tous mes efforts, yeah, I would say the person is talking about themselves, so would use mes.'

The monitoring / evaluating strategy used most often by all subjects except Louise (who monitored the sound of her responses most often) was B4, where learners checked on the appropriateness of the meaning of the possible answer by

translating it into L₁. In general, this was a strategy that was used successfully and profitably by subjects. However, the quality of Vera's checking for meaning was sometimes low. While she frequently tried to keep track of and assess her overall comprehension of the section being evaluated (B5), this sometimes provided the gist of the message rather than the detailed, precise translation (B4) necessary to evaluate the appropriateness of an answer. This was particularly noticeable when she came to do an overall check of her answers.

e.g. "He explained that the French Academy was going to decide to eliminate these two tenses here to make this French as a second language .. l'apprentissage .. hm .. to simplify something .. to simplify the French language anyway, to be able to make it easier to learn, I think." [Blank 13: du]

By not paying attention to each word here, by choosing to ignore the unknown word 'l'apprentissage', she was unable to evaluate her answer (.. 'l'apprentissage le français' ..) with accuracy. Had she used B4 more carefully, she might have found herself saying, as other subjects did, 'to simplify the something ____ French as a second language', and have found 'of' popping into her L₁ translation. In cases such as this, the quality of the subject's B4 strategy use adversely affected her ability to identify the deficiencies in her answers because her attention to textual detail was not sufficiently precise.

Another example of less effective B4 strategy use can be identified from Denise's 'think aloud' session. On a number of occasions when using B4, she asks herself questions about the appropriateness of the meaning of her response, but relative to English alone:

- e.g. "Ah non! Maintenant que j'ai fait tous .. les? .. now that I have made all the effort to understand the irregular .. hm .. understand .. um ..I have made all .. of the? ..no .. I've made all of the effort? or all the effort?"
[Blank 14: ces / les / mes]

While she does arrive at an acceptable response in this case, it is clear that her decision is taken based on the appropriateness of the L₁ meaning alone. She makes no attempt to back up her checking strategy with an evaluation of the two possible answers in L₂.

C. Inductive Inferencing

All subjects except Paula, a successful learner, who tended not to use L₁-based strategies to solve problems, resorted to the use of strategy C1 most often when inferring meaning. This is the strategy where the L₁ meaning equivalent of the missing word is inferred and then translated to L₂. As was the case with B4 (monitoring the meaning of a possible answer by translating it into L₁), this strategy was used largely successfully and profitably by subjects. However, in the case of Vera, there was a quantitative and qualitative difference in her use of this strategy. As seen in Table 4.2, there is a low frequency of occurrence (8) of this behavior in Vera's strategy profile. This fact resulted in a low overall percentage use of C-type strategies, as seen in Table 4.3. It also lowered her overall percentage use of L₁-based strategies, as shown in Table 4.4. This may seem unusual, considering her preference for L₁-based strategies in other strategy categories. A close analysis of Vera's 'think-aloud' protocol provided some insight into this question. While she did use C1 strategies more or less effectively on eight occasions, there were another eleven perfect opportunities for their use which were not acted upon. In these cases, she failed to realise that, in translating the sentences in question, she had in fact filled in the blank with the appropriate L₁

equivalent word, and that the process of using strategy C1 was already half accomplished.

e.g.¹. "la nouvelle something, apparently .. **which** had made the headlines."

[Blank 10: qui]

e.g.². "qui essayaient .. OK .. longtemps de comprendre .. who tried for a long time to understand .. OK .. it's essayer de .. OK, so I'll put 'de'."

[Blank 2: depuis]

The usefulness of the strategy of translating and hoping that the L₁ equivalent of the missing word will 'pop into' the blank was thus not capitalized upon in these instances. Similar examples of potentially rewarding uses of translation to L₁, that remained undiscovered and unexploited, characterized Vera's 'think-aloud'. Her overall performance on this task was considerably impoverished by this fact.

When needing to infer the meaning of an unknown word, subjects were most often inclined to infer meaning on the basis of the context. (C3) The quality of contextual guessing seemed to be affected by two main factors which are very much interlinked: quality of overall comprehension and confidence. An analysis of the protocols leaves one with the clear impression that since comprehension was considered by learners to be vital to success at this task, then those subjects who perceived themselves to be consistently losing track of the message, became progressively less confident, more anxious and less ready or equipped to infer from an already shaky context. Thus, while the less successful subjects had **more** comprehension problems than successful subjects during the course of the task, nonetheless, they were **less** prepared to use the strategy of contextual guessing than the

successful group. This result corroborates the conclusions of Hosenfeld (1977, 1984) and Hashkes and Koffman (1982) who also found a reluctance to guess among their poorer students. Furthermore, when they did attempt to use C3 strategies, they were generally very insecure and disparaging of their attempts at inferring: "It's probably not even it.", "I've probably just made up a new French word.", and less successful in making correct contextual guesses because of the more sketchy schema of the text they had built up.

Successful subjects, on the other hand, having built up clearer pictures of the overall message of the text, and having gained confidence from this fact, used contextual guessing quite readily in a relaxed, matter-of-fact way:

'Uh, something happens weird in their head, I don't know what that word means, but I can get that from context.' [Unknown word: s'embrouillait]

'Tout s'embrouillait dans leur tête. That's probably something like 'mixing-up' or something like that.'

D. Deductive Inferencing

The strategy of using grammatical / morphological analysis and deduction (D1) in order to decide on the nature and/or form of a missing item was used by all subjects as an initial problem-solving method. It was found, however, as in the case of B2 strategy use (evaluating grammar / morphology of a possible response), that the benefit of D1 strategies largely depended on not just noticing the important syntactic and morphological clues surrounding a blank, but on knowing how to analyse and use this information in order to make a correct deduction. Successful subjects were consistently

more focused in their syntactic / morphological analysis: they appeared to know what to look for, to have a better grasp of the grammatical function of words, to be more observant of the morphological variations in words, and above all, to know what to do with this knowledge.

e.g. "Et ___ qui ai passé toute la fin de semaine à essayer de comprendre la différence entre les deux .. hm .. what, what would go there? I'm trying to figure out what the sentence is saying to me .. hm .. hm .. [Interviewer: Are you reading?] I was reading the whole thing, but, .. er .. I think moi belongs in there because .. you've got 'ai passé' which would mean .. it's, it's 'je' [Interviewer: Did you try putting 'je' in blank 16?] Er .. it, it doesn't sound right .. it seems more like emphatic, right .. et moi, qui ai passé toute la fin de semaine." [Blank 16: moi]

Less successful subjects, while sometimes noticing a vital syntactic or morphological clue, were much less able to capitalize on this discovery, mainly because of an apparently less well-developed overall grammatical competence and a less rigorously analytical approach to deducing the answer. Analysis of the protocols of less successful subjects, dealing again with blank 16, provided insight into the qualitative differences within D1 strategy use. Subject Denise, while deducing that some kind of subject would be necessary to complete the blank, subsequently relied on the C1 strategy (inferring L₁ meaning equivalent of missing word and translating it into L₂) to come up with a response:

"And .. something .. who have passed all the end .. of the week to try to understand the difference .. Er .. maybe, I don't know if that could

be 'quelqu'un', someone who .. had spent all week .. I think I'd put someone there."

Similarly, Carol failed to notice the vital syntactic clue '*ai passé*', but found herself considering the absence of a formal indicator (in this case a comma) to be an important point in solving this problem:

"Et .. qui .. I'm thinking, like, what should go in front of qui? and I'm so used to 'qui' being like the starting of the sentence? it's like it's throwing me. Um .. et .. well then, I dunno .. um .. oh gosh .. I dunno .. et bien? maybe, well then, but then I'm thrown off, there should be a comma there then – I'm still thrown off by the punctuation. So I'm thinking like it can't be 'maintenant' or 'bien', so it has to be something which just fits right into the sentence, like, just goes there just like a .. I dunno."

Finally, while Vera did notice the crucial form of the verb after blank 16, her grammatical competence was not complete enough, nor was her sense of what 'sounds right' in the L₂ sufficiently developed, for her to reassess her answer and make the final deduction that what is required is the emphatic form of the pronoun:

"I can't think of a word that would go there .. qui ai passé .. who had passed all the weekend .. ai passé! (laughs) .. je qui ..ai passé, and I who had passed all the weekend trying to understand the difference between the two."

E. Repetition for Retrieval

Within this strategic category, a word or groups of words were repeated in either L₁ or L₂ in an effort to retrieve an unknown word's meaning or to provide a context that might lead to the gap between known and unknown being bridged. As mentioned earlier, the fact that less successful subjects used E-type strategies more than successful subjects reflects the fact that they encountered more comprehension difficulties while completing the task. The quality of use of this reception-type strategy was found to depend not so much on the way it was used alone, but rather on the way that repetition for retrieval was used in conjunction with other strategies, specifically clarification / verification (A) type strategies, as a subject strove to negotiate meaning. This type of combination strategy use will be the focus of the next section.

We would suggest, therefore, that the quality of the thought processes engaged in by the learners when encountering problem-solving situations considerably affected the outcome of their efforts. In addition, while less successful subjects were on occasion seen to use coherent thought processes in solving blanks, they were in general less in control, and less focused and organized in their implementation of strategic behaviors than their successful counterparts.

4.4 Are there Groups of Behaviors that Appear to Improve Performance on this Task?

In this section, we will examine whether there are groups of strategic behaviors that appear to improve performance on this task.

4.4.1 Automatic responses

This type of response was found in our data to be always accompanied by a B-type (evaluation / monitoring) strategy.

e.g.¹ "Mais chaque fois .. mais chaque fois? Yeah." [Blank 4: fois]

e.g.² "Let's see .. en parlant ou en discutant .. I'm not sure about that .. I know there's a .. a thing that we learned .. that a .. I think it's after .. en .. verbs end in -a.n.t." [Blank 6: en]

e.g.³ "Et puis .. maybe, and then .. who had .. all the weekend to try to understand the difference between the two. Probably puis, et puis .. but 'puis qui' doesn't sound right." [Blank16: moi]

e.g.⁴ "Mais alors, l'imparfait .. that sounds all right, l'imparfait, comment est-ce qu'on va exprimer .. " [Blank 15: sans]

However, as can be seen from the examples, checking an automatic response was not a guarantee of success. It was undoubtedly better to attempt an evaluation of an automatic response than to have accepted it without question, yet, as suggested in section 4.3, it was the quality of the checking via B-type strategies that had a major influence on the subject's eventual performance.

4.4.2 Non-automatic responses

The analysis of the 'think aloud' protocols revealed that when subjects encountered problem-solving situations on this task, they frequently engaged in multiple strategy use in attempting to find solutions. These strategy clusters fell into three specific types, largely determined by the kind of problem being tackled at that time:

- Problem-solving clusters that focused on a specific word or missing word.
- Problem-solving clusters that focused on building up a surrounding meaningful context to the blank or unknown word.
- Checking clusters.

4.4.2.1 Problem-solving clusters that focused on a specific word or missing word.

When one considers the nature of the cloze-type exercise, it is clear that the major focus of problem-solving will be to work out the missing words. It was found, also, that some words in the text were unknown to some subjects, so this afforded further information on how learners dealt with this second type of situation.

The kinds of complexes of strategies identified as being encountered in these two types of problematic situation tended to be combinations of monitoring / evaluating (B), inductive inferencing (C) and deductive inferencing (D) strategies. Table 4.7 indicates the frequency with which this type of strategy cluster was used by the six subjects.

**Table 4.7: Frequency of Single Word Problem-Solving Clusters
(B, C, D combinations)**

	Successful			Less Successful		
	Louise	Paula	Jane	Denise	Vera	Carol
Strategy Combinations						
D/B	3	4	4	1	6	4
C/B	9	1	16	6	4	12
C/D/B	0	1	2	2	1	0

As was found in sections 4.2 and 4.3, it was not so much the frequency of strategy combination use in this category that was a predictor of eventual success, but rather the quality of the strategies chosen and the way in which they were used.

We have chosen to illustrate this point with some examples of effective and less effective clusters taken from the three strategy combinations identified.

Combinations of deductive inferencing (D) and monitoring / evaluating (B) strategies

In this type of strategy cluster, the subject makes a deductive inference based on her syntactic / morphological knowledge, and then uses one or more evaluating strategies to assess the appropriateness of the response. In the following example, having deduced an appropriate answer on the basis of the form of the accompanying verb, and presumably feeling the need for a subject to be supplied, Vera then evaluated her answer on the basis of its meaning, by giving its L₁ equivalent translation (strategy B4):

"OK .. a annoncé .. that's a past tense, and 'a' you use with 'il', so he announced .. he announced the new something." [Blank 9: leur / il]

In a more complex example of D / B strategy use, subject Louise was identified to be moving back and forth between D and B strategies, using her syntactic knowledge and then monitoring for sound:

"qui essay .. pour? no .. pendant. I think 'pendant' goes with the past .. So I think that's right. It sounds a lot better than 'de' .. étudiants qui essayaient pendant? .. I think there's another word .. no .. maybe there isn't .. depuis! Right .. depuis long .. qui essayaient depuis longtemps. Now which one goes with the imperfect? That's my new dilemma. Um .. qui essayaient .. I think I'll keep depuis." [Blank 2: depuis]

Examples of less effective use of D / B clusters substantiated earlier findings (section 4.3) that subjects' overall grammatical competence and their ability to build up an accurate picture of the developing textual message are major factors affecting success at this task. Subject Carol's tentative attempt at problem-solving, in the following example, leaves one with the impression that she is shooting in the dark for a quasi-deductive inference, which she then tries to justify on the basis of L₁ translation:

"They began .. OK. I know it's to doubt .. their perception .. um .. I'm thinking that maybe it has to be .. um .. se douter, like the word takes .. the reflexive .. so, ils commençaient .. um .. se douter? de leur perception? – like I'd write that down, cos you know I wouldn't be too sure, or anything. So .. um .. de leur perception, cos like they're beginning to doubt their own, their own perception." [Blank 7: à]

Combinations of inductive inferencing (C) and monitoring / evaluating (B) strategies

In this type of strategy cluster, the subject makes an inductive inference about the missing / unknown word, and then uses one or more evaluating strategies to assess the appropriateness of the response.

In the following successful example of C / B strategy use, subject Jane infers the L₁ equivalent word, translates it into L₂ in order to fill the blank, and then proceeds to evaluate her response for syntax, meaning and sound:

"They .. were beginning to doubt their .. their understanding, and .. no .. nothing? really happened, rien .. yeah you can have .. negatives as subjects .. Nothing happened, nothing really happened to solve this difficulty, or something, I don't know what 'résoudre' means, or to .. account for this difficulty, I don't know. Yeah, rien probably sounds.."
[Blank 8: personne / rien]

Once again, it is the quality of the initial inference and the way in which it is subsequently evaluated that govern the success of the process. The following examples show how deficiencies can exist in both or either parts of these two-part C / B strategies:

"I can't think what 'protéger' is .. pro .. mm . wait now .. the French Academy had protected the French language? It doesn't make sense."
[after Blank 18]

In this example, subject Vera attempts to find an L₁ cognate for 'protégé' (C2), and then evaluates the appropriateness of her response in L₁ (B4). Her search for a cognate, however, stops there. Having rejected her first response, she does not persist with this strategy, and thus misses the chance of discovering the actual cognate.

In this next example, subject Carol infers the L₁ meaning equivalent of the missing word and translates it to L₂ (C1). She then evaluates the sound of the possible answer (B3), and rejects it on that basis. In this case, the subject's expertise in evaluating the correct sound of a possible response in L₂ is not sufficiently developed to be of use to her.

"I believe that .. je croyais que le? that doesn't sound right." [Blank 18]

Combinations of inductive inferencing (C), deductive inferencing (D) and monitoring / evaluating (B) strategies

While less common than either of the two-part strategies just described, examples of this strategy cluster provided excellent insight into how the greater variety of strategy types used in these complexes can enrich and improve performance on this task. Once again, however, success depended on the quality of the strategies chosen, and the way in which they were used to complement and inform each other.

Subjects Jane, Denise and Vera, who were identified earlier as using predominantly L₁-based strategies (see Table 4.4), maintain this behavior in this strategy combination. All three subjects used C1 (inferring the L₁ equivalent of the missing word and translating it into L₂), and D1 (deducing via syntactic knowledge) in

combination with a variety of monitoring / evaluating (B) strategies when working in C / D / B clusters.

In the example cited below, Denise moves back and forth between syntactic and structural considerations (D1) and inductive inferences about the L₁ meaning equivalent of the missing word (C1), while constantly checking, via translation to L₁ (B4), that the overall meaning conveyed satisfies her reading of the sentence:

"I know it's what – I just don't know how to put what there, I don't know if it would be q.u. .. I know it's referring to something up here .. so maybe it's up here .. hm .. I know it's a word to refer to the news here, that he announced. .. So .. I don't know if I could use a pronoun there, instead of what .. but I think it's what like I know what I want to say, I just don't know which word to use? .. by what, by .. like OK, it's the news that we're talking about .. so if I was stuck, I might put the news in .. like I'm not gonna leave this one blank. I'm gonna put something there. OK, I'm not sure what this word is .. the effect produced by .. OK it's the news .. he just announced .. or that he just announced. OK. I'll look up here and see .. or maybe the headlines, .. by the headlines. I'd probably put 'les manchettes' there .. and I'd probably put q.u. there .. that he." [Blank 19: ce qu' / les manchettes qu']

In this way, Denise was able to compensate for not knowing the French relative pronoun, 'ce que', by using her understanding of the idea of an antecedent and slowly negotiating an acceptable alternative answer on the basis of its meaning and appropriate form.

In contrast with Jane, Denise and Vera, subject Paula, who was identified earlier as preferring to work in L₂ (see Table 4.5), used L₂-based strategies C4 (inferring the answer on the basis of its sound) and B3 (evaluating the appropriateness of the sound) along with a classifying strategy (D2) on the one occasion she used this combination:

'Le professeur s'est mis .. um .. I think 20 is à rire, s'est mis à rire, I think that's an expression, sounds, it sounds right.' [Blank 20: à]

Subjects Louise and Carol did not use C / D / B combinations.

In all identified instances of C / D / B clusters, except one, subjects were able to arrive at a successful response. The unsuccessful attempt occurred when one of the trio of strategies proved weak:

"He announced to, wait now, he announced to the class (C1) .. a annoncé to them (D1) .. leur probably. I can't think of leur or les a annoncé (B2) .. I'm not sure if it's leur or les." [Blank 9: leur / il]

In this case, it is Vera's grammatical competence that is the weak link in the chain.

4.4.2.2 Problem-solving clusters that focused on building up a surrounding meaningful context to the blank or unknown word.

As mentioned earlier, all subjects emphasized the importance of understanding the passage if they were to have any chance of being successful at filling the blanks. It was discovered that when subjects encountered problems in keeping track of the

developing story, or in formulating a meaningful context for a missing or unknown word, they engaged in a type of complex behavior, most easily described as **code-switching**. Subjects would move back and forth between L₁ and L₂, using clarification (A) and repetition (E) type strategies in their efforts to negotiate meaning. Table 4.8 indicates the frequency with which this type of strategy cluster was used by the six subjects.

Table 4.8: Frequency of Code-switching Clusters to Negotiate Meaning (A/E Combinations)						
	Successful			Less Successful		
	Louise	Paula	Jane	Denise	Vera	Carol
A / E Combinations [A1 / A3 / E2 / E3]	2	7	5	7	5	5

It was not possible to define clearly how often the use of code-switching clusters was 'successful' or 'unsuccessful': in all cases this strategy use pattern resulted in some clarification of meaning – the extent of this clarification being largely dependent on the quality of subjects' code-switching behavior.

Thus, while frequency of use of code-switching clusters provides little insight into their benefit to learners, a close analysis of the quality of their implementation once again suggests that this is the key to their efficacy. The comments made earlier (section 4.3) about the quality of subjects' efforts at translation to L₁ largely hold true for the quality of subjects' code-switching behavior. Where subjects' reading, translating and repeating for better comprehension were fractured and inaccurate, as was largely the case for the less successful subjects, understanding seemed unenhanced by this procedure. Less successful subjects were more inclined to start reading in the middle

of a sentence, to translate in a word-by-word fashion, and to repeat single words in L₁ or L₂ rather than the complete sentence leading to the problematic section.

e.g. "I'm just gonna leave that .. OK .. apparemment avait fait les manchettes, OK having made the headlines this morning. Um .. il a expliqué que, OK, explained that the .. French Academy .. I tend to, before I even read the whole sentence, I tend to translate it. Like, I translate it, as I'm reading the sentence. It's just a habit I've got. OK, they explained to the ..explained that the French Academy .. um ..went .. um went .. I'm gonna say .. se décider, cos décider is they decided, they went and decided something. [Blanks 10 – 11: qui; de]

In the example just cited, Carol 'self-reports' her word-by-word approach to comprehension, starts in the midst of a sentence, is imprecise in her L₁ translation, and attempts to fill a blank without reading to the end of the sentence.

Denise also code-switches a great deal, but in a confused, fragmented way that is clearly ineffective in negotiating meaning:

"OK, ils .. were beginning .. douter de leur ..OK, they were beginning to doubt, de .. to have, I guess, doubts .. their perception .. and not really .. résoudre this difficulty .. finding a solution. Et .. I've lost total sense of what's going on here." [Blank 7 – 8: à; personne / rien]

More successful learners, while not necessarily solving their comprehension problems in every case, nonetheless seem more clear in their minds as to what they are doing and why they are doing it when they exhibit A / E type strategy clusters. If their

problem remains, then it is simply that, even with a surrounding context that is clearly understood in L₁ or L₂, the missing or unknown word remains unavailable to them on this occasion.

e.g. "Il a annoncé la nouvelle .. la nouvelle something .. apparemment avait fait les manchettes. Oh .. must be the news, il a annoncé la, la nouvelle .. he announced the new, the news? I don't have a clue .. apparemment avait fait les manchettes. I'm going to skip that." [Blank 10: qui]

Paula, who provides a short 'self-report' while attempting to solve Blank 13, describes the code-switching procedure she is using and the way in which she feels it may result in filling the blank:

"I'm constantly switching back and forth from English to French, trying to .. er .. just trying to translate the sentence and then put back in French what seems to belong there."

4.4.2.3 Checking Clusters

It was suggested earlier (section 4.2) that the frequency of B-type strategy use alone was not a stable predictor of success at this task. In addition, it was pointed out, in section 4.3, that the way in which subjects monitor and assess their answers, the quality of their B strategy use, appeared to be influential in their eventual performance. Analysis of the frequency of B-type strategy clusters (Table 4.9) suggests that the power of monitoring strategies increases dramatically when used in combinations.

Table 4.9: Frequency of Evaluating / Checking Clusters

	Successful			Less Successful		
	Louise	Paula	Jane	Denise	Vera	Carol
B-type Combination:						
B3 / B4	12	18	8	3	3	0
B3 / B2	3	2	0	0	1	0
B3 / B2 / B4	3	2	6	0	1	0
B2 / B4	0	1	2	3	1	5
Total	18	23	16	6	6	5

The totals in Table 4.9 suggest clearly that successful subjects use complexes of monitoring strategies much more often than the less successful group, who favour single B strategy use – predominantly B4 (monitoring the appropriateness of the meaning of the answer via translation to L_1) – to assess their responses. This one-prong approach most often used by Denise, Vera and Carol, depends solely on the quality of the one B strategy selected for assessing, and denies the opportunity for a broader-based evaluation mechanism founded on two or three criteria for checking.

Even within the evaluating clusters, moreover, quality of use continues to be a factor governing success. As was seen earlier, in our discussion of C/D/B strategy clusters, when one of the combination strategies chosen proves to be weak, then the outcome of the process can be jeopardized.

e.g. "Mais chaque fois, um, they tried to use it? to use .. um .. they knew the difference .. then I'd almost go .. well .. les utiliser .. they tried to

use it, and I've got les, which almost goes with the plural? But I think I'd erase that, I'd put down l', because they understood well the difference between? um. But each time that they tried to use .. it, yeah, I'd almost go with that, I think, because they understood well the difference between the passé composé, like they understood the difference, but every time they tried to use this difference, like, the thing that they knew." [Blank 5: les]

In this example, Carol moves back and forth between checking for meaning (B4) and checking for form (B2), but is ultimately unsuccessful in her response, largely because of an inaccurate analysis of the true antecedent for the required pronoun. In a similar procedure involving a B4 / B2 cluster for Blank 5, the superior quality of Denise's comprehension and syntactic analysis on this occasion allows her to deduce the correct answer:

"Every time they wanted to use it, maybe it's a .. pronoun .. they wanted to use it, or were talking it or discussing it, I guess, cos that's what they're talking about, the subject is the .. past and the imperfect, and each time that they .. I don't know what 'fall..oir' is, but, they used it, talking .. I guess they were talking about it .. no, they were discussing it, OK, each time they tried to talk it .. but I don't know which pronoun you put in there to take in le passé composé and l'imparfait .. I'd probably put l' here, or maybe I should put l.e.s. there, cos it's talking about two of them .. each time they discussed them."

The other feature that became clear through a close analysis of subjects' checking their responses was that, not only did the successful subjects use more

monitoring clusters on this task, but that they were aware of exactly what they were doing and why they were doing it, while assessing their answers. This finding corroborates O'Malley et al.'s (1985a, 1985b) conclusion that the frequency of subjects' metacognitive strategy use – in this case, evaluation strategies that involve metacognitive control – reflects their level of metalinguistic awareness, their competence to "think and talk *about* language" (Gass 1983:77). Successful subjects reported a clear overall strategy in accomplishing this task which relied heavily on self-monitoring and self-correction.

e.g¹. "I go through it fast and fill in blanks and then I .. see if it makes sense (B4) .. to make sure that it sounds right (B3). Sometimes though .. like .. there's still the rules sometimes that stick in my head (B2)."

e.g². "Usually what I do when I'm correcting things, I read them over about five or six times and just more or less start to do them over again, but this time I have more of a general idea of what the passage is about, so I can, I go through them more quickly. And then if I start to go through and then a different idea idea comes to me, I write it down. I look and I compare what I've got in my mind at the moment and what I wrote down before, and if they're different, I just compare the two and see what they sound like, what they both sound like (B3), and then, then translate them and see what they mean (B4), and which one seems to belong there."

The power of using monitoring strategies in clusters is recognized by successful subjects to be beneficial to them in their problem-solving: they are taking an active role in the process, choosing and controlling the strategies, monitoring and evaluating the

outcomes in order to refine and eventually construct an appropriate final response. On the other hand, where less successful subjects were concerned, there was a much less clearly defined overall plan of action, their approach resembling the fractured, hit-or-miss type of procedure that characterized the quality of many of their individual strategies. It seemed that, where successful subjects had **planned** back-up strategies available for action if initial strategies failed, less successful subjects, lacking this metacognitive control, relied on fewer strategy clusters and were generally less adept and creative in their use.

4.5 Other Findings

Subjects were encouraged after the 'think-aloud' session to draw conclusions about their own strategic approach. The information thus gathered provided valuable insight into subjects' general knowledge about themselves as learners – their metaknowledge. This type of 'self-report' when coupled with the extremely detailed profile of each subject built up through the 'think-aloud' protocol provided a clear diagnosis of each learner's strengths and weaknesses, a perspective akin to the "microanalysis of learner behavior" advocated by Vann and Abraham (1990:192).

Since one of the motivations for this study was to find ways of helping learners improve performance on this task, we will concentrate next on how subjects perceived themselves, and on what they said about themselves and about their L₂ learning. Clear similarities in the affective domain were immediately identified as being specific to each group. The successful subjects were confident and in control of the process at hand. In contrast, all three less successful subjects often conveyed a negative, pessimistic attitude in their comments while working through the task: "If I miss a few words down here then the whole paragraph is probably going to be gone"; "I've lost total

sense of what's going on here"; "I don't have one clue what it is", "Oh gosh, there are a lot of words there". This lack of confidence, that was evident in their approach to the task, led inevitably to anxiety when problematic situations arose and often to a feeling of insecurity when subjects felt required to risk an answer. This finding substantiates earlier research (Rubin 1975, Stern 1975 and Naiman et al 1978) that less successful language learners are more reluctant to take risks.

On a more positive note, however, it was found that subjects' evaluation of their behaviors while completing this task provided valuable corroborative evidence about their strengths and weaknesses as L₂ learners. Where the 'think-aloud' protocols provided examples of behaviors engaged in by a particular subject, and insight into the type of approach favoured by that subject, the supplementary 'self-report' type information gathered mostly at the end of, but sometimes during, the interviews, provided information on how clearly the learner herself was able to understand her approach and its limitations. The combination of 'think-aloud' and retrospective procedures was, in this way, found to be a very effective exploratory and diagnostic tool allowing for detailed profiles of each subject to be built up, and for specific recommendations to be made.

4.5.1 Profiles of successful subjects

(a) Profile of Paula

(i) Strengths

- has a worked-out plan of action for accomplishing the task
- has considerable intuitive command of L₂
- has planned back-up strategies when intuition fails her

- has considerable syntactic / morphological competence
- is able to discriminate between important and less important sections of text
- uses contextual guessing with confidence
- keeps track at all times of her overall comprehension
- uses monitoring / evaluating strategies systematically
- has overall metacognitive control of the whole process
- has overall confidence

(ii) Weaknesses

- has no obvious weaknesses

(iii) Self-Report

"I think basically, a good idea to start with, before you even start filling anything in, is to read the passage with the blanks, and just see what the passage is talking about. And then go through it, phrase by phrase, sentence by sentence, and just basically what I usually do is just constantly .. reading it in French, trying to figure out what belongs there, then going back to English, you know, and say, OK, well if I had this sentence in English, what would be there? Just sort of like nit-picking it apart in English and then once I've done that, go back to the French, read it in French, and then the idea just sort of comes to me, you know. That's what should be there – that seems to convey the idea that the sentence is trying to get across, it seems like to be linking. Sometimes it's instinctive."

"What I do, once I've filled this in, I go back and look at all the blanks and what I've put there, and I more or less just read it as I go along and try and see if what I've written makes sense. That's usually what I do – I just write down what comes to me."

"Usually what I find is, um, what I've written there is usually .. I'm usually on the right track. But, as I go back, and read over them, you know, I look at what I've written, and it seems to be, you know, right, or if it .. like I usually know by instinct, or whatever, if I've got something down and it doesn't make sense."

"It's really weird: it just came, you know, that's what should be there, that's what you're looking for."

"Usually, what I do when I'm correcting things, I read them over about 5 or 6 times and just more or less start to do them over again, but this time I have more of a general idea of what the passage is about, so I can, I go through them more quickly. And then if I start to go through, and then a different idea comes to me, I write it down. I look and I compare what I've got in my mind at the moment, and what I wrote down before, and if they're different, I just compare the two and see what they sound like, what they both sound like, and then, then translate them and see what they mean, and which one seems to belong there."

(iv) Discussion and Recommendations

An analysis of Paula's 'think-aloud' and 'self-report' revealed a picture of a very competent L₂ learner with a large repertoire of strategies, all of which she used in an organized, controlled, coherent way. Even though a large number of responses came to her automatically, she nonetheless always evaluated them immediately with a monitoring (B) strategy. When she occasionally failed to retrieve an item by instinct, she had back-up problem-solving strategies ready to deal with the situation effectively and efficiently. A close inspection of the 'think-aloud' data revealed that, in checking, she virtually always used at least two monitoring strategies in evaluating a possible response. Her considerable competence in L₂ allowed her to build up a full understanding of the message of the text, and this facilitated her ability to focus on the important parts of the text and to make inferences based on her comprehension of the context. Above all, it was her metacognitive control of the process that was most impressive: she knew what she was doing, why she was doing it and what she would do next if this strategy failed.

It must be pointed out, however, that while many aspects of Paula's behavior might be targeted for inclusion in a strategy-training package, her most valuable behavior – instinctive / automatic response – can probably not be taught, as mentioned earlier (section 4.3.1), but only comes when a certain level of subconscious proficiency in the L₂ has been attained.

(b) Profile of Louise

(i) Strengths

- has a worked-out plan of action for accomplishing the task
- has developed a certain degree of intuition about L₂
- uses contextual guessing with confidence
- keeps track of overall comprehension
- is not reluctant to skim or skip what she deems unimportant
- uses monitoring / evaluating strategies systematically
- has a good ear for what 'sounds right' in L₂
- has a realistic attitude to comprehension problems
- has overall confidence
- has a certain degree of metacognitive control

(ii) Weaknesses

- is not very analytical in her approach: could use syntactic / morphological knowledge more
- sometimes works too fast, too hastily
- relies too much on what 'sounds good' at times, without back-up checking

(iii) Self-Report

"I go through it fast and fill in blanks and then I .. see if it makes sense after, 'cos it's hard to, hard to read it when there's a blank space."

"I'd say, do what I do .. go through the whole thing and fill in something that sounds OK, 'cos then it's easier to read .. read what's, you know, to read it and translate it or whatever. And then you'll be able to understand what's happening, and then go back and start .. making sure that it's right. And .. if it sounds like it should be something else, or whatever, I'd put that in there and .. sound it out."

"It's best to sound it out and to see if it makes sense, to figure out – I find translation really important, 'cos if I didn't translate it, sometimes it's hard to figure out, to think in French when you've got a blank there and you don't know what it could be."

"I think it's good to, like go through it and figure out in English what could fit in there, then go through it and then read it and kinda think French .. and think does that sound right in French and if it doesn't , try to figure out what does."

"If it sounds good I just put it in there anyways."

"I don't concentrate on these too long."

"I think I'll just skip on."

"I think I'll just leave that."

"If I get too hung-up on that I'll just fool the rest of it up."

"I don't understand what that means, 'soit le passé composé', but I have the idea anyways."

"I don't mind it (=not understanding a word) too much. Like, right there anyways, 'cos there's no blank really close to it, so that's not that bad."

"Sometimes though .. like .. there's still the rules sometimes that stick in my head."

(iv) Discussion and Recommendations

An analysis of Louise's 'think-aloud' and 'self-report' revealed a picture of a confident, competent L2 learner with a large repertoire of strategies which were largely used in a coherent, organized way. In comparison with Paula, however, Louise seemed less in complete control of the process. This was perhaps true for two reasons. Firstly, she relied heavily on 'sounds right' strategies (C4 and B3) which sometimes seemed applied in a 'hit or miss' fashion, although most of the time her responses turned out to be correct. Secondly, her haste to move on gave the impression of the process controlling the subject, rather than vice-versa. Finally, it was clear that Louise's attention to form – syntactic and morphological – could have played a greater role, both as a primary strategy and as an evaluating strategy. On two of the three occasions where Louise filled in a wrong answer or left a blank, there were clear syntactic clues [Blank 8: rien / personne; Blank 16: moi] which were picked up by the more analytical subjects.

(c) Profile of Jane

(i) Strengths

- has a worked-out plan of action for accomplishing the task
- uses contextual guessing with confidence
- is extremely determined and persistent
- keeps track of her overall comprehension
- skips phrases she deems unimportant
- has a realistic attitude to comprehension problems
- has considerable syntactic / morphological competence
- is a sophisticated translator to L₁
- has overall confidence
- uses monitoring / evaluating strategies systematically
- has overall metacognitive control of the whole process

(ii) Weaknesses

- feels insecure when testing sound of possible answer
- doesn't feel confident enough to read passage in L₂

(iii) Self-Report

"Usually I go by what I know, like these certain rules that are, you know, you're supposed to be going by."

"Sometimes what I do, if you're wondering what I'm doing now, sometimes I try to guess the word again. If I say the same word again, then if I say another one, then I say, oh, that's not right. But some, some you'll know because you know they were right."

"I don't know what that word means but I can get it from context."

"I always try to get it."

"I'd like to know it, but I don't know it, so .. I go on. I'm not gonna quit now."

"No sir! Never! I don't leave anything!"

"It's starting to come better now when you understand more."

"This is the key part"

"Take out that 'apparently'."

"If I didn't start translating it more closely, I wouldn't have thought of that."

"That's what I would say if I was going to say it in English."

"I always read in English: I'm not confident enough yet to understand."

(iv) Discussion and Recommendations

An analysis of Jane's 'think-aloud' and 'self-report' revealed a picture of a very competent L₂ learner with a large repertoire of strategies all of which she used in an organized, controlled, coherent way. Her most impressive strengths were the quality of her syntactic analysis and her considerable determination and persistence. She was able to compensate for her inexperience and

lack of expertise in working directly in L₂ by the high quality of her other problem-solving strategies. In contrast to both Louise and Paula, who functioned and solved problems in L₂ with relative ease, Jane felt insecure in her ability to judge appropriateness of sound (B3) and in her ability to fully comprehend the text without direct translation to L₁. In addition, her relatively low incidence of automatic response use (4), further attests to this less well-developed subconscious proficiency in L₂. While such intuitive behavior can, perhaps, not be taught, it is to be hoped that Jane will acquire this instinct for what fits, for what sounds right in the L₂ through greater exposure to its written and spoken forms.

4.5.2 Profiles of less successful subjects

(a) Profile of Denise

(i) Strengths

- has developed a certain degree of intuition about L₂
- has a certain amount of competence in syntactic analysis, as seen in her occasional successful use of deductive inferencing

(ii) Weaknesses

- relies too much on L₁ for inspiration

- focuses on single words / short phrases – often considered in a vacuum rather than within the developing context
- makes no conscious effort to develop 'the big picture', in order to ease the frustration of unknown words and facilitate contextual guessing
- has no systematic pattern of checking and evaluating

(iii) Self-Report

[Interviewer: "What worked for you when you did this exercise?"]

"Mostly remembering which key words go with things like, I remember back to seeing that word followed by something else, or that word going in front of something else. And translating it a lot. I translate everything when I'm reading. If I don't understand it in English, I don't understand it."

(iv) Discussion and Recommendations

Denise's 'self-report' substantiates the 'think-aloud' findings of over-reliance on L₁ and single-word / short phrase type focus in her problem-solving. On the positive side, however, it is clear that this subject's developing intuitive feel for L₂ suggests that she might reasonably be expected to use more B3-type checking strategies (does it sound right in L₂?), in particular as a back-up strategy to her favoured B4 (check via L₁ meaning). Building on her other developing strength – grammatical competence – Denise might also

be shown how to use B2 (check syntax / morphology) more systematically along with the other monitoring strategies.

However, her major problem lies with overall comprehension – above all, that she did not build up a 'schema' of the passage and for this reason tended to lose track of the meaning of the text. This affected her ability to discriminate between important and less important words / phrases in the text, and her ability to guess accurately on the basis of context. Remedial lessons on the art of reading – reading in complete sentences; constantly reviewing and renewing one's picture of the developing schema by rereading and reanalyzing sentences; being prepared to infer meaning of unknown words from the context; recognizing cognates – might be recommended. Bialystok's (1983) finding that a lesson on how to infer significantly improved comprehension of reading material^c suggests the potential benefit of this type of strategy training.

(b) Profile of Vera

(i) Strengths

- has a certain amount of competence in syntactic analysis, as seen in her occasional successful use of deductive inferencing
- does try to refine and renegotiate her understanding of the overall text
- does try to infer meaning based on cognate / context

(ii) Weaknesses

- is not sufficiently persistent, when she is starting to get somewhere with her strategies
- is often not sufficiently precise or systematic in her analysis, so that she fails to capitalize on her strategies
- has a very hasty, anxious approach, where she rushes through the task in a headlong way
- is not sufficiently focused or systematic in her checking

(iii) Self-Report

[Interviewer: "What are the most successful things that you have devised to overcome problems?"]

"Well, first of all, for me, I've really got to understand what's there, and if I lose out on a few words, then, to me, it's almost like the whole passage is gone."

"I like to try to translate it. I like to know what's there in my own language, but then, if I can't get that, like I'll go back and I'll look and see what looks right."

"Lots of times I'll fill things in without really even looking really close at what's there."

"It's like I'm trying to get it done too fast?"

"So, like, I get really confused. I panic easy, I think."

(iv) Discussion and Recommendations

As was found in Denise's case, the accuracy with which Vera identified and described her limitations in her 'self-report' was remarkable. Of the six subjects, it was felt that she, above all, had not realized her maximum potential on this task. Her strategies, though sometimes used in groups, remained fragments that were seldom put together to reach a fully calculated conclusion. Her use of strategies A1 (translating to L₁), C1 (inferring L₁ meaning equivalent of missing word and translating it to L₂) and D1 (making a deductive inference on the basis of syntactic knowledge) was frequently good. However, the usefulness of this strategy use was often not fully exploited – perhaps because of the haste and the lack of tenacity which were overall features of her approach.

It was therefore felt that stress and panic contributed to Vera's performance on this occasion – factors that might be alleviated were the subject to gain more confidence in approaching this task. Since confidence may well develop as a result of improved performance on this task, it would seem important to help Vera capitalize more fully on the strategies she already uses in order to enhance her control of the process as well as her self-image. Recommendations might include that she pay closer attention to detail, the individual word(s) chosen for the blank or which immediately surround the

blank; that she use more complexes of checking strategies in a more systematic way; and, above all, that she take the time to listen closely to herself as she thinks, since the vital clues are perhaps there, going unheeded unless she slows down and pays **close attention** to what she has discovered via her initial strategies.

(c) Profile of Carol

(i) Strengths

- is not reluctant to make guesses, because of "the chance you might get it right"
- has a sense of humour

(ii) Weaknesses

- has a word-by-word approach to comprehension
- is overdependent on L₁ for inspiration
- makes no conscious effort to develop 'the big picture', in order to ease the frustration of unknown words and facilitate contextual guessing
- lacks grammatical competence
- has no systematic pattern of checking and evaluating
- engages in behaviors where there are no clear strategies

(iii) Self-Report

"That's what always happens to me, I always, like, tend to forget my vocab, the key word."

"I can't think of an English word for it .. like what I do, I break down, each word I translate it to English, and then put it together as a sentence."

"The problem with me, I don't think I have enough vocab or I'm not .. I don't use my vocabulary .. like I can, usually I can recognize, like if it's in a story or something, I'll pick out the key words and then I can tie it all around, right. But it's like, in this, you almost gotta know your vocab, because if you don't know the vocabulary before, you won't be able to stick in that little word that's supposed to go in."

"I don't know why, but it's just like, I'm trying to, like, I'm almost at the point now where I'm, like, trying to fit in words for the .. sake of fitting them in, trying to make them make sense."

"The ones which I .. er .. tend to, like, do by a process of elimination .. OK, if I get it right, it's purely because of luck."

"I'd put sg, actually. [Blank 6] No, I wouldn't .. yes I would – actually I've got two personalities (laughs) just haven't told you

about it, right! (laughs) Two little voices in my head are going, like, no, yes, yes!"

And, finally, her most telling comment:

"See, what I tend to do, I think what the problem with me is too, where I do translate, I tend to translate in English before I leave .. And like, once I'm finished with one sentence, I 'm like, OK, bye sentence, I'm not going to talk to you any more, like I don't connect the whole paragraph? And maybe if I did, I would tend to get the words a little bit easier. But it's just like I see each one. I don't see this as a passage. I see this as a bunch of sentences that need to be fixed up."

(iv) Discussion and Recommendations

Once again, the subject makes an extremely accurate diagnosis of her problems. When responses do not come to her "right off the bat", as she says, Carol's approach is often best characterized as 'hit or miss', shooting in the dark. While she does use recognizable strategies at times, their quality is often questionable and they are rarely adequately substantiated by sufficient evaluation strategies. During periods of no clear strategies, she relies on luck, as she imagines all kinds of possibilities that might fill in the blank. This, in itself, might not be such a poor strategy, were it followed up with a series of good evaluating strategies that might adequately assess the merits of the possible answers.

However, the key to Carol's problem, and thus the key to its alleviation, is contained in her final 'self-report'. As was found in the case of Denise, the inadequacy of her overall comprehension of the text as a whole is a major stumbling-block to her ability to proceed effectively with many of the cognitive learning and reception strategies she attempts to use. Remedial work in this area, on the lines of that recommended for Denise, might therefore be desirable.

It was thus found to be extremely enlightening to have encouraged the less successful learners, as well as the successful group, to make comments about themselves and about their strategies while completing the task. Each less successful subject made an accurate diagnosis of her problems, a fact that suggests an encouraging level of metacognitive awareness in all three poorer learners. It is therefore to be hoped, as suggested by Wenden (1986b and 1987) and Holec (1987), that in subsequently increasing learners' awareness of the nature of the language task at hand – via personalized strategy training and enhanced awareness of language in general – that the less successful learners in particular may be helped to gain greater control over their L₂ learning and thus become more autonomous. It is also felt that such negative factors as stress and panic which affected all three less successful subjects to varying degrees might be alleviated were subjects to gain more confidence in approaching this task.

CHAPTER 5

SUMMARY AND DISCUSSION

5.1 Summary of Research Problems and Method

The purpose of this study was to examine the cognitive learning and reception strategies used by first year university students of French while completing a modified cloze procedure. This particular task appears to involve highly complex thought processes and behaviors which we sought to identify and analyze, with a view to eventually being able – in a subsequent study – to design and test a programme of strategy training that might improve performance on this task.

Using a case study approach, we asked three successful and three less successful subjects to 'think aloud' as they completed the cloze exercise. During this time, we intervened with clarifying questions whenever information seemed incomplete or unclear. In addition, subjects were asked to do an immediate retrospection after the 'think-aloud' session where they were required to talk about their strategic behaviors.

Specifically, the study sought to:

- (i) identify the behaviors engaged in by subjects while completing the task,
- (ii) investigate whether frequency of use of certain strategies was a predictor of performance on this task,
- (iii) investigate how quality of strategic behavior affected performance outcomes, and

- (iv) investigate how use of groups of strategic behaviors affected performance outcomes.

5.2 Conclusions

(i) Strategic behaviors

It was found that learners engage in a variety of behaviors in completing this task. While these behaviors fell into the predictable categories suggested by various researchers (Rubin 1981, 1987; Abraham and Vann 1987): clarification / verification; monitoring; inductive inferencing; deductive inferencing; and, finally, repetition for retrieval, as suggested by Manghubai (1987), nonetheless, within these categories, the specific problem-solving behaviors engaged in by subjects were defined by the exigencies of this specific task. This finding corroborates those of Bialystok (1979) and Politzer and McGroarty (1985) who suggest that specific strategies have specialized effects for particular types of tasks: that strategies are goal-specific. The strategy inventory set out in section 4.1 represents the list of behaviors so far identified as being used and useful on this specific task: it is therefore open-ended and subject to modification as more protocols are analyzed.

(ii) Frequency of strategic behaviors

In general, it was found that frequency of strategic behavior was not a stable predictor of success or failure at this task. This finding substantiates the results of Bialystok (1979), Manghubai (1987) and Vann and Abraham (1990), all of whom suggest that quantifying the frequency of strategy use is insufficient to account for achievement. However, the strategy of monitoring and evaluating possible responses was used more

frequently by successful than less successful subjects, a result that echoes Politzer's (1983) conclusions that there exists a significant correlation between the strategy of monitoring and students' grades.

Information on frequency of occurrence of particular behaviors does, however, provide important insight into two other aspects of this study. Firstly, the frequency with which a particular behavior was engaged in by subjects may suggest its level of usefulness to learners on this particular task. In the present study, for example, it was found that all subjects used monitoring strategies more than any other while completing this exercise. This might suggest the primary importance of a lesson on checking and evaluating in any subsequent strategy training scheme for this task.

Secondly, an analysis of the strategy frequency tables (Tables 4.2, 4.3, 4.4 and 4.5) suggested that these frequencies allowed one to identify different types of learner. It was found that two of the six subjects employed many more L₂-based strategies, the remaining four subjects preferring to use L₁-based strategies. Other, less clear-cut differences, that suggested different styles of learning, could be identified from Table 4.2, where individual subjects showed preference for problem-solving on the basis of form or sound. Thus, a frequency count of this type provides initial insights into different types of learners who use strategies that match and mirror the level and types of proficiency they have attained in L₂. This finding corroborates the conclusions of Politzer (1983), Politzer and McGroarty (1985) and Abraham and Vann (1987) who suggest that level of L₂ proficiency defines the strategies available to a learner, and that because of this, different sorts of approach will be used by different types of learner. Finally, it was clear from our data that different types of approach on this task could lead to equally successful results (cf. Rubin 1987): both Paula and Jane were successful despite the fact that their strategic approaches were quite different, Paula solving most of her problems in L₂, with Jane

preferring to use L₁-based strategies. In the same way, it was found that there were different paths to lack of success.

(iii) Quality of strategic behaviors

A qualitative analysis of the strategic behaviors of the subjects led us to suggest, like Politzer and McGroarty (1985) and Manghubai (1987), that it was, above all, the quality of strategy use that determined the success of the problem-solving. It was found that less successful subjects' approach to the task was more fragmented and disjointed. When using strategies to negotiate meaning, their attention was too closely focused on each individual word or phrase, so that the surrounding context was not implicated and thereby remained unavailable for corroborative use. (cf. Hosenfeld 1977, 1984) Overall, the less successful subjects had much greater difficulty distinguishing important from less important information, and keeping track of the developing picture of the text. This therefore made it increasingly difficult for them to understand, by reading, translating or inferring, the subsequent sentences. Ironically, despite this word-for-word approach to comprehension, they were frequently inattentive to the precise detail of the message and/or unable to piece it together coherently in order that the context be sufficiently established so as to be used to enhance the blank filling.

Successful subjects, on the other hand, constantly refined and renegotiated their understanding of the text, using a variety of strategies – translating, contextual guessing, repeating, reading from known to unknown. Once a correct schema had been established via this negotiation process, they were in a much better position to make accurate contextual guesses and to be able to anticipate and predict the subsequent content of the text.

When using strategies that sought to analyze or evaluate the form of existing or missing words, once again qualitative differences between successful and less successful subjects were apparent. While both groups of learners paid attention to grammatical form, function and word-order, it was found that successful learners were more able to proceed from an identification of important grammatical or morphological clues to a reasoned calculation or evaluation of a correct response. Those less successful subjects who managed to spot relevant syntactic or morphological clues were often unsuccessful in knowing how to use this information to their advantage. This seemed to be largely because of lesser overall grammatical competence in L₂, a more tenuous understanding of the underlying systems of the L₂ and, above all, fewer and weaker evaluation strategies available to monitor possible responses.

(iv) Groups of strategic behaviors

The findings of the present study corroborate the conclusions arrived at by Wesche (1979), Rubin (1987), Manghubai (1987) and Oxford (1989), that it may be groups of strategic behaviors rather than single, specific strategies that are most beneficial for this particular task: in other words, that the quality of strategic behavior is enhanced when strategies are used in clusters. Certain complexes of strategies appeared to improve performance on this task, but again, the quality of the individual strategies used affected their collective benefit. Factors affecting the eventual effectiveness of such clusters included which strategies were chosen, the quality of those strategies, and the way in which they were used to complement and inform each other.

It was also evident, particularly in the checking clusters that were identified, that the successful learners displayed greater metacognitive control of the process in that they had a more systematic plan of action in implementing multiple strategy use. In negotiating and

evaluating meaning, they followed similar procedures each time they encountered a comprehension problem, using code-switching in a controlled, methodical way. They also systematically used checking strategies, often in clusters, as corroborative evidence for or against their proposed response. It was found that the power of these monitoring strategies increased dramatically when used in clusters in this way.

Less successful subjects' behavior, on the other hand, often involved no clear strategic plan of action, strategies used alone, and responses that were left un- or under-evaluated. Their overall approach often resembled the fractured, hit-or-miss type of procedure that characterized the quality of many of their individual strategies. Lacking the metacognitive control evident in the pre-planned, multi-strategic approach of the successful subjects, the less successful group relied on fewer and weaker strategy clusters and were generally less skillful and imaginative in their use.

(v) Other findings

It was found that the combination of 'think-aloud' and retrospective procedures was an effective exploratory and diagnostic tool which allowed for detailed profiles of all subjects to be compiled and for specific remedial recommendations to be made. Subjects' evaluation of their behaviors while completing this task proved extremely informative and provided valuable corroborative evidence about their strengths and weaknesses as L2 learners. In particular, it was possible for profiles to be built up, based on learners' identified strengths and weaknesses, and some preliminary recommendations regarding strategy training, where necessary, were made. These recommendations were predicated on the belief that any future strategy training should take into account the kind of learning approach presently favoured by the learner and the level and types of L2 proficiency so far attained. This type of approach was advocated by Abraham and Vain (1987), who

suggested that factors such as a learner's cognitive style and level of proficiency be borne in mind in planning strategy training. The unexpectedly detailed picture of each individual learner afforded by the 'think-aloud' / retrospective procedures thus suggests its ongoing usefulness for diagnostic assessment of learners, and subsequent strategy training planning.

5.3 Limitations of this Study

- (i) Because of the small number of subjects involved, the findings of this study may be less generalizable to a large population of L₂ learners.
- (ii) The elicitation procedure used for this study was highly individualized in that the interview session was unstructured, and each probing question asked by the investigator was determined to a considerable degree by the learner's responses to the task at hand. As such, similar results may not be realized by the same researcher with the same subjects on a different occasion. This question of reliability and reproducibility is raised by Grotjahn (1987:66) who discusses the problem that arises from the fact that "in unstructured methods such as narrative interview and thinking aloud, the researcher himself becomes a research instrument by virtue of his role as interpreter."
- (iii) The quality of the data gathered depended on the skill of the investigator (cf. Hosenfeld 1976): that is, the 'think-aloud' data collection method was reliable for what it actually contained, but not for what may have been omitted through incomplete data elicitation. When learners processed information so rapidly that it was not available to them for verbalization, the type of strategy in use was then

investigated via immediate retrospection. Despite this, there were times when strategy type remained obscure.

- (iv) Some validity problems remain, in that the study is highly reliant on the particular interpretation of one researcher.
- (v) The study was conducted with young adult subjects. Its findings might, therefore, not apply to younger learners.
- (vi) All subjects were female in this study : findings might therefore be less generalizable to male L₂ learners.

5.4 Implications

The study provides insight into what successful and less successful L₂ learners actually **do** when asked to perform the specific task of solving a modified cloze passage. Our results substantiate that this is in fact a highly complex exercise that calls on a wide repertoire of cognitive learning and reception strategies, involving behaviors that are vital to the learning of reading, vocabulary acquisition techniques, and grammatical function. As such, it might be suggested that the cloze procedure has potential as a strategy training tool, since so many different types of strategies are needed to perform this task well. As suggested by Hosenfeld (1977), the 'think-aloud' technique might be brought into the classroom, so that learners think about the strategies being used on this task by the volunteer subject, while at the same time comparing them with their instincts or ways of solving the problem at that moment. Based on this comparison, subjects might gain new and better strategies , which would be useful to them not just in completing this type of test exercise, but in many other general domains of L₂ learning, as mentioned above.

Furthermore, though this discussion and promotion of strategic competence in their L2 learning, our learners would be helped to develop a heightened metalinguistic awareness of what they should be doing and how and why they should be doing it. In this way, we would hope, like Wenden (1986b, 1987) and Holec (1987), that our learners would gain greater control over their own personal road to L2 proficiency and thus greater autonomy.

Finally, the study provides detailed information about individual differences in L2 learners. While not generalizable to a large extent, it does provide some insight into the various degrees of strength and weakness, the different paths to success and failure that characterize our learners. As such, we would concur with Hosenfeld (1976, 1977) that the 'think-aloud' can be a very powerful diagnostic (as well as research) tool, and that its use can lead to specific recommendations on types of remediation that would benefit the less confident, less experienced learner. In this way, individualized strategy training programs might be devised that match the subject's actual proficiency and learning style with a proposed remedial course. It is quite clearly inappropriate to automatically recommend strategies that work for a successful subject to a less successful learner, if the latter does not have the requisite linguistic knowledge to control them. It is clear also from this study that strategies, if they are to be taught, should be shown working in complexes, so that learners come to the realization that they should back-up their existing strategies with others that complement, enrich and inform them, thus increasing their power many times over.

5.5 Suggestions for Future Research

The findings in the present study suggest that further investigation is needed to examine whether clusters of behaviors exist during the performance of other language learning tasks. In addition, subsequent studies should be devised that examine the role of quality in strategy cluster use in terms of its influence on the eventual rate of achievement.

It is to be hoped that future research in this area will continue to focus on the qualitative differences of strategy use by different types of learners.

Following from this, further investigations need to be carried out with different kinds of learners. This study used young adult L2 learners: it would be useful to discover whether younger learners, such as junior high school students adopt similar behavior patterns in problem-solving situations.

Thirdly, further studies are needed to investigate whether better strategies can be taught to less successful learners, and to what extent, and with what effect, can strategy training programs be devised that match a particular subject's learning style.

Finally, we agree with Vann and Abraham (1990:192) that further case studies – "microanalysis of learner behavior on varied tasks" – are crucial to the advancement of our understanding of the strategic processes initiated by learners during the course of their L2 learning.

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APPENDIX A

APPENDIX A

THE MODIFIED CLOZE TEXT

La Révolution française

Il était une fois un groupe _____¹ étudiants qui essayaient _____² longtemps de comprendre la concordance des temps au passé. Ils comprenaient bien la différence _____³ le passé composé et l'imparfait, mais chaque _____⁴ qu'il fallait _____⁵ utiliser, _____^{6a} parlant ou _____^{6b} discutant, tout s'embrouillait dans leur tête. Ils commençaient _____⁷ douter de leur perception, et _____⁸ n'arrivait vraiment à résoudre cette difficulté. Il fallait trouver une solution.

Un jour, le professeur est entré dans la classe, et, d'un air soulagé, _____^{9a} a annoncé la nouvelle _____¹⁰, apparemment, avait fait les manchettes (=headlines) ce matin-là. Il a expliqué que l'Académie Française venait _____¹¹ décider _____¹² éliminer soit le passé composé, soit l'imparfait afin de simplifier l'apprentissage _____¹³ français comme langue seconde. Les étudiants n'en croyaient pas leurs oreilles. La réaction ne s'est pas fait attendre et le professeur a entendu les commentaires suivants: "Ah non! Maintenant que j'ai fait tous _____¹⁴ efforts pour apprendre les participes irréguliers, on ne va pas laisser tomber le passé composé!" Mais alors, _____¹⁵ imparfait, comment est-ce qu'on va exprimer la durée, l'action qui continue?" "Et _____¹⁶ qui ai passé toute la fin de semaine à essayer de comprendre la différence entre les deux, _____¹⁷ n'est pas sérieux!" "Je croyais _____¹⁸ le rôle de l'Académie Française était de protéger la langue française! Ils sont devenus complètement fous!"

En constatant l'effet produit par _____¹⁹ il venait d'annoncer, le professeur s'est mis _____²⁰ rire et s'est empressé de fixer la date de l'examen qui allait porter sur la concordance des temps au passé.

1	d'	2	depuis	3	entre	4	fois
5	les		en	7	à	8	personne / rien
9	leur / il	10	qui	11	de	12	d'
13	du	14	ces / mes / les	15	sans	16	moi
17	ce / il	18	que	19	ce qu' / les manchettes qu' / la nouvelle qu'	20	à

APPENDIX B

APPENDIX B

GENERAL SCHEME OF COGNITIVE LEARNING / RECEPTION STRATEGIES

- A. Clarification / Verification of meaning / understanding.
 - A1. Translates into L₁ words directly preceding and / or following the blank.
 - A2. Seeks overall schema (by scanning / skimming through a number of blanks).
 - A3. Reads through the single blank, in L₂, to establish context.
- B. Monitoring: focus on form and comprehension (cognitive and metacognitive strategy use.)
 - B1. Monitors vocabulary.
 - B2. Monitors grammar / morphology.
 - B3. Monitors sound: tests a possible answer, or a number of options for sound.
 - B4. Monitors specific meaning: checks the appropriateness of the possible answer by translation to L₁.
 - B5. Monitors general meaning: checks overall comprehension of the text or parts of the text.
- C. Inductive Inferencing.
 - C1. Infers L₁ meaning equivalent of missing word and translates (or tries to translate) it into L₂.
 - C2. Infers meaning of unknown word from cognate in L₁ or L₂.
 - C3. Infers meaning of unknown word from context and other clues (e.g. situation, text structure, personal relationships, topic, world knowledge).
 - C4. Infers answer on the basis of its sound.
 - C5. Failed attempt to infer meaning.
- D. Deductive Inferencing.
 - D1. Uses syntactic / morphological knowledge.
 - D2. Classifies.

E. Repetition for Retrieval

- E1.** Repeats word(s) in L₂ while searching for its / their meaning.
- E2.** Repeats L₁ translation of text immediately preceding and/or following the blank.
- E3.** Repeats in L₂ the known word(s) immediately preceding or following the blank.

APPENDIX C

APPENDIX C

LETTER REQUESTING SUBJECT PARTICIPATION

Department of French and Spanish
 Memorial University of Newfoundland
 St. John's, Newfoundland
 A1B 3X9
 February 1990

Dear Ms.

I am requesting your participation in a research project I am conducting. The study proposes to investigate the kinds of strategies used by first year university students as they complete the "vocabulary-blank passage" exercise that is used for teaching and testing in French 1050 - 1051. Participation in the study will involve:

1. an initial individual meeting, lasting about 15 minutes, that will provide pretraining and specific instruction in how to "think-aloud"; and
2. a 30 - 40 minute session during which you will "think-aloud" while completing a vocabulary-blank passage. This session will be audiotaped for subsequent analysis.

All data gathered during the study will remain confidential and any reports of this research will safeguard the identities of those who participated in it. When the study is completed, a summary report of the findings will be available for those who are interested.

I would greatly appreciate it if you would agree to be a participant in this study. However, please feel free to decline to participate in, or to withdraw from the study at any time.

Please complete the attached form and return it to me at the French Department office (S-4023). I am enclosing a summary of the research project that will provide you with further details. Please do not hesitate to contact me (S-4032, Telephone 737-8579) if you have additional questions.

Sincerely,

Jan Black

 LEARNING AND RECEPTION STRATEGIES USED BY L₂ LEARNERS IN COMPLETING A
 MODIFIED CLOZE PROCEDURE: SIX CASE STUDIES.

I, _____, agree / decline * to participate in this
 research project.

Signed: _____

Date: _____

* delete as necessary

SUMMARY OF RESEARCH PROJECT

LEARNING AND RECEPTION STRATEGIES USED BY L₂ LEARNERS IN COMPLETING A
MODIFIED CLOZE PROCEDURE: SIX CASE STUDIES.

Janis H. Black
Department of French and Spanish
Memorial University of Newfoundland
St. John's, Newfoundland

The purpose of this study is to examine the strategies used by first year university students of French while completing a specific kind of language task. The type of activity involved is a modified cloze procedure which forms part of the teaching and testing syllabus in first year French courses at Memorial University of Newfoundland. This particular task appears to involve highly complex thought processes and behaviors which the researcher will seek to identify and analyze, with a view to eventually being able - in subsequent studies - to design and test a program of strategy training that might improve performance on this task.

Specifically, subjects will be asked to "think aloud" as they complete the cloze exercise. The researcher then proposes to:

1. identify the strategies used by L₂ learners in dealing with this problem-solving task; and
2. observe whether consistent patterns of use emerge: in particular
 - a. whether there appear to be strategies that gain effectiveness when used in clusters, and
 - b. whether there is evidence to suggest that there are different sorts of approach, different complexes of strategies, that suit different sorts of learners.

The potential benefits of such research would be in the area of strategy training. Successful combinations or clusters of behaviors might be taught to weaker students who attempt this task. Such strategy training, if successful, could provide students with valuable insights into reading L₂ texts, coping with unknown vocabulary, monitoring and assessing the appropriateness of their problem-solving, and ultimately into developing a higher degree of metalinguistic awareness. In addition, we may gain information about the individual differences between types of learner in order to better match the type of training envisaged with the type of learning approach adopted by the learner.



